AGRIDEMO

Case study reports:

D3.2 Structural Characteristics

D4.2 Functional Characteristics

D5.3 Effectiveness

Part I: CS Austria, Belgium, Denmark, France

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Introduction

This document presents an overview of the in-depth analysis performed on a total of 35 case studies, carried out during the AgriDemo-F2F project.. These 35 cases represent a diverse array of demonstration approaches and activities, occurring throughout Europe. The process of case study selection, and a short overview of the cases, is given in D2.5.

The analysis focuses on 3 main aspects of on-farm demonstrations: **i) structural characteristics (corresponding to D3.2)**, involving characteristics related to the network, actors involved, roles of actors and governance; **ii) functional characteristics (corresponding to D4.2)**, describing mechanisms and tools that are being used for recruitment, interaction and learning during the demonstration; and **iii) peer learning characteristics (corresponding to D5.3)**, which aim to capture the effectiveness of demonstration approaches, by looking at both the extent and nature of learning that takes places during demonstration events.

Data was collected by all partners, following the methodological guidelines for data gathering and analysis (D3.1-4.1-5.2), after which analysis was done by the Case Study Work Package Team (AUA, CCRI and EVILVO). Draft versions of the reports were sent to partners for validation (during cases study workshops), after which the case study reports were finalized.

The content of this document is mainly descriptive, giving a detailed overview of the setting in which the demonstration is conducted, and about the processes taking place. This document however does not provide a cross-case analysis, which will be the focus of D3.3 (key structural characteristics for effective on-farm demonstrations) and D4.3 (key functional characteristics for effective on-farm demonstrations).

Austria Case Study 1

1. Background

Network

In CS 1 the main actors of the networks present were the agricultural chamber, the advisory for soil and water protection, companies, AGES, farmers, the host farmer and media channels.

Farm facts and location

The farm of MK & FK (50 ha arable land, 140 fattening pigs) is located in Bad Wimsbach-Neydharting in Upper Austria and is an example of a farm well connected to agricultural organisations. They have a long history of demonstration activities on their fields, which range from various crop trials to fungicide and growth regulator tests and experiments with soil and plant aid agents. The agricultural holding is working very closely with the agricultural chamber of Upper Austria. They also collaborate with AGES and private companies which can rent fields for their experiments and tests. The farm of the family organises field days already since 12 years; in the first year around 50 to 60 people participated and in 2017 already approximately 800 people (personal communication farm K., 2018).

Event details

The demonstration event took place on 13.06.2018 and was organised with a total of 350 participants (split up in groups of approx. 30-50). 10 demonstrations as a field walk were organised: 1. fertilisation of winter rape, 2. fungicides in winter barley, 3. winter barley varieties, 4. winter rape varieties, 5. under sown crops and herbicides in grain maize, 6. N-fertilisation in winter wheat, 7. varieties and sowing density of winter wheat, 8. growth regulators for winter barley, 9. varieties and sowing density of winter barley, 10 varieties of winter wheat. A few hands-on tools (testing nitrate levels in water) and some multisensory activities (touching and looking at crops and roots) were available for the farmers, There was rather little time for formulating questions, however the discussion were lively once they started. The limited discussions in smaller groups maybe have been caused by the heavy rainfall that encouraged the participants to move further from station to stations rather than staying in the rain for long discussions. The host farmer provided trial areas for the experiments of the agricultural chamber and other participating organisations. The organisations benefit from the large range of the event and the huge amount of participants. In cooperation with agricultural companies machineries were exhibited and subsequently tested on the host farmer's fields. AGES was mentioned as one key player for knowledge transfer to the farmers. A report of the local television channel made the main contents of the field day available for a broader audience.

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 (Level 1) and Farm level interviews with demonstrators/hosts (Level 2) to reveal how the functional and structural characteristics enable learning. Analysis is reported in Sections 3 and 4. Data is sourced from interviews with 3 Programme/Network members and 1 Farm level interviewee. 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. This data is sourced from 6 pre-demonstration participant surveys, 1 pre-demonstration facilitator survey 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.

Finally, workshops were organised in September 2018 with the aim to introduce the project Agri-Demo-F2F and the two Austrian case studies in detail to members of the agricultural chamber (WS 1) and to demonstrators and participants of the demo events as well as two external stakeholders (WS 2). Furthermore, the workshop participants, who have experiences in demonstration activities in their provinces, were asked to contribute to key structural/functional characteristics of effective on-farm demonstrations. Afterwards, they discussed about 'barriers' (issues/challenges) and 'drivers' of on-farm demonstrations in Austria and gave examples for best practices from their regions.

3. Structural Characteristics

T1: Programme/network level

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

AGES (Austrian Agency for Health and Food Safety) is responsible for variety testing throughout Austria. It leases fields in different farms to conduct trials and compare results. AGES' department role is to test and present new varieties (Programme interviewee 1).

The Agricultural Chamber of Upper Austria holds the main responsibility in the organisation of events. It also conducts experiments at the host farmer`s location, and together they plan the route for the field day.

Private advisers are organised in a steering group which meets 2 times per year for discussions, coordination, personal management, annual planning, and presentation of the business report. Within formed working groups the advisers together with the so called 'water farmers' (which are heads of the work groups and are trained by the consultancy for soil and water protection) manage the network/programme (Programme interviewee 2).

> Training organisations, such as the rural institute for advanced training, is responsible for specific trials, such as plant protecting issues. They engage experts as facilitators/demonstrators. (Programme interviewee 2)

> Host famers engage in the selection of topics and the organisation of the event. (Programme interviewee 1)

All actors above are engaged into assessing the event and planning future steps.

> In the end we (AGES, agricultural chamber, farmers, demonstrators) pass the event in review and think about possible improvements for the future. (Farmer)

> Participants' ideas are included in the demo set-up. Results from an event in autumn for example are discussed with farmers, advisers and researchers. Their suggestions are taken into account for the follow-up event in spring. (Farmer)

2. Networks

All programme interviewees stated that actors involved are well connected at both national and international level, as well as among themselves. Cooperating organisations and bodies use those links to inform and increase outreach and impact of demos.

In Austria AGES conducts variety testing within 9 experimental stations throughout Austria. There is no international cooperation.

> I collaborate with BOKU Vienna (University of Natural Resources and Life Sciences) and the agricultural school in St. Florian (upper Austria) to a limited extent. (Programme interviewee 1)

> We are well connected to other work groups and committees like the Advisory for soil protection in Vienna, the ministry, universities (Boku, Vienna), partner organisations in Bavaria (Bavarian regional office for agriculture), the machinery ring of upper Austria, schools, the Federal Environment Agency (excursion delegations from Morocco or Jordan), the ministry (….) The connection focuses on Austria and partly on Bavaria or foreign countries due to excursions. (Programme interviewee 2)

> I have good connections to other federal states like lower Austria, Burgenland, Styria, and Carinthia. Furthermore I am well connected to the Austrian Agency for Health and Food Safety (AGES), the agricultural ministry, RWA (Raiffeisen Goods Austria) and the chemical industry including companies like: Bayer, BASF Austria, Syngenta, Kwizda, Nufarm Austria, Belchim Crop Protection, FMC, Adama Austria, Plantana and Certis Europe. The connections are mostly national and partly international (e.g. the Bavarian regional office). (Programme interviewee 3)

3. Funding arrangements

All institutional actors are either directly or indirectly funded for their involvement in organised demonstration activities by the national or local government. In specific cases commercial/supply case companies also pay for variety testing.

> Variety testing is task of the state. Seed companies pay fixed tariffs for variety testing. We have core financing from the agricultural chamber but no special funding. (Programme interviewee 1)

> The budget is provided by the division 'soil water management'. Therefore an annual decision of the state parliament is necessary. (Programme interviewee 2)

> For the division crop protection there is no funding any more, in former times there was a federation-federal state-funding pool. Now (…) we have to submit a project proposal every two years which is supervised by a coordination office of the 'agricultural chamber Austria' in Vienna. (Programme interviewee 3)

T2: Farm (event) level

The farmer has a 30-years long experience in experimental farming and demonstration activities.

> In 1985 I started with silage maize trials. In 1987 I started to cooperate with the agricultural chamber as chairman of the work group for trial design and analysis. 1991-1997: crop rotation trial with 16 replicates. Since 1995 variety testing on grain maize, silage maize, wheat and barley. Since 1999 Trials on crop protection and fertilisation in cooperation with the agricultural chamber. Since 2000 fertilisation trials with AGRO Linz and other companies. Since 2004 my fields are one of AGES`s trial sites. Since 200 all our experiments are set up in 4 replications. (Post host farmer interview)

The farm hosts a variety of events each year with multiple objectives and target groups. Moreover, the farmer's experience has guided his selection of demo topics and objectives to meet the farmer community needs.

> (We host) … annual field days, 10 excursions per year, pupils visit the farm once a week. (Post host farmer interview)

> (…), we aim to present a broad range of varieties from different companies and point out also those with low yield levels for example. Independence of companies and politics is important for us. (Post host farmer interview)

Although the demo farm is connected to the agricultural chamber and AGES (which summarize and compare experimental results) it does not consider itself as part of a programme or wider network. The farmer holds a decisive role in deciding on the when's and how's of hosted demos.

> (….) AGES for example comes up with ideas for our farm but we decide whether we implement them or not. But we are not involved in any demonstrations on other farms (post host farmer interview).

Financial support of demos is rather limited despite the long-standing relationship of the farm/farmer with AGES and the agricultural chamber. It seems that the overall power of the demo stems from the clear division of roles and alignment of strengths, objectives and aspirations among actors.

> (…) The family acts as manpower, the agricultural chamber is the interface to companies, AGES (Austrian Agency for Health and Food Safety) supports with the experimental set-up and also acts as demonstrator. (…) We receive small financial support from the agricultural chamber (…) but we are not part of any funding programmes. AGES also pays a small financial compensation for leasing 7 of our fields but this is no funding arrangement but just a compensation for work effort. Last year we awarded the Austrian innovation prize that is endowed with 500 Euro.

The host farmer acted also as a demonstrator whereas the multiple demo trials were served by experts/facilitators of collaborating organisations.

There was a facilitator at each 10 topics, as well as a person who guided the group from one spot to another. The facilitators/demonstrators were from the organisations that were responsible for the demonstration (observation tool).

1. Location and layout

The farm is located in Bad-Wimsbach-Neydharting, Upper Austria. It is an average sized farm (50 ha arable land and 150 fattening pigs) cultivating maize, barley, rapeseed, soya, biodiversity fields as well as permanent grassland (post host farmer interview). The farm offered ample opportunities for demo experiments on several fields as comparisons in multiple fields while agricultural machinery was also showcased.

Size and design of demo: big field experiments, on several fields, e.g. small plots with several winter wheat varieties - also old varieties (observation tool).

2. Practice/technology demonstrated

The rich host farmer's experience in demonstrations and experimental trials has resulted to a multifaceted set of comparisons fields covering a wide set of demo topics.

(the farm had) 10 trials on: 1. fertilisation of winter rape, 2. fungicides in winter barley, 3. winter barley varieties, 4. winter rape varieties, 5. under sown crops and herbicides in grain maize, 6. N-fertilisation in winter wheat, 7. varieties and sowing density of winter wheat, 8. growth regulators for winter barley, 9. varieties and sowing density of winter barley, 10 varieties of winter wheat (observation tool).

The farmer's collaboration with apex organisations and national bodies equipped him with a plethora of materials which he availed to participants.

> We provide a printed field guidebook including explanations and results, posters, brochures, presentation boards, Links, printed results, references for downloads from our and partner homepages (e.g. PPT presentations). (Farmer)

3. Frequency, duration and timing

The farmer runs this specific annual field day since 15 years. This time the event took place in the afternoon of June 13, 2018 and its duration was three (3) hours (17.00 – 20.00).

> It should be noted that trial/demo results are presented in a follow-up event organised in autumn. (Farmer)

Impressively wide attendance numbers -some 350 participants in total- indicate that the event is a milestone in local farming communities. Most farmers found it rather easy to join, with only a few reporting a travel time to attend that exceeds 45 minutes (pre survey participants' tool).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

Although the Farmer was compensated for their involvement, he received a modest amount of money.

> We receive small financial support from the agricultural chamber, according to their financial resources, but we are not part of any funding programmes. AGES also pays a small financial compensation for leasing 7 of our fields but this is no funding arrangement but just a compensation for work effort. (Farmer)

According to the Programme Interviewees, funding was increasingly limited, coming via the agricultural chamber. They reiterated that any funding was intended as a compensation, rather than a payment.

> There are no monetary incentives except taking over the arising expenses for a demonstration event. (Programme Interviewee 2)

> Farmers obtain a low financial compensation for the experiments but I would call this only a tiny incentive. (Programme Interviewee 3)

2. Motivations for host farmers

The Farmer was motivated by a desire to transfer 'curiosity and interest to others'. He also added that demonstrations provide the opportunity to see developments in agricultural machinery first hand and noted how economic benefit has never been a motivation for them.

> Our field days also include machinery exhibitions. Companies often offer us to test their agricultural machines. Hence we become familiar with new technologies and the companies get the chance for advertising their products at our field days. This is a win-win-situation for both. Economic benefit has never been a motivation or reason of us! (Farmer)

Programme Interviewee 1 noted how the Farmer (CS1), was naturally oriented to delivering demonstrations.

> [The Farmer has expressed a] keen interest since school days, has closely cooperated with the agricultural chamber, and has curiosity [...] As a teacher at an agricultural school he also attaches importance to knowledge transfer for pupils. Social standing is no motivation. (Programme Interviewee 1)

Programme Interviewees 2 and 3 reiterated the importance of a personal desire to want to deliver demonstrations, rather than a desire for financial benefit. In terms of tangible benefit, Programme Interviewee 3 recognised how – by becoming host farmers – farmers expand their own network.

> Overall interest in plant production and in forwarding the information to colleagues. The focus is on personal conviction rather than economic benefit. Our water farmers only get 150 Euros for their activities. (Programme Interviewee 2)

> I can exclude economic benefit as a motivation. Host farmers want to expand their own knowledge, social standing in the region may be a reason too. Host farmers gain personal benefit due to close contact to advisers also beyond and above the agricultural holding. (Programme Interviewee 3)

3. Motivations for participants

The Farmer felt participants were particularly attracted to their events because of their independence from companies; he felt that participants were therefore more likely to trust their advice.

> Because we are independent of any companies, participants appreciate independent statements [...] we aim to present a broad range of varieties from different companies and point out also those with low yield levels for example. Independence of companies and politics is important for us. (Farmer)

Programme Interviewee 1 suggested that the access to other farmers and the informal knowledge exchange associated with this, was a key motivation for farmers. The social aspect should not be underestimated either.

> The communication between the farmers and their exchange of knowledge could be a motivation factor. Last but not least the cosy get-together with food and beer in the end is a great trigger factor. (Programme Interviewee 1)

The second Programme Interviewee highlighted the importance of content; particularly attractive for participants was the exhibition of machinery, as well as novel speakers.. By attending demonstration events, farmers can work towards their certificates of competence; which makes it a significant motivation for participants.

> Technique (machinery exhibition) is a big trigger factor, interesting and new speakers, and confirmations for ÖPUL interventions or certificates of competence too. (Programme Interviewee 2)

> Farmers obtain points for their certificate of competence by attending a demonstration event. (Programme Interviewee 3)

Participants stated as motivations to attend this demo: interested in progress concerning plant breeding and crop protection; comparing with others, get to learn something new; exchange of experience; exchange of views with farmers; continuing education; experiments; interest; machinery exhibition; unaltered results; school; watching new experiments on varieties and fertilisation and copy them for own farm; experience for the future (on own farm); finding the best varieties for own farm.

4. Advertising and recruitment

The Farmer noted that participants were not specifically targeted for recruitment and that the events were open to a wide range of interested groups.

> Everybody who is interested is invited to come, no matter if farmers or others. (Farmer)

The Farmer felt that word-of-mouth advertising was the most effective means of advertising events, although he supplemented this with other platforms, including agricultural chamber communications.

> Word-of-mouth advertising is the most effective way, agricultural journals and the newsletter from the agricultural chamber of Upper Austria are also used for advertising events. (Farmer)

One of the Programme Interviewees noted the importance of differentiating the means of advertising and inviting participants. He noted that this needed to be tailored to the age of participants. Interestingly, the means of advertising were broad and varied.

> Depending on the age of the target audience the personal, printed invitation, for elder people, or a Facebook post, for the younger ones. The water farmers also use Email and send reminders via SMS or WhatsApp. Water farmers have to comply with a special number of participants that is

> targeted by the work group. Deductions are made in case of too less participants. (Programme Interviewee 2)

In terms of recruiting traditionally 'hard to reach' farmers or populations, the certificate of competence (discussed above), meant that demonstrations had become of interest to all farmers, who needed to attend such events to achieve their certificate.

> We are successful with the certificate of competence, that farmers have to prove. Some pressure is put on the farmers because now they have to pass this kind of advanced training. (Programme Interviewee 3)

One of the Programme Interviewees suggested that providing problem driven demonstrations – which offer a solution to a specific and contemporary problem – was key to recruiting participants.

> For example pesticide residues are found in water. Therefore the rural government requires to advise farmers concerning stopping the application of a special pesticide and finding alternatives. I always try to keep in mind the present problems and topics. (Programme Interviewee 3)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Farmer felt his approach to demonstrating was 'Mostly top down'. Two out of the three Programme Interviewees agreed with this, although one felt it was 'Entirely top down', owing to the direct input from the Agricultural Chamber.

Although the demonstrations had a clear relationship with the Agricultural Chamber, the design of demonstrations and selection of demonstration topics was done closely with farmers and hosts, and often responded to issues farmers were experiencing or facing.

> Some special issues are predominated by the host farmer and by the members of the working groups. The presented experiments need to have duration of at least 3 years. Another focus is on news and innovations, for example depending on new products for crop protection. Farmers want to become more familiar with them before using them. (Programme Interviewee 3)

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

According to the Farmer, participants were involved in the development of the demonstrations. There was a strong emphasis on including potential participants in the demonstration-design, and a process in place to ensure this could happen.

> Participants' ideas are included in the demo set-up. Results from an event in autumn for example are discussed with farmers, advisers and researchers. Their suggestions are taken into account for the follow-up event in spring. (Farmer)

The Farmer reiterated how demonstration design was a product of cooperation between farmers and other stakeholders. This came through strongly in this Case Study.

> They are selected in cooperation between farmers, AGES, the agricultural chamber, the school that I'm teaching at, and me. The main decision is up to the agricultural chamber and me. Current agricultural topics (e.g. pesticide residues in the groundwater) are presented and alternatives are stated. (Farmer)

There was a similar emphasis on the inclusion of host farmers in the design of the overarching programme. Although it appears to be a democratic process, as Programme Interviewee 2 claimed – 'appreciation for the host farmer is of particular importance, the host farmer is the crucial part'.

> Host farmers are always involved regardless of they are well known to our network or if they are newly recruited ones. (Programme Interviewee 3)

> On the one hand the topics are steered by the programme or network on the other hand the interest of the work group members, which is discussed at the annual meetings, is taken into account. Nevertheless not every wish can be satisfied. (Programme Interviewee 2)

3. Focus and Design

Both the Farmer and two out of the three Programme Interviewees described the network as 'in between' a 'Whole farm' and 'Single focus' approach. The third Programme Interviewee described the network as 'Single focus'.

The Farmer and two out of three Programme Interviewees felt the network approach was also 'a mixture' between an experimental and exemplary design. However, the Farmer felt that a more 'experimental' approach would better fit his farming ethos. All Programme Interviewees recognised the importance of the Farmers' ethos and own preferences.

> This choice is influenced by the host farmer, the consultant for agriculture of the agricultural chamber and myself. The approach should be as broad as possible. (Programme Interviewee 1)

'Whole farm' focussed, deploying an approach that was 'a mixture' between experimental and exemplary approaches to demonstration. The Farmer told us how he emphasised the whole system because of the importance of the bigger picture to sustainable farming operations.

> I try as less as possible to single out stuff. It's the whole system that… well I can imagine that people who see something interesting here say 'let's try this too' and then it doesn't work, because you need the whole system. (Farmer)

The Programme Interviewee reiterated the importance of a broad approach, particularly to those interested in improving the environmental credentials of their farms.

> People who want to start a nature inclusive farm, they have a big list of questions, not only about the trees, crops or agricultural things, but very often more about the financing or how to get approval from the municipality, or how do you get the land to start your farm? So very broad, always very broad. (Programme Interviewee 2)

4. Ideal group size

The Farmer and Programme Interviewees tended to agree about the ideal group size for a demonstration – all suggested around 20 people or under work the best (regardless of type of participant) – although they did recognise that it did depend on the event. Interestingly the Farmer noted how, despite recognising an optimum number, some demonstration days had *a lot more* attending.

> 20 persons (farmers) per group with almost the same basic knowledge are most effective. Nevertheless, at our field days we have a number of groups with 50 to 80 participants each. (Farmer)

> Not more than 20 persons per group is most effective. The type of group is always farmers, no matter which age. (Programme Interviewee 1)

Programme Interviewees 2 and 3 suggested that when groups are bigger, splitting the group into smaller groups was a useful tactic to facilitate discussion.

> The optimal group size is 30 people maximum. In case of more participants, they are split up in smaller groups, like at our field days. 15 to 20 people per group would be even more effective because than discussions arise but this is not feasible each time because a certain number of farmers has to be advised. (Programme Interviewee 2)

> I prefer 15 to 20 people per group. Above 20, smaller subgroups may split up and discuss a special issue. (Programme Interviewee 3)

T3: Enabling learning appropriate to purpose, audience, context

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

In terms of structuring the day, a clear emphasis was put on combining different elements.

> Prefer a combination of demonstrations and oral presentations. Also a machinery exhibition is part of our field days. Versatility is important, as well as food and drinks in the end. (Farmer)

> The most effective way is a balance between talk and practical activities. (Programme Interviewee 2)

Programme Interviewee 3 described a very structured, but nonetheless varied, format of their typical events. It also included a social element (meeting in a restaurant), before a field walk. He also noted how, in his experience, farmers preferred evening events and warned against a standalone presentation, without any interactive elements e.g. field walks.

> We often meet in a restaurant for discussing before the field walks or also the other way round. The structure of the event also depends on the weather conditions. Farmers prefer evening events. Single presentations that are given in restaurants in front of a huge audience are less effective than events for small groups that are combined with field walks. (Programme Interviewee 3)

The Farmer described a range of tools which he had found useful and was planning for future events. There was a strong emphasis on 'hands on' elements or actually seeing, scope for open discussion or doing things 'in the field'.

> Question and answer sessions are most effective. Posters would be effective too. It is important to present topics directly in the field rather than at the meeting point in the machinery hall before the field walks. Hands-on tools or looking in a soil pit would be desirable for future planning. (Programme Interviewee 1)

The Farmer and all three Programme Interviewees listed the ability for 'Participants to ask questions and talk openly' as the most important facet of a demonstration day. As Programme Interviewee 2 noted – 'open discussion is extremely important'. Programme Interviewee 1 suggested that asking questions was a way of telling that participants had listened to the speech.

2. Taking into account variation in learning

The Farmer claimed to 'try to consider each participant's view', although noted that it was often 'not possible at a field day with many participants'. He did however, claim to 'assume participants have basic knowledge' about the demonstration topic.

Two out of the three Programme Interviewees claimed to plan for variation. The both referenced the use of pre-demonstration evaluation of participants' knowledge, which is a novel and important approach. Although,

both noted that this is not always possible at smaller events; this may be something to consider developing the provision for in the future.

> We partly plan for the variation in learning capacities. In single cases (e.g. a seminar concerning a new programme for the Austrian fertilisation plan) we evaluate participants` knowledge in advance. This is not possible for demonstration events / field days. (Programme Interviewee 2)

> In case of small course groups with a more diverse audience like pupils and farmers I ask participants to introduce themselves to ascertain their standard of knowledge. In case of our working groups I know about that in advance. Planning for the variation in learning capacities is not possible at big demo events. (Programme Interviewee 3)

T4: Effective follow-up activities

1. Follow-up activities and materials

The Farmer claimed to continue to engage with participants on an informal level – encouraging them to test what has been presented at the event. The Farmer and the Programme offered a range of materials for participants to access after the event including presentations, figures and other resources; these documents are available online to participants or in hard copy at the event.

> I offer my PowerPoint presentation as printed slides before the event and an overview table for pesticides as well as folders on topics like erosion, driftage, resistances, and weeds. The latter are available on the info desk. Information material is also available on our homepage. (Programme Interviewee 3)

> Actual information from our network and the agricultural chamber is available on an information desk at each demonstration event. These are brochures, information sheets, etc. Participants collect them before or after the event […] printed handouts don't show great effect because they aren't read. Therefore, we focus on having a few but precise printed materials with the hint to our email as well as downloads from our homepage. (Programme Interviewee 2)

2. Assessing impact

Nor the Farmer or Programme Interviewees attempted to assess any kind of impact of the demonstration event amongst participants or in the broader context.

5. Event analysis: effective peer learning characteristics

Event details

There were approximately 350 attendees at the event, of which 37 completed the pre and post survey.

	n° surveys	agricultural master	employee	farmer	pupil	retiree	salesman	adviser	farmer + apprenticeship	training centre + apprenticeship	unknown
occupations	*37*	1	2	15	9	1	1	1	1	1	5
working area	*33*										
local area	29	1	2	12	6	1	1		1		5
not local area	4			2	1			1			
gender	*35*										
male	34	1	2	13	9	1	1	1	1	1	4
female	1										1
age	*36*										
18-30	24		2	10	9				1	1	1
31-40	1			1							
41-50											
51-60	7	1		2			1				3
60+	4			2		1		1			

T1: Learning processes

1. Communication initiation by participants

When in the whole group participants were rather closed and didn't share their knowledge and/or experiences related to the topic willingly. When in small groups between 10% and 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. In the small groups, when walking in the fields and after the demonstrators had talked, people were opening up and sharing ideas and stories. A little time was made for questions. Some (5-10) questions were asked. There were a few participants trying to formulate their own points of view regarding the topic.

	participant answers				
	strongly disagreed %	disagreed %	agreed %	strongly agreed %	not applicable %
I had the feeling that **I could share my own knowledge as relevant information**.	0	22	42	33	0
I asked at least one question during the demonstration .	84% yes				
I shared my own point of view at least once during the demonstration.	68% yes				
I **felt encouraged to ask questions** during the demonstration.	0	11	53	28	0
When there were any discussions, **I felt comfortable sharing my opinion**.	0	19	42	22	11

	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	2/6	3/6	1/6	0
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	0	5/6	1/6	0
I **encouraged the participants to formulate questions** during the demonstration.	0	0	3/6	3/6	0

2. Interactive knowledge creation

Hands-on opportunities

A hands-on activity on NO3- measurements of water was demonstrated taking enough time, so it was clear to every participant. No hands-on activity was carried out by participants.

Other multisensorial experiences

It was possible to see and touch the crops, and the roots of rapeseed.

Discussion opportunities and negotiating conflicting points of view

There was a facilitator at each of the 10 topics, as well as a person who guided the group from one spot to another. The facilitators/demonstrators were from the organisations that were responsible for the demonstration.

Open discussions between a few participants were stimulated and shared critical points of view were clarified so more people could understand. The rain probably minimized some discussions in the group. There were although lively discussions about the advantages of old and new wheat varieties, diseases of winter wheat (e.g. fungi) in different years, N fertilisation strategies for wheat with different qualities; N fertilisation strategies (e.g. before winter, slow release fertilisers) for rape; sulphur fertilisation of rape and application of herbicides in rape. Additionally, advantages and disadvantages of different wheat varieties were discussed in the field.

	participant answers				
	strongly disagreed %	disagreed %	agreed %	strongly agreed %	not applicable %
In my opinion, **there were interesting discussions** during the demonstration.	6	8	47	33	6
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	3	9	46	29	14

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	1/6	3/6	2/6	0
If participants **didn't agree with each other during discussions**, somebody (me or somebody else) **tried to reach consensus** between them.	0	2/6	4/6	0	0

3. Engagement during the event

Participants all seem to know each other well, but are not close friends. Demonstrators act open and friendly, but not as close friends with the participants. The host farmer was also a demonstrator. Many of the participants said they came because of the host farmer.

	participant answers				
	strongly disagreed %	disagreed %	agreed %	strongly agreed %	not applicable %
I **felt actively involved** during the whole demonstration process.	0	22	59	19	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	3	5	57	30	5
I could **relate well to other participants** (because they have an agricultural background similar to mine).	3	1	54	32	0
A lot of the **other participants** are **part of the same farmer network** as me.	8	17	47	28	0
I felt like I could **trust the knowledge of (most of) the other participants**.	3	19	33	42	3
The demonstration **felt like an informal activity** to me.	3	8	49	41	0
I thought **the host farm was comparable enough to my own farm**.	0	28	39	31	3
I had the feeling the **demonstrator was like one of us.**	3	11	56	31	0
I had the feeling **I could trust the demonstrators knowledge**.	3	6	58	33	0
I **got along very well with the demonstrator.**	3	11	51	31	3

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were **participants** (farmers, advisers, researchers etc.) **involved in the overall development of this demonstration**? If yes, how?	2/6 answered yes, by discussion and involvement in the planning of the demo event.				
Most of the **participants were well known to me**.	0	2/6	4/6	0	0
A lot of the participants **are part of the same network as me**.	0	2/6	4/6	0	0
The demonstration felt like **an informal activity** to me.	0	0	2/6	4/6	0
I think the **host farm** was **well suited** for this demo.	0	0	0	6/6	0
I **got along well** with the participants.	0	0	1/6	5/6	0

T2: Learning outcomes

Explained knowledge was sufficiently understandable and practical skills were sufficiently addressed to foster maximum uptake by participants. There was no clear evidence that common methods or ways of thinking on farming and/or on learning were questioned. So at the actual demonstration critical thinking was not fostered clearly, but this happened extensively afterwards when attendees were having food

and drinks together.

	participant answers				
What would you **ideally like to learn** today?	most answers contained: crop protection; effects of plant production products, experiments on and characteristics of varieties; drought on arable land, tips, practice-oriented information and solutions, current situation in cereal production; results for experiments on sowing density; indicators for yield level; how to improve arable farming on the own farm				
	strongly disagreed %	disagreed %	agreed %	strongly agreed %	not applicable %
The **demonstration met my expectations** regarding what I wanted to learn.	3	8	50	39	0
The **demonstration exceeded my expectations.**	6	22	36	36	0
I felt surprised at some point(s) during the demonstration.	3	17	58	28	0
I obtained a clearer understanding of the topic(s) demonstrated.	3	8	58	31	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	3	8	58	31	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	8	6	61	25	0
I **reflected on my own point of view** at some point during the demonstration.	3	14	59	24	0
I learnt about **the principles underlying a practice**.	3	11	56	25	6
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	6	21	44	26	3
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	3	26	43	23	6

	demonstrator answers				
what do you **intend for the particpants to learn** today?	getting to know new products and new techniques in crop production; agricultural tools for the protection of soil and water; presentation of new varieties; practical experience				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	1/6	5/6	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	2/6	3/6	1/6	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	4/6	1/6	0	1/6
I obtained a clearer understanding of the topic(s) myself.	0	3/6	2/6	0	1/6
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	1/6	4/6	0	1/6
I **reflected on my own point of view** myself at some point during the demo.	0	3/6	2/6	1/6	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	1/6	4/6	1/6	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	0	3/6	3/6	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	0	1/6	4/6	1/6	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	0	0	5/6	1/6	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,9 on 5, participants rated the event overall as effective. Everybody who participated in the surveys would recommend the demonstration. They stated as most effective characteristics of the event: exact results from the experiments; the host farmer; good information; field walks; many participants; broad scope; precise experiments and demonstrations.

Most had no suggestions for improvement. Only three commented with: more efficient grouping of participants; precision farming for next generations and 'changes'.

Demonstrator:

The demonstrators reported as most effective characteristics: the practical relevance, variety of experiments, only interested farmers as attendees, lots of experts as demonstrators, the broad scope, the exact experiments and information about listed varieties.

Observed points of improvement

As points of improvement, the demonstrators stated none.

Observed main strong points of the event:

The event was very well structured and organised with guided field walks and printed guidebooks. The host farmer is very interested in research and cooperates with various networks. Another strong aspect is the host farmer`s focus on knowledge transfer not only to farmers but also to pupils. The different demonstrators were recognised by the participants as trustworthy and the participants felt as if they could actively participate.

6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY Austria: Kastenhuber

Taru Sanden, Agnes Schweinzer, Heide Spiegel, AGES

The farm of Maria and Franz Kastenhuber (50 ha arable land, 140 fattening pigs) has a long history of demonstration activities, ranging from various crop trials on fungicide and growth regulator tests and experiments on soil and crop protection. The farm is working closely with the agricultural chamber and AGES leases parts of the farm for its trials. Annual field days with 500-800 participants are organised since 2006.

Objectives

- knowledge transfer for local farmers and agricultural schools
- collaboration with research partners
- presenting innovative results and conclusions independently from agricultural industry

Motivations

- 'curiosity in new ideas' (direct quote from the host farmer)
- new perspectives for agriculture

Topic selection

- in consultation with research institutes and the agricultural chamber
- according to the host farmer`s personal interest

Audience & participation

- mostly local farmers recruited from agricultural networks, advisors, researchers
- local television channel
- free-of-charge participation

Demonstration set-up

- guided field walks
- 10 experiments, spatially and thematically separated
- researchers and farmers as demonstrators
- printed field guidebooks including results of the presented experiments
- predominantly top down approach
- informal relationship between demonstrators and participants

Evaluation peer-to-peer learning environment (field day, 13.06.2018)

- 350 participants in total (split up in groups of approx. 30-50)
- few hands-on tools (testing nitrate levels in water)
- some multisensory activities (touching and looking at crops and roots)
- little time for formulating questions
- lively, but limited discussions in smaller groups (maybe due to heavy rain)

- well structured and organised demo, open minded host farmer
- field day is organised once a year by the farmer himself without funding
- keen interest of local farmers and promotion in agricultural networks, mostly positive feedback from participants
- participants considered the demo's content relevant to their own situation
- fostering of single loop instead of double loop learning

PLAID

AGRIDEMO

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AGES

Austria Case Study 2

1. Background

Network

In CS 2 the main network actors were BOKU (University of Natural Resources and Life Sciences, Vienna), FiBL Austria (Research Institute of Organic Agriculture), farmers, Bio Austria (umbrella organisation for organic farmers), the host farmer and AGES. The host farmer mentioned a strong interaction between all these actors.

Farm facts and location

The farmer, A, is located in Absdorf in Lower Austria. He stopped ploughing 25 years ago, and converted his farm (80ha arable land, 10ha grassland) to organic cultivation in 2006. Nutrient management is done only by crop rotation without any fertiliser (even no compost). In 2010 A co-founded VERMIGRAND Naturprodukte GmbH. The company produces organic fertilisers and peat-free organic soils. The research on his farm focuses on composting using earthworms, soil-health and agroforestry.

Details about the event

The organisation of the event was cooperation between FIBL, BOKU, Bio Austria and the host farmer. The scientific actors FiBL and BOKU provided basic scientific information for the farmers and the host farmer. The host farmer transfers practical knowledge e g. trial results and experiences about the Roller crimper method to the participants. Farmer to farmer learning was mentioned as an indispensable basic for discussion between peers. Participants were recruited from the local work groups of Bio Austria and the host farmer himself.

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 interviews with 2 Programme interviewees and 1 Farm level interviewee, the host farmer. 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. This data is sourced from 6 pre-demonstration participant surveys, 1 pre-demonstration facilitator survey 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.

Finally, workshops were organised in September 2018 with the aim to introduce the project Agri-Demo-F2F and the two Austrian case studies in detail to members of the agricultural chamber (WS 1) and to demonstrators and participants of the demo events as well as two external stakeholders (WS 2). Furthermore, the workshop participants, who have experiences in demonstration activities in their provinces, were asked to contribute to key structural/functional characteristics of effective on-farm demonstrations. Afterwards, they discussed about 'barriers' (issues/challenges) and 'drivers' of on-farm demonstrations in Austria and gave examples for best practices from their regions.

3. Structural Characteristics

T1: Programme/network level

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

Two associations with special interest on Organic farming are referred by the two Programme Interviewees: BioAustria (Austria's umbrella association for organic farming) with an executive board out of farmers and FiBL Austria, a non-profit association with an executive board and a managing director.

Bio Austria

> Bio Austria as a network of organic farmers has several farmer work groups in all federal states, each one of which is coordinated and supported by a so called 'organisation farmer'. In total Lower Austria it has 80 work groups with one leader each (Programme Interviewee 1).

BioAustria is responsible for the organisation of field days. In general, the leader of a work group or an adviser from BioAustria is actively involved in demonstrations, while some actors may assume multiple roles.

> I act as organisation farmer, adviser and demonstrator. (Programme Interviewee 1)

2. Main actors involved at Bio Austria and respective roles

'Organisation farmer' or working group leader's role

The organisation farmers often organise field days or meetings with the work groups and inform advisers concerning date and content of the field days. Working group leaders act also as demonstrators (Programme Interviewee 1).

Advisers

Advisers act as demonstrators, recruit new demonstrators from farmer work groups, decide on the suitability of a specific field for a demonstration, support and organise demonstration events and topics. Working as an intermediary, they suggest topics related to participants interests.

> Advisers are the main players... […]. It is up to the host farmer to offer which fields are visited during smaller field days. I have to decide if these experiments fit with the demonstration programme and I act as the demonstrator. The host farmer provides his fields for the event but does not necessarily have to be present. (Programme Interviewee 1)

> We discuss about demo events at our adviser meetings. If drought was an issue for participants, for example we try to include this topic in the next field day. (Programme Interviewee 1)

Actors' collaboration

The selection of farmers to host demonstrations is a collaboration between a work group leader and an adviser.

> First of all I arrange a meeting with a work group leader for discussing potential topics and targeting a date. According to that I ask suitable farmers. (Programme Interviewee 1)

The selection of demo goals and objectives are decided on different levels.

> Namely, the executive board, the assembly of delegates, various adviser meetings and training courses in Austria's federal states as well as the agricultural chamber concerning education issues decides. Objectives may vary between adviser groups and federal states.

Fibl

Fibl staff, work closely with both the agricultural chamber of Lower Austria and BioAustria, organising and supporting field experiments and field days on farms.[..]. They are active in several phases, such as the event organisation and propagation, feedback through surveys, new farmer hosts recruitment etc.

> The chamber and I (researcher) organise field experiments and field days on farms. We present the experiments, goals and results if already available. The farmer and owner of the farm presents the backstory. Sometimes also the leader of a BioAustria network group or an adviser from BioAustria is involved. (Programme Interviewee 2)

> We refer to the network of the Bionet project where relevant information is available and we invite farmers to participate also further events. We also recruit them to become part of the Bionet network and as a further step intensify the collaboration. (Programme Interviewee 2)

Networking

Bio Austria and Fibl are well connected both nationally and internationally.

> On international level we (Bio Austria) are well connected with other organisations, NGOs, retail chains and companies related to organic farming in the EU. For this issue we have a special department. On national level we cooperate with NGOs, retail companies, gastronomy, beekeepers, viticulturists, direct marketers etc. (Programme Interviewee 1)

> We (Fibl) are very well connected to all kinds of advisory services in the field of agriculture, like the agricultural chamber or BioAustria. We also cooperate with research institutions like Boku* or Raumberg Gumpenstein. There is also a network of farmers in the Bionet and Biobo projects who are interested in conducting experiments on their own field. On the international level we are in particular connected to the Fibl institutes in Germany, Switzerland, France and Brussels. Furthermore Fibl Austria is in contact with organic farming associations in Germany and Switzerland. (Programme Interviewee 2)

*the Boku Vienna (University of Natural Resources and Life Sciences, Vienna

Other actors

Host farmer

According to the Programme Interviewee 1, the host farmer's role in a demonstration may vary from some oral presentation to total absence. On the other hand Programme Interviewee 2, referred to a more actual role of host farmers.

> Host farmers are involved in case of bigger events, when preparing a pit with a soil profile for example and giving some oral presentation. [...] It is up to the host farmer to offer which fields are visited during smaller field days. I have to decide if these experiments fit with the demonstration programme and I act as the demonstrator. The host farmer provides his fields for the event but does not necessarily have to be present. (Programme Interviewee 1)

> Host farmers are involved in individual demo activities as well as in the overall demo programme. Concerning field days, host farmers present experiments from our project but they also present other topics that are relevant on their farm. This programme is planned beforehand with the host farmer. (Programme Interviewee 2)

Researchers, experts and companies

Both programme interviewees referred to the involvement of researchers, experts and/or companies in the preparation of a demonstration event and its content.

> Researchers and companies are invited to meetings in the work groups for the content of the field days." [..] "In case of bigger events with presentations of researchers, links to further information are shared. (Programme Interviewee 1)
>
> For field days with very special topics and experts we try to gain as much information as possible in advance in order to provide useful discussions during the event. (Programme Interviewee 2)

Target Audience

Both programme interviewees stated that the main participants/audience are organic growers and especially Bio Austria members, and farmers in transition to organic practices. Nevertheless, one of the two interviewees referred also to a wider stakeholder participation during demo events.

> The main participants are the farmers of Bio Austria members. We also try to recruit interested farmers that have not converted to organic agriculture yet. My audience are always organic farmers. (Programme Interviewee 1)
>
> First of all these are organic farmers but also other interested people, s, researchers and representatives from the public body with relation to agriculture. . **[...]** .The most effective way is tapping into already existing networks from projects or from the work groups of BioAustria... [....] Some demo activities focus more on newcomers that have recently converted to organic farming, others especially focus on women in agriculture. (Programme Interviewee 2).

T2: Farm (event) level

The host farmer of this case study has a strong affinity to research and he cooperates with universities by implementing research on his farm and transferring knowledge since 15 years. The host farmer has referred to the following actors and respective roles.

1. Host farmer role

The case study host farmer is always involved as demonstrator. However his involvement varies according to who organises the event.

> Sometimes other institutions organise demonstrations on our farm. Then, organisation and advertisement is up to them but I'm still involved as demonstrator. [...] If partner organisations organise a field day on my farm they give the main presentation but I'm always involved at least as demonstrator. Researchers and advisers are the organisers of the demo events. (Farmer)
>
> Our workers are involved in preparing field days or excursions. Besides mainly I am involved. I have to prepare information material or presentations, take time for the events and think about the programme depending on the weather. (Farmer)

The host farmer is also involved in demo topics selection, usually in collaboration with the institutes who organise the event.

> Topics are selected by the organisation team, including the members from my cooperation institutions and myself. I usually don't organise demo events on my own. (Farmer)

In this specific demo the host farmer, acted as both a host, demonstrator and a facilitator of the event (Observation Tool).

2. Participants – target audience

The target is generally farmers and mainly organic farmers. Nevertheless a wide variety of stakeholders has been reported to attend the farm's events. Apart from the host, farmers are not involved in the overall development of the demonstrations.

> On the one hand these are farmers, but due to our holistic approach also pupils, students, kindergartners. […]. Nevertheless, according to these institutions' ethos the focus group are organic farmers as well as students who focus on organic agriculture. […]I have a broad audience from kindergartners to international researchers. (Farmer)
>
> In general farmers as participants are not involved, except the host farmer. (Farmer)

3. Networks

The case study demonstration farm is not part of a programme or a wider network nor is connected to other demo farms. However, the host farmer is well connected to research and project boards and in that way he has the opportunity to use this kind of networking. Many of the institution he collaborates with are networks or work with networks.

> Hitherto our farm has not been connected to other demo farms but we are cooperating with research institutions or BioAustria. For example the next IFOAM conference takes place in Vienna in September. In the course of this BioAustria organises a demo event on our farm. Fibl organises excursions on flowering strips, Bioforschung Austria on agroforestry or Boku on roller crimper. We are also cooperating with schools, some of them (agricultural schools in lower Austria and Salzburg) visit our farms regularly. (Farmer)
>
> I'm in the consortium of the Best4Soil project and involved in the OK-Net Arable project as farmer. In case of the latter one I organised a conference that also included demo activities, with 120 participants from 15 countries on our farm last year.[…]. I'm glad to have access to research, e.g. EIP-AGRI and as member in 3 focus groups (organic farming, soil borne diseases, carbon sequestration.

As these two associations, Bio Austria and Fibl, have a big geographic coverage all over Austria, through this collaboration the farmer gains attendance and support. Both associations work with pre-existing locally based initiatives, groups and networks to host demos as well as for outreach and recruitment/attendance.

4. Resources, finances and incentives

The case study demonstration farmer is not funded for his demo services, but aims at some funding arrangement in the near future.

> Till now there are no funding arrangements but due to our increasing demo events we will have to organise them more professionally and also ask for funding arrangements. (Farmer)

However when collaborating with some institutions or associations like Bio Austria and Fibl or a funding programme, he has the opportunity of some kind of compensation.

> There are funding programmes from the ministry, the federal states or the European Union with a term of 3 to 5 years. [..]Yes, financial support is possible, because demo events can be part of a funding programme. (Programme Interviewee 1)

> Funding is only on projects, without any core funding. Fibl in cooperation with the agricultural chamber or BioAustria supports with the organisation of the field day. Farmers get a small financial compensation. (Programme Interviewee 2)

5. Location and layout

The Grand Farm is an average size farm located in Absdorf, Lower Austria, cultivating cash crops, which are sold through national product dealers. The farmer applies stockless farming and crop rotation: lucerne (2 years)-wheat-maize-hemp-soja-rye-mixed crops- and also catch crops (Post host farmer Interview).

The design of the demo/test area includes flower test strip, field experiment for roller-crimper with 4 replicates of each treatment. The farm has comparative layouts for the replicated field experiment plus several fields are managed by no-tillage (observation tool).

Travel time of farmers to reach the demo farm ranged from 15 to 35 minutes, with an average time close to 25 minutes. Most participants have rated their travel effort to participate as rather easy.

6. Frequency, duration and special offers of the event

The specific event, occurred in19 of July 2018, in collaboration with the advisory service of BioAustria (post survey demonstrator interview). The event was designed within the framework of a scientific project (pre survey demonstrator interview). Its duration was 4 hours (from 15.00 to 19.00).

> In general, the host farmer holds one-off events at his farm, but depending on the topic, a series of events can be also organised. Overall, 20 to 30 events are organised at his farm per year (Farmer).

The farmer offers some minor arrangements when holding an event, which he plans to expand and organise better in the future.

> I offer water in small glass bottles. For the future we are planning a sitting together after the events in a restaurant close to our farm. (Post host farmer interview)

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

The Farmer claimed to receive no funding for demonstration activities, although he noted that the increasing demand for demonstration events and the professional standards they were expected to deliver them, meant they were going to ask for funding arrangements.

> Till now there are no funding arrangements but due to our increasing demo events we will have to organise them more professionally and also ask for funding arrangements. (Farmer)

Whilst the Programme Interviewee recognised that financial support was available through funding programmes, he also noted that in receiving funding, demonstration events became more formal and required much more structure. He therefore expressed a preference for more informal approaches.

> Yes, financial support is possible, because demo events can be part of a funding programme. But for this purpose some organisational effort like invitations or attendance lists are necessary. That's why I prefer the more flexible way with email and SMS. (Programme Interviewee 1)

2. Motivations for host farmers

The interviewees listed a variety of motivations for hosts. The Farmer was motivated by learning and supporting other farmers in learning about specific topics and accessing the cutting-edge research on specific topic areas.

> The aim of these 3 main topics is supporting farmers with research by investing in soil health and providing efficient methods for gaining higher gross margins for example. But conducting research on climate protection, pollution prevention or promoting biodiversity is equally important. (Farmer)

The Farmer also talked about wanting to respond to the challenge of knowledge transfer within the agricultural community as being a key motivation for him.

> The main reason is that knowledge transfer is difficult in the field of agriculture [...]. That's why knowledge transfer is my main motivation. (Farmer)

The Programme Interviewee also described **a range of motivations for farmers**. In the first instance, he mentioned how farmers were simply motivated by a desire to learn new things, including recommendations and advice on things – in particular, things that had gone wrong. He also talked about how some farmers were motivated by being selected to be demonstrators; this is seen as an honour and privilege in the farming community and should not be underestimated.

> Some farmers like to host events because they know that they will learn new things. Some are recruited by myself and maybe feel honoured. Host farmers like to show best practise examples or also failed experiments in order to get recommendations for improvement. Discussing with other farmers and problem solving is an important point. Furthermore I try to avoid possibly arising costs for the host farmer. (Programme Interviewee 1)

3. Motivations for participants

The range of motivations for participants tended to be **oriented around learning and the benefits to their own farm practice**. On a more practical note, Programme Interviewee 1 suggested that access to machinery was often a key motivation for participants.

> Most of them try to benefit from demo events, in the term of gaining new ideas, working more efficiently, having higher gross margins or coming up to environment-related goals. (Farmer)

> Participants want to see and learn something new. Further trigger factors are the attendance of researchers or companies with machinery exhibitions. (Programme Interviewee 1)

Participants themselves stated as main reasons to attend: get to know something new; personal interest; I`m also cooperating with the host farmer in another project; exchange of experiences, get to know new cultivation methods; interest in mulch seeding; new technologies; interest in no-till technology.

4. Advertising and recruitment

In terms of advertising, the Farmer noted how advertising was the responsibility of the Programme level.

> I don't have much experience in this field because most advertisement is done by my cooperation institutions but in my opinion email is the best way. (Farmer)

At the Programme level, a range of approaches were used to advertise events as to target the widest possible audience. However, the interviewee was aware that the type of advertising needed to fit the particular event; he suggested that bigger events were best advertised in the members journal, where was smaller events required a more personal approach (e.g. email and text message).

> Bigger events with researchers as speakers are advertised via our member journal and newsletter some time in advance to address a wide audience. SMS and email are more effective for smaller events like field days and allow planning on a short-term basis. (Programme Interviewee 1)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Farmer felt his approach to demonstrating was 'Mostly top down' – because discussion was limited to the specific topic area or question to be addressed. There was some disagreement amongst the two Programme Interviewees, who conversely stated the approach was 'Entirely top down' and 'Entirely bottom-up', however, they both agreed that the approach differed 'depending on the approach of each adviser'. (Programme Interviewee 1).

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

Despite this lack of consensus about the nature of interaction, Programme Interviewee 2 told us how the programme was *informally open* to input from hosts and participants. He described a 'multi-stage process' that involved multiple stakeholders to agree on potential topics.

> Hosts and participants are involved in the selection directly and indirectly due to discussions and always having a sympathetic ear for the farmers/advisers and their concerns. (Programme Interviewee 2)

Although, host farmers had more *formal opportunity* to have input to and steer demonstrations and the demonstration programme.

> Host farmers are involved in individual demo activities as well as in the overall demo programme. Concerning field days, host farmers present experiments from our project but they also present other topics that are relevant on their farm. This programme is planned beforehand with the host farmer. (Programme Interviewee 2)

3. Focus and Design

The Farmer and both Programme Interviewees described the network as 'in between' a 'Whole farm' and 'Single focus' approach.

There was disagreement amongst those interviewed regarding the nature of the design of the programme; the Farmer felt the approach was 'a mixture' between an experimental and exemplary design, Programme Interviewee 2 felt the design was 'exemplary' whilst the Programme Interviewee 3 felt the design was 'experimental' in nature. All had a preference for a mixed approach to programme design, which was rooted in a desire to apply specific research findings to a broader farming context:

> We present single experiments but my approach as a researcher is to stay on top of things, bring the information on a broader basis and give a linkage to other research experiments on the same topic. Of course there is this experimental approach when presenting an experiment on a field day but we also give further exemplary information on relevant research topics. (Programme Interviewee 2)

The Farmer and two out of three Programme Interviewees felt the network approach was also 'a mixture' between an experimental and exemplary design. However, the Farmer felt that a more 'experimental' approach would better fit his farming ethos. All Programme Interviewees recognised the importance of the Farmers' ethos and own preferences in shaping the delivery of demonstrations.

4. Ideal group size

There was a strong consensus across the Farm and Programme levels that optimum group sizes should be kept to around or under 20 persons. This allowed for better communication (without the need for a microphone) and allowed more/better access to activities, tools or machines. It was also felt to allow discussion between participants.

> 20 persons per group are most effective because this group size is optimal to handle without a microphone. Moreover no sub groups emerge but still a good group dynamic is ensured. (Farmer)

> 20 persons is an optimal size. In case of more participants acoustic becomes an issue and not everyone can try out hands on or multisensory tools. A group of less than 20 participants diminishes lively discussions due to lacking knowledge exchange. (Programme Interviewee 2)

T3: Enabling learning appropriate to purpose, audience, context

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

The Farm and Programme level interviews revealed the importance of 'doing' and 'seeing' as part of a *varied* day.

> Looking in a soil pit is always part of our events, sometimes we also have machinery exhibitions. They are very effective for attracting participants' attention. (Farmer)
>
> A technical presentation in combination with a field walk, no matter in which order, is a good solution. Presenting some outlandish issues is effective too. (Programme Interviewee 1)
>
> Giving a short overview and some explanations on what will be presented should be the beginning. Usually a field walk follows. In the end there should be enough time for discussion with the participants. (Programme Interviewee 2)

The Farmer and one of Programme Interviewees listed the ability to support or prompt 'Problem solving' as the most important factor in delivering demonstrations.

> Problem solving is the most important aspect [...] because this is exactly what my work as adviser is all about. Farmers contact me because of having problems and I try to give advice. (Programme Interviewee 1)

The additional Programme Interviewee stated it was having opportunity for 'Participants to ask questions and talk openly' which he felt was a precursor to being able to problem solve.

2. Taking into account variation in learning

The Farmer talked in detail of how he adapted his approach to fit different learning styles and levels of prior knowledge. By using prior knowledge of the group, he adapted his presentations according to their skills and backgrounds. He also ensured he could account for differences in prior knowledge by starting at a low baseline. Although this is effective, there is scope to develop this approach to differentiation given the Farmer is so receptive to this idea.

Programme Interviewee 2 expressed a similar level of understanding of accounting for variation in learning and accommodated it in a similarly efficient but low-level way. There was no mention of the way that different participants might prefer to learn. Variation in learning needs is an important theme amongst demonstration programmes that target or cater for farmers converting to organic as there is arguably more learning to do.

> In case of many newcomers in the field of organic agriculture we try to present more basic information [...]. The breaks in between the presentations as well as the discussions after the event are used for question time for those participants that are on a lower knowledge level. (Programme Interviewee 2)

T4: Effective follow-up activities

1. Follow-up activities and materials

The Farmer did not continue to engage with participants after the event, claiming he 'didn't want to push anybody' to continue their involvement.

At the Programme level, the Programme Interviewee described an ongoing process of engagement, where farmers are referred to the Bionet project network, part of which, they are invited to participate in future events.

> They may even be invited to participate in future research and collaborate with them. (Programme Interviewee 2)

A range of follow-up materials were available. These included basic materials such as brochures, but more complex and specialists' results – particularly regarding the research project – were available on request.

> Yes, to some extent but only upon request, for example if participants ask for special results regarding some scientific study that I have mentioned. Information is provided per email. (Farmer)

> We point towards our Bionet brochure which provides information on the presented topics but also additional information. (Programme Interviewee 2)

Programme Interviewee 1 suggested that the types of materials available was linked to the size of the event. Only at larger events were materials such as host presentations or research data made available.

> In case of bigger events with presentations of researchers, links to further information are shared. We also point participants out to our newsletter and education programme. At smaller events usually no follow-up materials are made available. (Programme Interviewee 1)

2. Assessing impact

The Farmer did not assess the impact of his demonstration events.

At the Programme level, assessment was sometimes conducted. It was sometimes informal, i.e. 'Sometimes when visiting the event location again we ask what has been going on since our last demo event' (Programme Interviewee 1) but is also conducted on a more formal basis at the start of subsequent events.

> As indicator we use feedback from participants when we meet again at field days and reflect about former events. (Programme Interviewee 2)

5. Event analysis: effective peer learning characteristics

Event details

Only 8 farmers participated, which were all men who worked in the local area. There were only 8 presumably due to the fact that this field day was right in the middle of harvest time. All of them completed the pre and post survey.

	n° survey participants	farmer	farmer/pensioner	pensioner
occupations	*8*	6	1	1
age	*8*			
18-30				
31-40	1	1		
41-50				
51-60	3	3		
60+	4	2	1	1

T1: Learning processes

1. Communication initiation by participants

The event consisted of a very small group in which discussions were easy. More than 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. There was a lot of time for questions and a lot (>10) of questions were asked. A lot of participants, but not all of them, had no problem formulating their points of view regarding the topic during the event.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	1/8	6/8	1/8	0
I asked at least one question during the demonstration .	7/8 yes				
I shared my own point of view at least once during the demonstration.	5/6 yes				
I **felt encouraged to ask questions** during the demonstration.	0	0	4/8	3/8	1/8
When there were any discussions, **I felt comfortable sharing my opinion**.	0	1/8	1/8	5/8	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.	1/2	1/2	0	0	0
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	1/2	1/2	0	0
I **encouraged the participants to formulate questions** during the demonstration.	0	0	2/2	0	0

2. Interactive knowledge creation

Hands-on opportunities

No hands-on activity was demonstrated or could be carried out by the participants.

Other multisensorial experiences

The participants could smell the compost and they could feel it with their hands. It was possible to see the flower strips and field experiment up close.

Discussion opportunities and negotiating conflicting points of view

The farmer was both a host, demonstrator and a facilitator.

Open discussions were stimulated and given a lot of time. Most participants were involved. 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	0	6/8	2/8	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	0	0	1/7	3/7	3/7

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

3. Engagement during the event

Participants all seem to know each other well, but are not close friends. Demonstrators act 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	1/8	5/8	2/8	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	0	0	6/8	2/8	0
I could **relate well to other participants** (because they have an agricultural background similar to mine).	0	0	4/7	3/7	0
A lot of the **other participants** are **part of the same farmer network** as me.	0	0	6/8	2/8	0
I felt like I could **trust the knowledge of (most of) the other participants**.	0	0	5/8	2/8	1/8
The demonstration **felt like an informal activity** to me.	0	0	3/7	4/7	0
I thought **the host farm was comparable enough to my own farm**.	1/7	1/7	3/7	2/7	0
I had the feeling the **demonstrator was like one of us.**	0	0	5/8	3/8	0
I had the feeling **I could trust the demonstrators knowledge**.	0	0	2/8	6/8	0
I **got along very well with the demonstrator.**	0	0	3/8	5/8	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**? If yes, how?	1 said no. The other one said yes, because of the coordination with the advice service of BioAustria.				
Most of the **participants were well known to me**.	0	1/2	1/2	0	0
A lot of the participants **are part of the same network as me**.	0	1/2	1/2	0	0
The demonstration felt like **an informal activity** to me.	0	0	1/2	1/2	0
I think the **host farm** was **well suited** for this demo.	0	0	1/2	1/2	0
I **got along well** with the participants.	0	0	1/2	1/2	0

T2: Learning outcomes

Explained knowledge was sufficiently understandable. Practical skills were not sufficiently addressed to foster maximum uptake by participants. Common methods or ways of thinking on farming and thinking on learning were questioned and alternatives were shortly elaborated on in group. Many aspects of organic farming were discussed.

	participant answers				
What would you **ideally like to learn** today?	new production methods; seeds inoculation with compost tea; expertise in the roller crimper method; new knowledge and socialising; putting the no till technology into practice				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	0	4/8	4/8	0
The **demonstration exceeded my expectations.**	0	2/8	4/8	2/8	0
I felt surprised at some point(s) during the demonstration.	0	1/8	5/8	2/8	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	0	5/8	3/8	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	1/8	4/8	3/8	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	4/8	4/8	0
I **reflected on my own point of view** at some point during the demonstration.	0	0	5/8	3/8	0
I learnt about **the principles underlying a practice**.	1/8	1/8	4/8	2/8	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	1/7	0	4/7	1/7	1/7
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	1/8	2/8	3/8	1/8	1/8

	demonstrator answers				
what do you **intend for the particpants to learn** today?	beeing aware of alternative mangement tools; information concerning new cultivation methods				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	2/2	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	1/2	0	1/2	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	1/2	1/2	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	2/2	0	0
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	0	2/2	0	0
I **reflected on my own point of view** myself at some point during the demo.	0	1/2	1/2	0	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	2/2	0	0	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	2/2	0	0	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	0	1/2	1/2	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	0	0	2/2	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 4,5 on 5, participants rated the event overall as very effective. They would all recommend the event. They stated as most effective characteristics of the event: explanation of the tea-bag method; open performance; practical experience; topic; presentation of innovative cultivation methods and relation to practice and region.

Most had no suggestions for improvement. Only three commented with: stick to the time schedule; advertise event earlier; event should be continued in the following years.

Demonstrator:

The demonstrators reported as most effective characteristics: the participants and knowledge exchange between science and practice, transferring knowledge on current scientific results.

As points of improvement, the demonstrators stated: better scheduling and preparing and handing out information material.

Observed main strong points of the event:

The host farmer holds a research farm and strongly focuses on knowledge exchange. He cooperates with many national and international research institutions and is very keen on innovative agricultural approaches like the Roller-Crimper method. It was a small group which was great for discussion. More or less all participants joined discussions on the field and asked questions. All of them would recommend the event to others.

Observed main improvements:

Sticking to the time-schedule was mentioned by one of the demonstrators and the participants. Hands-on experiences could have been made possible in the context of this event and dissemination materials could have been provided.

6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY Austria: GRAND

Agnes Schweinzer, Heide Spiegel, Taru Sanden AGES

Alfred Grand (AG) stopped ploughing 25 years ago, and converted his farm (80ha arable land, 10ha grassland) to organic cultivation in 2006. Nutrient management is done only by crop rotation without any fertiliser (even no compost). In 2010 AG co-founded VERMIGRAND Naturprodukte GmbH. The company produces organic fertilisers and peat-free organic soils. The research on his farm focuses on composting using earthworms, soil-health and agroforestry.

Objectives

- research and development
- collaboration with research partners
- knowledge transfer of scientific results
- testing and modifying of new techniques

Motivation

- presenting innovative and alternative approaches and methods for agriculture

Topic selection

- in cooperation with research partners, universities, the agricultural chamber of Lower Austria and BioAustria (Austria's umbrella association for organic farming)
- since being a research and demonstration farm key topics are determined by the host farmer

Audience & participation

- scientists, farmers, citizens, pupils, journalists, local television channel
- recruitment from local work groups of BioAustria and the host farmer's personal network
- free-of-charge participation

Demonstration set-up

- oral presentation and topic overview by the host farmer in the beginning
- field visits by car
- 2 demonstrators (1 researcher, the host farmer)
- informal relationship between demonstrators and participants
- mostly top down approach
- no dissemination material
- no feedback surveys by the participants after the event

Evaluation peer-to-peer learning environment (field day, 19.07.2018)

- small group of 8 participants
- multi-sensorial experiences (smelling and feeling compost, viewing flower strips)
- exchange of knowledge within the whole group, sufficient time for questions
- all participants would recommend the event to others

- first organic no-till trials with the Roller-Crimper method in 2016 → cooperation with the Rodale Institute (Pennsylvania, USA)
- fostering of research cooperation on EU- and international level
- integration of values about sustainable agriculture
- AG is very keen on a strong relationship between research and practice

PLAID

AGRIDEMO

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AGES

Belgium Case Study 1

1. Background

Programme

The demonstration was inserted in the programme of the EURAF-2018 conference in The Netherlands, as a field tour on Agroforestry. The ambition of the EURAF Conference 2018 is accelerating inspiring transitions towards agroforestry as sustainable land use, including the role that agroforestry has to play in order to fight against climate change. Agroforestry is the integration of woody vegetation, crops and/or livestock on the same area of land. Trees can be inside parcels or on the boundaries (hedges). Agroforestry can be applied to all agricultural systems, in all parts of Europe. As 'European Green Capital 2018' Nijmegen is the perfect international podium to promote agroforestry. The prestigious title 'European Green Capital' is an initiative of the European Commission.

On EURAF-2018, farmers are more than welcome to exchange their experiences and know-how, also regarding the barriers in their transition to agroforestry, which will be considered by the European Thematic Network Project 'Agroforestry Innovation Network' AFINET linked to the EIP-AGRI. The aim was to conclude the 2018 conference with a firm and clear public statement to inspire and to encourage both farmers and policymakers. During the conference every participant was invited to contribute to this statement.

Funding and Governance

The programme partners include: EURAF; The City of Nijmegen (NL); Van Akker Naar Bos and AGROFORESTRY Nederland. EURAF's Executive Committee is composed of the Executive Board (elected by EURAF's General Assembly) and the National Delegates (elected by the national associations that are members of EURAF).

The EURAF conference asks for fees to participate in the conference and be part of the excursions/field tours, as the one to the demonstration farm in Belgium.

EURAF accomplished that incentives for the promotion of agroforestry plots have been introduced to the Common Agricultural Policy: Agroforestry practices are listed as Ecological Focus Areas and farmers can receive greening payments for such plots in pillar I (Reg. (EU) 1307/2013). The establishment of agroforestry plots can be supported through national or regional Rural Development Programmes in pillar II (Reg. (EU) 1305/2013).

Actors and networks

From the 250 participants in the EURAF conference 2018, about 40 attended the field tour at the Belgian Agroforestry farm. The visit was arranged by a member of the EURAF staff who is also vice-president for '*Van Akker naar Bos*', a Belgian and Dutch organisation supporting transition to agriculture more in balance with nature. The Belgian farm is part of an informal network, because the farmer is very active in different networks related the organic farming, so his name is known.

This was a one-off demonstration in the context of this conference. But the farmer has demonstrations at his farm for diverse groups on regular basis.

Event Farm and location

It is an organic mixed farm with livestock (Limousin beef cattle) and sheep, cereal crops, orchards and hedgerows. The farm is situated in the eastern part of Flanders. Farming in balance with nature is a key objective for the farm. In recent years, the farmer has invested significantly in agroforestry around his farm. Trees have been planted both in the meadows for grazing, and in the arable plots (alley cropping). He planted a large number of sweet chestnuts and walnuts in his pasturelands. Cattle and sheep graze his orchards, use the straw and some of the cereals. He is member of a farmer's cooperative. He sells his beef and grinds his cereals into flour in an old mill. He teaches on agricultural schools, receives a lot of

visitors to propagate biological farming and agroforestry principles, and is well versed. The farm is very active in demonstrations, hosting around 50 demonstrations each year, for a diverse audience (schools, citizens, farmers, researchers, etc.).

Event date: 29/05

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 (Level 1) and Farm level interviews with demonstrators/hosts (Level 2) to reveal how the functional and structural characteristics enable learning. Analysis is reported in Sections 3 and 4. Data is sourced from interviews with 1 Programme member, who was interviewed in June 2018 (not on the same date as the event). This Programme member organised the field tours during the EURAF conference and is part of the board of '*Van Akker naar Bos*'. For the event, we interviewed the host farmer, who was also the demonstrator and is very active in the organic farming community. He also teaches agriculture. 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.
3. Event tools and surveys (Level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 4 pre and post demonstration surveys for participants, 1 pre and post demonstrator survey, a post demonstration host farmer interview 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.

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. For the Belgian and Dutch cases, a workshop was held on the 9th of November.

3. Structural characteristics

T1: Programme/network level

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

The organisations involved in this case study include: EURAF, Van Akker Naar Bos and Agroforestry Nederland.

Van akker naar bos (VANB)

'Van Akker Naar Bos' (VANB) is a Belgian and Dutch organisation which aims to accelerate the transition to agroforestry or nature inclusive agriculture, by giving farmers a platform to facilitate that transition. Farmers are participating in the board of VANB, and it seems that in general, they hold a substantial role in the processes of the organisation.

VANB organises field excursions to nature inclusive and/or agroforestry farms, making use of the associated networks. As an organisation it also provides advises to any interested parties, concerning agroforestry.

> Yes with *'Van Akker Naar Bos'* we've done it more actually. We've done it now 3 or 4 times, that we just organised as VANB foundation, excursions to a nature inclusive farm or an agroforestry farm. VANB has already organised twice a conference about agroforestry, so we have created a network around that. From that network people join to these excursions. (Programme interviewee)
>
> People also come quite often to us for advice, because they notice we are quite active in that acceleration. (Programme interviewee)

EURAF (in collaboration with VANB)

The European Agroforestry Federation (EURAF) aims at promoting the adoption of agroforestry practices throughout the different environmental regions of Europe. It has about 280 members from 20 different European countries. Its Executive Committee is composed of the Executive Board (elected by EURAF's General Assembly) and the National Delegates (elected by the national associations that are members of EURAF).

VANB also organised demonstrations in collaboration with EURAF. The EURAF committee was responsible for the conference/scientific programme and VANB for the demonstration content, the supervision of the daily-demo programme and for recording useful observations from the field.

> We were responsible for the content, and the EURAF committee was responsible for the whole scientific programme and the assessment of the contributions and for the posters, etcetera, that was not the responsibility of the programme committee, we were as *'Van Akker Naar Bos'* responsible for the daily programme and that the speakers were there and especially the second day when the excursions were organised and how we took the content from the excursions with us to the end statement, that was also our responsibility, to guide the process to the end statement of the conference. (Programme interviewee)

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

Host farmer and demonstrator

The host farmer's responsibilities and roles vary, depending on each demo-organiser. Apart from being the demonstrator, it seems that sometimes they are engaged quite a lot in the demo-topic and content selection. Sometimes, the host farmer takes care is also involved in organising catering and tasting etc.

> Well, that varies. Sometimes it is an organisation asking if they can come by. Sometimes they do the catering themselves, sometimes they don't. Sometimes I do everything myself. For example if I organise a tasting, I organise it myself. Often *BioForum* (an organic farmers' association) is also involved. If they organise some actions, I attach my business on to theirs… A lot of times it is only me, but I also work closely together with another organic farmer, Koen, and he is also often involved, yes. (Farmer)

> We leave it also to the farmers whom we visit, because very often, farmers, they start telling what for them is the most important thing, which they tell first. We don't have a guideline for them how they should do it. In consultation with the farmers or teachers or with the practitioners, it's an organic way how it is structured. I can't say what is the most effective way. (Programme interviewee)

Most demonstration events organised in the specific farm include an introduction to farmer's own backstory, a field walk and sometimes a short presentation with some pictures (Post host farmer interview). However, it seems that the host farmer is not charged with responsibilities at the program/network level, and the overall demo development. His main role is hosting attendees and telling his story.

> No. When I'm talking as part of *BioForum*, then the people who work there professionally, they have to be able to say what I want them to say. And these people also want to know what is going on in the world of the organic farmers… We only want to know what is going on at the farms of the organic farmers …That's how it should work. That role is one I try to play very consciously, yes….The whole system of the farm and how I got here. (Farmer)

Target Audience/type of participants

Both Farm and Programme interviewees, stated that the demo-audience age and background varies (toddlers, pensioners, students etc). Farmers willing to transform their farm, are very motivated to attend too.

> Very diverse groups, from toddlers to pensioners. 20 percent are other farmers (…). I also get schools here. Also high school students, because in some cases, they have to for the official learning goals. (Farmer)

> …that is in the first place farmers, in the second place all other stakeholders that are relevant to speed up that acceleration, so also government people and researchers and teachers and let's say policy makers they are the main groups I think on which we focus our activities. And maybe also especially the young farmers, young people, they are more open to start a kind of nature inclusive farm, to support them yeah. (Programme interviewee)

I think the majority is also in the process of starting a nature inclusive farm or in transforming their own farm into a nature inclusive farm and they want to see a workable and feasible example of this practice. They are all in the process of starting up such a farm, so they want to see the examples. (Programme interviewee)

Network members as an actor

Network members are engaged also in the topic selection of the demo activities organised by VANB, as long as these topics are in accordance with VANB goals. Moreover, VANB network members join demos and excursions initiatives.

> VANB has already organised twice a conference about agroforestry, so we have created a network around that. From that network people join to these excursions. (Programme interviewee)

> It is not always set by us. We are also part of a big network. So sometimes you get nice ideas from your network and then we can decide yes that is a nice idea for VANB and then we jump on it. As long as it fits in our own aim of accelerating the transition we are open for everything. O yeah yeah, we hope that they join our network….that they see our website and that they come also with ideas on what we as VANB should do, or that they also participate in our next event. (Programme interviewee)

Practitioners and teachers

Teachers and practitioners are usually consulted on the content and other processes of demonstration activities before the events, in collaboration with VANB and host farmers.

> We leave it also to the farmers whom we visit, because very often, farmers, they start telling what for them is the most important thing, which they tell first. We don't have a guideline for them how they should do it. In consultation with the farmers or teachers or with the practitioners, it's an organic way how it is structured. I can't say what is the most effective way. (Programme interviewee)

3. Networks

Networks connected to VANB

VANB is well-connected with other agricultural networks and/or organisations, with its members being part of networks or collaborating with them. VANB networks (whether some or all of them, is not clarified) demand some kind of paid contribution in order to be a member. Sometimes, due to the events organised by VANB, new networks are occasionally formed.

> …that is mainly also through our personal networks. We are with 5-6 in the board of VANB and we all have a different network, because of previous experiences. We are a part of a big network. (Programme interviewee)

> For example, that course which we gave, that was also nice that the participants also formed some kind of network, and now one year later, there is still email contact between participants, who want to inform others that they started or want to ask each other a question. There is still interaction between participants who followed the course. So they use this network, and we use their network. (Programme interviewee)

> Yes now we have plenty connections to other networks. That's amazing, well, for example through this conference, we (VANB) have a quite strong connection now to EURAF. We also have a strong connection with Nijmegen, the city of Nijmegen, were the conference was. We have a nice kind of structural connection with Park Lingezegen, committee, in the area between Nijmegen and Arnhem and we help that committee also to develop agroforestry in that region of 1500 hectares… (Programme interviewee)

> O yeah yeah, we hope that they join our network. And that doesn't mean that they have to become a member and pay contribution. (Programme interviewee)

Networks connected to demo farm

The specific demo farm is connected with other knowledge exchange organisations beyond VANB and EUFRAS, which organised the specific event. However, the demo farm is neither part of a bigger agricultural network, nor of a demo programme. The events, although frequent, are occasional and one-off.

> Yes indeed. Inagro, ILVO. If it's about Agroforestry they have been here. BioForum also (held) demonstrations. (Farmer)
>
> Q: So your farm is part of a bigger agricultural network? No, the visits are always one-off. It's not really organised or fixed. You're not obligated within BioForum, you do it because of the feeling of solidarity and connectedness. (Farmer)

Nevertheless, the farmer indicated that he belongs to BioForum, through which he also attracts participants for the demos organised at his farm. He did not clarify though his specific role in that network (pre survey demonstrator).

> If participants are targeted in demo recruitment? Sometimes. Depending on who is the external organiser. If I do something myself I talk to my network, and that is very broad…What is the most effective way of attracting participants and advertising events? Talking to my network. (Farmer)

4. Resources, finances and incentives

The host farmer is not funded for his demo services by an external programme. However depending on the type of participants, a fee for attending the demo may be paid.

> Very often it is free of charges. When toddlers come have a look, I obviously won't ask money for that, but if rich service clubs come over, they will have to pay. Also if I do the catering, I tend to keep prices very low. Because then it is also promoting my products… (Farmer)

As the specific demonstration event occurred in the framework of VANB and EUFRAS collaboration, some kind of compensation was given to the demo farmer (it was not clarified in which form). While VANB doesn't seem to have available funding for the organisation of demonstrations, sometimes they offer some kind of compensation to hot farmers, a practice that seems to depend on each collaborative farmer. Again, a way indicated to compensate demo farmers were participant's fees.

> That's also quite ad hoc. With the EURAF conference, it was quite okay, but we don't have a structural funding or something like that. It's activity per activity. So sometimes farmers don't ask for it (kind of compensation), but sometimes they send an invoice, sometimes they don't, it depends a lot….Yes of course, we also ask money from participants for the excursions to organise it. So a part of that can go to the farmers. But sometimes farmers refuse this, and then this goes to the bank account of VANB and we organise other things with that. (Programme interviewee)
>
> We also ask money from participants for the excursions to organise it. (Programme interviewee)

Finally, according to available data, the host farmer didn't took any special training for the event. However, he has had some sporadic training days as a farmer (Pre demonstrator survey).

5. Decision-making process in organising demonstrations and its objectives

The decision-making process VANB follows in selecting demo topic is quite collaborative. Some topics are set by the VANB and others following farmers' feedback, on topics they are interested in.

> It is not always set by us... So sometimes you get nice ideas from your network and then we can decide yes that is a nice idea for VANB and then we jump on it. (Programme interviewee)

> We asked the participants: what do you like to learn? And we developed the course on the input of these participants on their own issues. SO everyone could say I would like to learn about this or that. So let's say half of the program of that course was in fact topics of participant, which were used to fill the whole course. (Programme interviewee)

Demonstrations are usually managed in a less structured way, with no strict guidelines to the host farmer. Moreover, VANB builds on participant farmers' and stakeholders' feedback to plan its further actions. Thus the overall governance can be characterised as mainly bottom up. However depending on each specific situation, the organisation may follow all approaches (from top-down to bottom up).

> We leave it also to the farmers whom we visit, because very often, farmers, they start telling what for them is the most important thing, which they tell first. We don't have a guideline for them how they should do it. In consultation with the farmers or teachers or with the practitioners, it's an organic way how it is structured. I can't say what is the most effective way. (Programme interviewee)

> Host farmers always involved in the development of the individual demonstration activities…we give them the platform and they can tell everything that they want. No strict guidelines. (Programme interviewee)

> Yes! Of course! (for feedback request) Because, of course we like to hear if it was a nice conference or course, of course that is the fuel for next activities. (Programme interviewee)

> Mostly bottom up. Three years ago we thought, farmers have to do it, so let's focus mostly on farmers. But now, we are Three years in existence, we see that it is everywhere... all stakeholders in Holland, on provincial level, municipality level, there is no shortage on interest in this. We are pragmatic in that sense, if it is needed, if there is interest… It is not as structuralised as we would like. It is not a straight line of development. It goes with a lot of curves. The most important thing is your own network. We would actually use all strategies, from entirely top down to entirely bottom-up. (Programme interviewee)

The demo farmer, sometimes adjust the topic and the content of each demo event to the specific needs of its audience.

> How are demonstration topics selected? By the interest of the audience together with what I want to say… Participants are involved in the overall development of the demonstrations. Some people have specific questions and then we talk about that beforehand over the telephone. So indeed, I work specifically towards my audience. Maybe even questions they don't know they have yet, because they don't know enough yet. (Farmer)

T2: Farm (event) level

The demonstration farm in Belgium was inserted in the programme of the EURAF-2018 conference in the Netherlands, as a field tour on Agroforestry. From the 250 participants in the EURAF conference

2018, about 40 attended the field tour at the Belgian Agroforestry farm. The visit was arranged by a member of the EURAF staff who is also vice-president of 'Van Akker naar Bos'.

The host farmer is member of a farmer's cooperative and teacher in agricultural schools. He is very active in different networks related to organic farming and he receives a lot of visitors to publicise biological farming and agroforestry principles.

The host farmer holds, generally, one-off events at his farm (Farmer), as was the one organised in the frame/for participants of the EURAF conference.

1. Practice/technology demonstrated

The topic of the demonstration was agroforestry.

2. Event Farm location and layout

The farm is situated in the eastern part of Flanders. It is an average size (50 hectares) commercial organic mixed farm with livestock (Limousin beef cattle) and sheep, cereal crops, orchards and hedgerows. Farming in balance with nature is a key objective and, in recent years, the farmer has invested significantly in agroforestry around his farm. Trees have been planted both in the meadows for grazing, and in the arable plots (alley cropping). He also planted a large number of sweet chestnuts and walnuts in his pasturelands. Cattle and sheep graze his orchards, use the straw and some of the cereals.

Travel time of farmers to reach the demo were 150 minutes for all participants, as all of them were attended the same conference at the same place. Most participants have rated their travel effort to participate as of average difficult. A participant focused on the quite a long drive; another participant, a farmer himself, mentioned how hard is for farmers to find financial support for conferences and field trips (Pre participants survey).

The demo-farm is characterised by the host farmer as a mixture of experimental and exemplary approaches, which is also what he really prefers to demonstrate at his farm. However, the farm does not follow typical experimental designs and/ or protocols. It seems that the farmer is 'freely' experimenting in different options concerning agroforestry and nature inclusive farming. (Farmer).

The specific demonstration event was structured around a proof of a concept[1] approach, with no comparative layouts, following a whole farm approach and showcasing combinations of agroforestry practices all around the land of the farmer. Thus, there were different examples around the farm but, as typical comparisons were missing, not comparable. (Observation tool).

At the specific event, the host farmer was also the demonstrator who shared his personal stories and experiences and showed everybody around the farm. (Observation tool)

3. Frequency, duration and timing.

The farm is very active in demonstrations, hosting from 5 to 50 demonstrations each year, for a diverse audience (schools, citizens, farmers, researchers, etc.).

[1] Showcasing alternative management practice not experimentally designed, which is discussed during field days or meetings to provide an understanding of how it was done and its outcome

4. Farm's infrastructure and further arrangements

In general, the farmer offers some arrangements when holding an event, like catering and tastings, organised by the collaborating organisation or by himself.

> Sometimes it is an organisation asking if they can come by. Sometimes they do the catering themselves, sometimes they don't. Sometimes I do everything myself. For example if I organise a tasting, it is completely in my own hands. (Farmer)

However, no specific arrangements (accommodation, catering, etc.) were made for the specific event. (Post host farmer interview).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

In the case of BE1, the farmer noted how he did not receive any significant payment by way of incentives, but sometimes – depending on the group – charged a fee when he had to put on catering. He also noted how providing catering at demonstration events provided him with an opportunity for to promote organic agricultural products.

> Very often it is free of charge. When children come to have a look, I obviously won't ask money for that, but if rich service clubs come over, they will have to pay. Also, if I do the catering, I tend to keep prices very low. Because then it is also promoting my products. (Farmer)

The Programme Interviewee reiterated that the funding for demonstration activities across the network was 'quite ad hoc' and was dependent on the group and the context. He recalled how sometimes they send an invoice, sometimes they don't, and it depends a lot. So whilst, there was no significant opportunity for monetary gain, farmers were not typically left out of pocket.

The network does not currently receive structural funding, and any money accrued is done so through event charges. Although it is important to note that – according to the Programme Interviewee – some farmers refuse to accept payment for demonstration activities:

> Sometimes farmers refuse this [money], and then this goes to the bank account of VANB and we organise other things with that. (Programme Interviewee)

2. Motivations for host farmers

As suggested above, money does not appear to be a key motivation for host farmers. The Farmer in BE1 claimed to be motivated by sharing good practice and 'telling his story'. In addition to this, he had some broader ambitions about changing agriculture and benefiting the farming community as a whole.

> I like to tell about what I'm doing. That's the main thing. That is very clear. I have to be able to tell my story, for sure. And secondly well, a very idealistic goal about me wanting to change agriculture. Somewhere underneath that is also my goal yes. And I want to tell this to other farmers. Like 'look, there are the mistakes, that's what you have to tackle. And these are possible solutions'. (Farmer)

The Programme Interviewee concurred, putting an emphasis on the opportunity being a demonstrator gives farmers to tell their story. The Programme Interviewee also highlighted the benefits to farmers too – such as growing their networks, which in turn makes them better placed to receive funding.

> So very often [...] they like to tell their story. They also have that aim for accelerating to transition. That's also a motivation for them. And I think also, their own networks will also grow when visitors come on their farm. That can have its advantages in the long run, for funding, or contacts or more visitors. (Programme Interviewee)

3. Motivations for participants

The BE1 farmer felt motivations for attending demonstrations were very varied – ranging from a simple 'afternoon trip' to people wanting 'very specific technical details'.

The Programme Interviewee felt farmers were more specific and relating specifically to improving their own farms or approach to farming.

> I think the majority are in the process of starting a nature inclusive farm or in transforming their own farm into a nature inclusive farm and they want to see a workable/feasible example of this. (Programme Interviewee)

The idea that farmers are motivated by a demonstration solving or addressing a particular problem they are experiencing did not come across strongly in the interviews. The motivations seemed much more varied. The Programme Interviewee claimed that "as long as it fits with our own aim of accelerating the [agricultural] transition, we are open for everything."

Participants themselves stated as main motivators to attend the demonstration: seeing experiences with examples of agroforestry; learning about agroforestry systems in Central Europe and discussion with farmers and other researchers.

4. Target audience

The target audience for demonstrations was very broad and encompassed audiences for more general farm open days, to more technical-oriented sessions. The farmer claimed the intended audience included 'everybody, from toddlers to pensioners'. Whilst the farmer estimated only 20 percent of those attending demonstration events were farmers, he noted how 'they tend to take up more of the time, because the information needs to go a lot deeper'.

The Programme Interviewee noted this diversity amongst target audience, but noted how it was *primarily* aimed at farmers.

> In the first place [it is] farmers, in the second place all other stakeholders […], so also government people and researchers and teachers and […] policy makers. And […] also especially the young farmers, young people, they are more open to start a kind of nature inclusive farm, to support them. (Programme Interviewee)

The Farmer claimed participants were sometimes 'informally targeted', i.e. through his own network, but the Programme Interviewee noted there was no formal targeting/recruitment of demonstration attendees.

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

There was some disagreement around the approach to designing demonstration activities within the programme between the Farmer and Programme Interviewee. The Farmer felt the nature of interaction in BE1 was more aligned with a top-down approach, whereas the Programme Interviewee felt it was more a bottom-up approach.

The Farmer noted how bottom-up approaches were time consuming and more difficult to achieve which was why he tended to deploy a more top-down approach:

> Bottom-up asks a lot of time. That process, to get [them thinking] their 'radars' spinning, is not very easy, that needs time. (Farmer)

The Programme Interviewee notes the transition the demonstration network has been through; only three years ago he recalls how the demonstrations were farmer-oriented and bottom-up, whereas now there is a lot more input from stakeholders and official sources, such as provincial and municipal levels. Whilst there was still a strong emphasis on what the farming community want and need, he recognised that it was not the only source of input – 'we would actually use all strategies, 1-4 [top down to bottom up'.

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

There was no formal platform for farmer involvement in designing/shaping the learning process at the individual demonstration level. However, the Farmer noted how he often spoke to prospective attendees prior to the event to help them get the most out of the event.

> Some people have specific questions and then we talk about that beforehand over the telephone. So indeed, I work specifically towards my audience. (Farmer)

According to the Programme Interviewee there are currently three farmers on the VANB board who get to shape the overall design of the demonstration programme/network. Whilst the Programme Interviewee suggested there was some discussion amongst the board members, which included farmers, about the programme design, he also noted this was often overshadowed by other things. Fitting the programme/network objectives with the research or contractual commitments of its members is an important thing to consider when trying to understand BE1 and its demonstrations. It also raises questions about the effectiveness of this approach; whilst it confers advantages, i.e. the use of members' networks and synergies with other activities they may be involved in, it could also mean the network is not responding to industry need because their members do not have the capacity to do so alongside their other commitments.

> Interviewer: How are demo topics selected? I don't know if there is a plan for this? I believe it depends on what is going on at that moment?
>
> Yes, exactly […] because for all of us in VANB, the network is a side activity. We all have our main jobs and you bring the networks from these jobs in VANB. I'm for example also a teacher at university and a staff member at an institute. And so I have my contacts and projects there. (Programme interviewee)

3. Focus

Both the Farmer and Programme Interviewee describe the network as 'Whole farm' focussed, deploying an approach that falls 'in between' experimental and exemplary approaches to demonstration. The Farmer told us how he emphasised the whole system because of the importance of the bigger picture to sustainable farming operations.

> I try as less as possible to single out stuff. It's the whole system that… well I can imagine that people who see something interesting here say 'let's try this too' and then it doesn't work, because you need the whole system. (Farmer)

The Programme Interviewee reiterated the importance of a broad approach, particularly to those interested in improving the environmental credentials of their farms.

> People who want to start a nature inclusive farm, they have a big list of questions, not only about the trees, crops or agricultural things, but very often more about the financing or how to get approval from the municipality, or how do you get the land to start your farm? So very broad, always very broad. (Programme Interviewee)

4. Ideal group size

The Farmer and Programme Interviewee generally agreed that a number under 30-40 is a good number to work with. The Farmer raised some interesting points regarding this number, specifically relating to the ability to be heard by this size group without straining his voice, but also that when the session is anything more than a 'one on one', economically it needs to bring in more people to be worth it.

> More than 30 doesn't work. 30 people is economically interesting, because you are telling it at 30 people at once. When you have a group of 40 or 50, it's not personal anymore like one on one, so it wouldn't matter if you add some more people. (Farmer)

> Well the maximum is around 40 I think, that's also what we did at the EURAF conference, because if the groups is bigger, then it becomes more difficult. (Programme Interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

Both the Farmer and the Programme Interviewee talked about the importance of balancing elements of the day in order to best facilitate interaction and learning, i.e. not spending too long on particular aspects of the day.

> First I tell them about the wider part, then we go and watch. So when the attention starts to drop, you have to stop talking and show them things. A bit of walking is then also involved. (Farmer)

The Programme Interviewee also noted how they typically left the design of the structure of the day to the host farmers.

> That should be a balance between a talk and practical activities, yeah. We leave it also to the farmers whom we visit. (Programme Interviewee)

The Farmer recalled how he might use a range of different materials and content – 'for example showing a PowerPoint with a couple of pictures because you cannot show every season in reality'. He also claimed that the materials he used differed according to the groups he is catering for. He noted the importance of getting attendees to search for/source the information themselves, because they are then actively engaging in it. On other occasions he will give attendees a short report.

> When we give it all to them on a silver platter, sometimes that is also not beneficial [...] so they can look it up if they want more information. But for some groups I gave them a short report. The group who arrives now, that are students and they have to take notes, so they don't need a report from me, they have to make that themselves. (Farmer)

[Q34a(F) & Q32a(P)] The Farmer felt the most important aspect of a demonstration day, was the inclusion of 'good quality expert advice and technical presentations', whereas the Programme Interviewee felt it was the freedom for 'participants to talk openly'.

> It is also not that much about techniques I think, it is far more on how the person can radiate something. (Programme Interviewee)

2. Taking into account variation in learning

Both the Farmer and Programme Interviewee claimed to plan for the variation in learning styles and capacities of attendees. However, this seemed to be aimed at content rather than how attendees might prefer to learn or the ways they might learn.

> We gave a course, it was 6 full days, and each day it was 2 hours of input from our side: like how to design a nature inclusive farm; and after that we asked the participants: what would you like to learn? And we developed the course on the input of these participants on their own issues. So everyone could say I would like to learn about this or that. So let's say half of the program of that course was in fact topics chosen by the participant. (Programme Interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

At the farm level, the Farmer noted how they did not continue to engage with participants after the event – "that is something I still want, but is not possible at the moment". However, this was a role assumed at the Programme level. Although the Farmer did not follow up with participants after the event, as above, he did sometimes provide materials such as reports or website links for participants to engage with after the event. There were also further materials and follow-up events on the programme website.

2. Assessing impact

The Farmer had no formal way of assessing the impact of his events, however – via his informal network – he is able to identify any impact.

> Yes, sometimes I visit farms of colleagues. Or people who tell me that when I'm in the neighbourhood, I should come by. And then if you see that, or when you're like me, occupied with cycles, and you see other farms adopting that, yes then they don't even need to tell me. Then I just know this idea came from me. And I even had it before that I go to a demonstration myself, and the one who is talking is talking about stuff that originally came from me. (Farmer)

There was no formal measurement of impact from the programme/network.

5. Event analysis: effective peer learning characteristics

Event details

4 participants filled in the surveys. All of them were male and didn't work in the local area.

age	ecologist	farmer	PhD student	total
20-30			2	2
30-40		1		1
50+	1			1
total	**1**	**1**	**2**	**4**

T1: Learning processes

1. Communication initiation by participants

In the whole group, between 10% and 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. Participants actually had no problem sharing knowledge, but the time wasn't sufficient. They were never put in small groups on purpose. During the walk, they did talk to each other about the topic. A little time was made for questions, but less than about 10 percent at the end of the demo. Some (5-10) questions were asked and there were a few participants trying to formulate their own points of view regarding the topic, but mostly time didn't allow for more. This was led by mostly the organiser of EURAF as a facilitator, but also by the host farmer.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	2/4	2/4	0	0
I asked at least one question during the demonstration .	3/4 yes				
I shared my own point of view at least once during the demonstration.	4/4 yes				
I **felt encouraged to ask questions** during the demonstration.	0	2/4	1/4	1/4	0
When there were any discussions, **I felt comfortable sharing my opinion**.	0	0	3/4	1/4	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	1	0	0	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

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

The participant could use sight and hearing to see and hear about 'working' agroforestry examples, no real hands-on activity was demonstrated or possible to carry out by participants.

The demonstration included being outside in the field while the farmer was showing them agroforestry examples and explained the implementation.

Discussion opportunities and negotiating conflicting points of view

There was not really a discussion facilitator, although at the end, the person responsible for the group (organiser of the conference), guided some discussion on triggers for change for traditional farmers to agroforestry.

Open discussions between a few participants were stimulated but not more than 10 percent of the time was available for that. They wanted to discuss and were very interested, but time didn't allow for it. Shared critical points of view were clarified/rephrased so more people could understand. This was the demo with the most sharing and discussion on critical points of view in Flanders that we observed, unfortunately time was the biggest issue.

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

3. Engagement during the event

The demonstrator and the participants act more distant than open. They came from a congress in the Netherlands, so the farmer and the participants didn't know each other beforehand. They were very interested though. The language and time barriers didn't give him the option to be very engaging on personal level with the participants.

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

The explained knowledge was sufficiently understandable but since it was not his first language, the farmer used very easy English, and sometimes translation help was needed, but he tried really hard to be clear. There was no focus on trying out practical skills. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. This was mostly about why and how to implement whole farm/agroforestry instead of traditional farming. This was shortly discussed among different participants and the host.

	participant answers				
What would you **ideally like to learn** today?	Use of fruit and nut trees in combination with other crops, livestock and practices; New solutions in agroforestry; issues about agroforestry practice; farmers skills and knowledge				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	4/4	0	0	0
The **demonstration exceeded my expectations.**	2/4	2/4	0	0	0
I felt surprised at some point(s) during the demonstration.	0	2/4	2/4	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	2/4	2/4	0	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	1/4	3/4	0	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	2/4	2/4	0
I **reflected on my own point of view** at some point during the demonstration.	0	0	3/4	1/4	0
I learnt about **the principles underlying a practice**.	0	1/4	1/4	2/4	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	1/4	1/4	1/4	1/4	0
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	1/4	2/4	1/4	0

	demonstrator answers				
what do you **intend for the particpants to learn** today?	How they can change to agroforestry and what agroforestry is				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	0	1	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	0	0	1	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	1	0	0	0
I obtained a clearer understanding of the topic(s) myself.	1	0	0	0	0
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	1	0	0	0
I **reflected on my own point of view** myself at some point during the demo.	1	0	0	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	0	1	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	1	0	0	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 2,5 on 5, participants rated the event overall as not really effective. Only 2/4 would recommend the demonstration. They stated as most effective characteristics of the event: a lot of knowledge available; Interaction with other participants and to see a different farmer approach from abroad.

Suggestions for improvement included: smaller and shorter demo's for more farmers; smaller groups or multiple guides (to show the farm); offer a short PowerPoint presentation and after that go to the field.

Demonstrator:

The demonstrator reported that he has no idea on what made it effective and said: 'I'm left behind with questions. The audience was very divers.' He said it could have been more effective if he had been part of the congress prior to the demo.

Observed main strong points of the event:

Very interesting farm and farmer. The farmer was a motivated speaker although he didn't knew English that well. You could notice his teacher skills very well. Interesting but unfortunately short discussions due to time restrictions.

Observed main improvements:

The group was too big for everyone to hear properly or take part in the short discussion time. The farmer had to speak English but he wasn't a very strong English speaker. A hands-on activity could have been integrated.

6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY Belgium: Natlandhoeve

Hanne Cooreman & Lies Debruyne, ILVO

The Natlandhoeve is an organic mixed farm, situated in the eastern part of Flanders. Farming in balance with nature is a key objective for the farm. The farm combines arable production, with both beef cattle (Limousin breed) and sheep. In recent years, the farmer has invested significantly in agroforestry around his farm. Trees have been planted both in the meadows for grazing, and in the arable plots (alley cropping). The farm is very active in demonstrations, hosting around 50 demonstrations each year, for a diverse audience (schools, citizens, farmers, researchers, etc.).

Objectives

- Demonstration of alternative farming model (show what is possible)
- Knowledge exchange
- Promotion of on-farm product sales

Motivations

- Idealistic: continuous improvement of the farming sector
- Networking with other organic/agroecological farmers, but also researchers and advisors, to explore new approaches
- Surprise people, trigger critical reflection by participants

Topic selection

- Depending on the audience, and is discussed beforehand with the organizing party
- Whole farm approach – organic
- Agroforestry

Audience & participation

- Very diverse audience: farmers, students, families, researchers, …
- Participation fee: depends on the audience, and if there is clear added value (knowledge) for the farmer

Demonstration set-up

- Bottom-up approach, demonstrations based on participants requests
- Farmer = part-time high school teacher, with good demonstration and storytelling skills
- Always combination of introduction (sometimes with ppt) & farm visit
- Set-up differs from demo to demo: ranging from 1-on-1 tours for colleague farmers, to tasting sessions of farm products for senior citizens
- There is no formal evaluation of the demonstration, but in most cases verbal feedback is sought from organizing party

Evaluation peer-to-peer learning environment (29th May 2018)

- Diverse group of approx. 40 students, researchers, farmers (participants of EURAF conference)
- Presentation based on drivers and barriers for the implementation of agroforestry in practice
- Prior knowledge was not absolutely necessary for the demonstration
- Host farmer received valuable input through varied experience and expertise of (international) participants

- Farmer has very strong intrinsic motivation for hosting demonstrations. The farm offers an excellent example of the possibilities for an agro-ecological farming system.
- No real structural support in Flanders for farmers who have an interest in hosting demonstrations.
- One-man show: farmer is central in organizing and conducting the demonstration. He has excellent didactic skills, and has specific tools and tricks to trigger the participants' attention
- Continuity in demonstrations on his farm is enabled by the farmer's elaborate network and presence in both the local and the organic farming community.
- Key areas to explore: structural support for on-farm demonstrations (besides projects) – business model, creation of local networks, development of demonstrator skills

PLAID

AGRIDEMO

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ILVO
Institute for Agricultural and Fisheries Research

Belgium Case Study 2

1. Background

Programme

The demonstration was an outcome of the operational group guided by Inagro on Controlled Traffic Farming (CTF) in organic farming. Inagro, a research and advisory centre in the West of Flanders, took the initiative for the Operational Group. Advisers from INAGRO have had several talks about CTF with individual farmers and machinery suppliers in recent years. In 2016, INAGRO implemented CTF on its own organic research farm. The formation of an Operational Group was the natural next step for the group to make.

Benefits of CTF have been proven in research and practice in recent years: controlled traffic lanes prevent soil structure damage and soil compaction in the seedbed between the tracks. This results in optimal growing conditions for soil-life and roots and better water storage capacity of soils. CTF also benefits mechanical weed control as fields are earlier accessible and there are no tracks in the seedbed. While these benefits are favourable for organic farming practices, lock-ins make the implementation on farm level not so easy and especially the feasibility for medium sized farms is questioned. In the Netherlands, several arable organic farmers successfully apply permanent CTF. In Belgium, this is not the case yet, but some farmers got inspired and are interested. They are at the base of this Operational Group.

The experiences of 4 cases in this operational group and current knowledge is synthesised in a report to inspire other colleagues and will be disseminated by means of a demonstration moment, some networking meetings and publications in written or digital agricultural press. As a main outcome, this project should make CTF more accessible and common in Flemish (organic) agriculture. This demonstration is an outcome of this operational group.

Funding and Governance

The Operational group is supported by the EU Rural Development Programme and the Flemish government. Participants also pay a small contribution themselves.

Since November 2015, professional users of crop protection products have to obtain a 'fyto license'. To extend this license automatically, the users have to attend a certain amount of training sessions. This demonstration counted as one of these training sessions, so attendees could register if they needed to follow the session for their 'fyto license'.

Actors and networks

About a 100 farmers, researchers and advisers attended this demonstration, organised by INAGRO and supported by the operational group in organic farming they are leading. The main target group were organic and non-organic farmers, to spread the knowledge on organic possibilities in weeding. This was a one-off demonstration.

Event Farm and location

The demonstration was organised on a farm situated in the western part of Flanders. In the past, the farm had mainly pig production activities, but has now converted to organic farming, and main activities are now arable farming and agro tourism. The farmer cooperates with his son, who has an organic dairy farm nearby. This demonstration was the first of its kind to be organised on this farm (organised by an experimental research centre), but the farm has previous experience with open farm days.

Event date: 08/06

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 (Level 1) and Farm level interviews with demonstrators/hosts (Level 2) to reveal how the functional and structural characteristics enable learning. Analysis is reported in Sections 3 and 4. Data is sourced from interviews with 1 Programme member and the host farmer, who were interviewed in June 2018 (not on the same date as 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.
3. Event tools and surveys (Level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 26 pre and 20 post demonstration surveys for participants, 1 pre and post demonstrator survey, a post demonstration host farmer interview 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.

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. For the Belgian and Dutch cases, a workshop was held on the 9th of November.

3. Structural characteristics

T1: Programme/network level

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

Inagro

Inagro, a research and advisory centre in the West of Flanders, is the main initiator and organiser of the case study demonstrations. As a research institute they apply and run several projects in which they involve their advisory board and/or the operational groups they guide. The specific demonstration was an outcome of such a cooperation with an operational group, through which they promote Controlled Traffic Farming (CTF). CTF processes were first implemented on Inagro organic research farm and thereafter the operational group have been formed.

The projects' that Inagro run, usually determine the overall demonstration topic. Topics are mainly decided by Inagro's advisory board, in which farmers are represented as well as Inagro's stuff who are experienced in the field. This allows for demonstration topics to coordinate to current needs and interests. Decisions are usually made in an annual or biannual meeting where farmers and additional/supporting people also take part.

Inagro has an active role concerning demo advertisement and participants' engagement using information newsletters. Inagro also requests some kind of feedback and evaluation in a verbal and informal way, through related questions and discussions. Inagro also publishes and offers some kind of follow-up materials after demos to the participants, such as flyers and brochures. Thus, Inagro plans, designs and organises these demonstration activities. The host farmers and other partners also contribute to these processes. Sometimes they also invite demonstrators from the supply chain. This was the case in the specific demonstration event.

> Q: How is the programme/network managed? A: The way I see it as head of the division, I'm a central figure in this whole system. We also have a technical advisory board, in which farmers are represented. They guide the programme with us. This demonstration day was also organised as part of the operational group. (Programme interviewee)
>
> Q: Are participants targeted in demo recruitment? A: Always. Now we aimed not to specific, farmers from every sector were welcome, because it's also relevant for them. It was made known through our newsletter (from Inagro). Sometimes we focus more on for example smaller groups of organic farmers only. (Programme interviewee)
>
> Q: How are demonstration topics selected? A: Yes, well we have the advisory board, we have the operational groups, also when the Flemish government spreads calls for projects, and then we look if we have something that fits. So these are some triggers from practice to process and put in a proposal for a call. And then it 'starts its own life'. So actually it's both bottom-up and top-down. (Programme interviewee)
>
> Q: Do you request feedback from demo participants? A: Yes. Well not enough actually. Now I didn't do it because I was busy with other stuff and you were walking around with your forms. So I'm very curious what feedback you guys are getting. We also did it before by spreading a feedback form, but that didn't give us much to work with. Usually I do it verbally in informal settings, but of course that doesn't give a global idea. (Programme interviewee)
>
> Q: Do you evaluate the demonstration activities overall? A: No. Not structurally, sometimes we ask some stakeholder what they thought from an activity. But for example it is not the case that we evaluate with the advisory board at the end of the year how all projects have been, we don't do that no. (Programme interviewee)

Q: Are follow-up materials made available to participants after demos? A: Yes. Flyers and brochures yes, they all know our website.

Q: What materials are provided during demonstrations? A: Inagro provided leaflets and stuff like that (Host farmer)

Q: How are the demo activities on the farm managed? A: Inagro asked me and I said yes. They did most of the organisation, I just opened up my farm, a barn for drinks afterwards and prepared a piece of the field for the machines to show the weeding. (Host farmer)

Q: Who are the main people involved in the demonstration activities and what are their roles? A: well the organiser from Inagro who did the talking, and invited the machine demonstrators. There were some other people from inagro to assist with the registration and the drinks afterwards and they put arrows on the street. Me I just presented myself and the farm, and opened up my farm and field. (Host farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? A: Yes. It was organised in dialogue between me and the organiser from inagro and the machine builders; I believe participation from farmers is important, but this demo was good I think. Everybody could see something useful for his or her farm. Sometimes I think there are too many 'public servants' during the demo's, they make a nice daytrip out of it, because they get paid to be there... So it should stay focused on farmers, demonstrations. (Host farmer)

Q: How do you identify/select relevant topics that will interest farmers? R: Yes, actually, the operational group is the result of an interest we experienced from the farmers. The operational group exists because of the need for information about weed control. So this was actually obvious. Within Inagro, these things get decided. Partly by the advisory board, but also from other people working at Inagro, what do we experience when we go out in the fields? And in that way we decide what we are able to do this year and what are current issues? Hanne: So are there farmers involved in this advisory board or how this that work?
It's an annual meeting, or 2 times a year, with mostly farmers, with some supporting people. (Programme interviewee)

The operational group

As already mentioned Inagro formed and guides an operational group and through this collaboration the Controlled Traffic Farming CTF are promoted. The operational group consists of 10 farmers and is active since 2 years. The operational group contributes to the adaption of the topics to farmer's interests. Finally the operational group members' sometimes involve other businesses/farmers in relation to the issues promoted through the demonstrations and in that way they contribute to the post-demo engagement of participants.

Our farmer who hosted this demo, he was part of an operational group of 10 farmers who were searching to optimise. The machines are all expensive. They were looking how they could maybe organise them together to buy a machine. I think our farmer was one of the more curious ones. I think the farmer who hosted didn't expect the organisation to be involve so many farmers on his field, but in the end he looked positive on this experience I think. (Programme interviewee)

Q: How do you identify/select relevant topics that will interest farmers? A: Yes, actually, the operational group is the result of an interest we experienced from the farmers. The operational

group exists because of the need for information about weed control. So this was actually obvious. Within Inagro, these things get decided. Partly by the advisory board, but also from other people working at Inagro, what do we experience when we go out in the fields? And in that way we decide what we are able to do this year and what are current issues? Hanne: So are there farmers involved in this advisory board or how this that work?
It's an annual meeting, or 2 times a year, with mostly farmers, with some supporting people. (Programme interviewee)

Q: Do you - at the programme level - continue to engage participants after the demonstrations? A: Yes. Yes, it happens that the operational group moves on with other business. It happens when we organise a demo, we look at the farmers that are present, if we still need a demo field for example, we go talk to some farmers who show interest. It is not structural, but we do talk about that during demo's yes. So yes that happens. (Programme interviewee)

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? R: This demo day was part of an operational group, so this is funded by the Flemish government and the European Union, and a little part by Inagro. The operational groups exist for 2 years. Most other projects involving demonstration also take about 2 years, which is somewhat mainstream. (Programme interviewee)

The host farmer

Host farmers seem to be involved in the development of the overall demonstration programme through their representatives at Inagro's advisory board or if they are regularly part of the operational groups that Inagro cooperate. The specific event's host farmer stated that he/s was not involved in the overall development of demos at the programme / network level (Host farmer). As already mentioned, Inagro is the main initiator and organiser of the case study demonstrations. According to the Programme interviewee host farmers are sometimes involved in the development of the individual demonstration activities, mainly by providing their farms and through consultation/discussion which always takes place before a demo event. In the specific case study, the Host farmer simply provided its farm's facilities and prepared a part of the field for the machinery demonstration.

Q: How are the demo activities on the farm managed? A: Inagro asked me and I said yes. They did most of the organisation, I just opened up my farm, a barn for drinks afterwards and prepared a piece of the field for the machines to show the weeding. (Host farmer)

Q: Who are the main people involved in the demonstration activities and what are their roles? A: Well the organiser from Inagro who did the talking, and invited the machine demonstrators. There were some other people from inagro to assist with the registration and the drinks afterwards and they put arrows on the street. Me I just presented myself and the farm, and opened up my farm and field. (Host farmer)

Q: Are host farmers involved in the development of the individual demonstration activities? A: Always. It could be more, but of course it's their farm so we can't work without a dialogue with him. (Programme interviewee)

Q: Are you involved in the overall development of demos at the prog / network level? A: No. They contacted me this one time and I said yes. (Host farmer)

Q: Are host farmers involved in the development of the overall demonstration programme? A: Sometimes. Through the advisory board 1 or 2 times a year where farmers can have their say. Or since they are regularly part of the operational groups, they are involved somehow. (Programme interviewee)

> Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? A: Yes. It was organised in dialogue between me and the organiser from inagro and the machine builders; I believe participation from farmers is important, but this demo was good I think. Everybody could see something useful for his or her farm. Sometimes I think there are too many 'public servants' during the demo's, they make a nice daytrip out of it, because they get paid to be there... So it should stay focused on farmers, demonstrations. (Host farmer)

Audience/type of participants

The intended audience of the demonstrations according to the Programme interviewee and the Host farmer are mainly active farmers (conventional/organic) of the horticulture, vegetable production, cattle and livestock farming sectors. Sometimes demos' participants are further engaged if they are interested and fit with the overall demonstration goals. In most cases mainly farmers as well as researchers from ILVO or INAGRO or from other schools typically attend the demonstrations activities organised by Inagro.

> Q: Who is your intended audience? Yes, of course the active farmer and horticulturist. R: About supply chain and sales market. We are mostly active in horticulture, vegetable production, cattle and livestock farming. Actually that is pretty broad yes. (Programme interviewee)

> Q: Who is your intended audience: (not relevant since it's the first time since they turned organic a couple years ago, and it's organised by external organisation; but 'farmers', conventional and organic, could be a relevant answer) (Host farmer)

> Q: Do you - at the programme level - continue to engage participants after the demonstrations? R: Yes. Yes, it happens that the operational group moves on with other business. It happens when we organise a demo, we look at the farmers that are present, if we still need a demo field for example, and we go talk to some farmers who show interest. It is not structural, but we do talk about that during demo's yes. So yes that happens. (Programme interviewee)

> Q: Who typically attends your demonstrations activities? A: most of them are farmers, and there are also some researchers form ILVO or INAGRO or from another school. I think about 4/5 are farmers. (Host farmer)

Machinery suppliers

As stated earlier, Inagro sometimes invites for cooperation machine demonstrators from the supply chain. In those cases these machinery suppliers are involved in the overall development of the demonstrations.

> Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: Yes. It was organised in dialogue between me and the organiser from inagro and the machine builders; I believe participation from farmers is important, but this demo was good I think. Everybody could see something useful for his or her farm. Sometimes I think there are too many 'public servants' during the demo's, they make a nice daytrip out of it, because they get paid to be there... So it should stay focused on farmers, demonstrations. (Host farmer)

> Inagro, a research and advisory centre in the West of Flanders, took the initiative for the Operational Group. Advisers from INAGRO have had several talks about CTF with individual farmers and machinery suppliers in recent years. (Background info).

2. Networks

Inagro is a well-connected research centre with other knowledge exchange organisations, such as several agricultural organisations, processing actors, supply chain actors, advisory entities, ILVO etc. the specific event's demo farm is part of a programme /network guided and run by Inagro (the operational group is considered as a network). The Host farmer also seems to be well connected to several organisations. He holds an elected role in Boerenbond, he is member of the provincial chamber for agriculture and chairman in the environmental board of his town. Finally, he has stated that he is pretty well connected with Inagro who organised the demonstration event on his farm.

> Q: To what extent is the network/programme connected to other networks/programmes in your country or even internationally? R: Well, we are connected with agricultural organisations, processing actors, supply chain, advisory, ILVO, so we are pretty close to the field. The network is really important. (Programme interviewee)
>
> Q: To what extent is the demo farm connected to other demo farms and/or other knowledge exchange organisations? A: I'm part of Boerenbond and I have connections within Inagro (organiser of the case study demo), I was chairman for 20 years there, but 2 years ago I passed it on. Now I am still a board member there. I'm also in the provincial chamber for agriculture and I am chairman in the environmental board of my town. (Host farmer)
>
> Q: Is your demonstration farm part of a programme or wider network (e.g. LEAF)? A: Yes. Inagro. (Host farmer)

3. Resources, finances and incentives

The demonstrations organised in the frame of the cooperation between Inagro and the operational group are mainly funded by the EU Rural Development Programme and the Flemish government, while Inagro also pays a small contribution to hold demo days. Moreover Inagro offers a small but decent compensation to farmers to host demonstration activities in order to compensate for their time devotion and possible field "damages".

> Q: What are the funding arrangements for your demo activities? R: How do these impact on the lifespan of the farm demo? This demo day was part of an operational group, so this is funded by the Flemish government and the European Union, and a little part by Inagro. The operational groups exist for 2 years. Most other projects involving demonstration also take about 2 years, which is somewhat mainstream. (Programme interviewee)
>
> Q: Do you offer any incentives to farmers to host demonstration activities? R: Yes. We try to provide a decent compensation. Because there's always some damage to a demo field and they have to put time in the organisation. It's definitely not a big compensation. If it's a small group who comes to the farm, it might not always be necessary, but in this case I believe it definitely was. (Programme interviewee)
>
> Q: What are the funding arrangements for your demo activities? R: How do these impact on the lifespan of the farm demo? I got some compensation from Inagro. It was a onetime thing for now. (Host farmer)

4. Goals / objectives

Inagro intend through the organisation of demonstration activities to diffuse research results and knowledge to farmers, with a focus on organic farmers. This helps organic farming move forward but

also make conventional farming more sustainable. The specific event has been organised in order to show possibilities of mechanical weeding to a wide audience (conventional and organic farmers).

> My goal coming from Inagro is practice research to advisory. To give more knowledge to the farmers. I think in short this is the goal of Inagro. I focus on the organic farmers. Providing farmers with knowledge on organic agriculture. Helping organic agriculture moving forward and enhancing. Weed control is a big part of that. And also yes, from my experience in organic cultivation, aiding to develop conventional farming towards more sustainable farming. (Programme interviewee)

T2: Farm (event) level

The event took place on June 8, 2018 at 'Hof ten Torre', a farm situated in the western part of Flanders. In the past, the farm had mainly pig production activities, but has now converted to organic farming, and main activities are arable farming and agritourism. The farmer cooperates with his son, who has an organic dairy farm nearby (Poster).

1. Actors' role

Attendees

Approximately 80-100 participants attended the demo event; 26 of them were interviewed (Observation tool). Nine out of ten participants (89%) worked in the local area (Pre demonstration survey participant). The vast majority (89%) of those interviewed were (organic and conventional) farmers with the rest being researchers, teachers and advisers. (Pre demonstration survey). Six out of 10 (58 %) participants felt actively or very actively involved during the whole demonstration process (Post participant's survey). According to the available data participants did not seem to have any specific role during the demonstration.

Adviser and Demonstrators

The actual demo event was in the hand of the Inagro adviser. He made a short introduction, and guided the tour to on-field demonstration of some 8 machines in the field. The adviser guided the demonstration of the different machines by explaining them and showing the difference between them. He then introduced the (companies') demonstrators and let the demonstrators speak one by one on their machines. (Observation tool). The adviser also acted as a facilitator; however during the tour participants did not engage into any guided discussion.

Host farmer

The host farmer did not have any active role during the demonstration event. He provided the field and an empty shed for a drink afterwards, but didn't talk in front of the audience apart of a few minutes of introducing himself and his farm. The host farmer has limited experience in hosting demonstrations in his farm (observation tool).

> Q: Who are the main people involved in the demonstration activities and what are their roles? A: Well the organiser from Inagro who did the talking, and invited the machine demonstrators. There were some other people from inagro to assist with the registration and the drinks afterwards and they put arrows on the street. Me I just presented myself and the farm, and opened up my farm and field. (Host farmer)

2. Practice/technology demonstrated

The main topic of the demonstration day was the mechanical weed control in maize in the frame of Controlled Traffic Farming (CTF) in organic farming context (Observation tool). The benefits of CTF have been proven in research and practice in recent years: controlled traffic lanes prevent soil structure damage and soil compaction in the seedbed between the tracks. This results in optimal growing conditions for soil-life and roots and better water storage capacity of soils. CTF also benefits mechanical weed control as fields are earlier accessible and there are no tracks in the seedbed. The specific topic was jointly decided by Inagro's researchers and the technical advisory board, consisting partly of farmers. Some eight different new types of machines for mechanical weed control have been demonstrated for the mechanical weeding in maize by the respective companies. The machines were shown on a part of the maize field of the host farmer (Observation tool).

The on-field demonstration allowed participants to see the machines in action, and evaluate them in a working context. Direct comparison between the different machines was possible (Observation tool).

3. Frequency

The specific demonstration was a one-off event because of the nature of the topic and the context (Poster).

4. Farms' infrastructures or arrangements

The Host farmer prepared a barn for drinks after the end of the demonstration.

> Q: How are the demo activities on the farm managed? A: Inagro asked me and I said yes. They did most of the organisation, I just opened up my farm, a barn for drinks afterwards and prepared a piece of the field for the machines to show the weeding. (Host farmer)

5. Accessibility

Both programme and Host farmers stated that the travel time to a demo farm is an important factor that would discourage people from attending a demonstration. The travel time of participants to reach the demo farm, ranged from 5 to 120 minutes, with an average time close to 40 minutes approximately half of participants (46%) rated their travel effort to participate as very little or little effort. Another proportion of 31% of participants rated their travel effort to participate as quite some effort. Finally 23% of participants rated their travel effort to participate as great effort or greatest possible effort (Pre demonstration survey participant). . It is not clear if the effort rate is related only to the travel distance as the effort ratings were not always proportional to the travel distance. Maybe other factors influence the effort rate i.e. participant's motivations, free time etc. (Pre demonstration survey participant).

> Q: What do you think discourages people from attending demonstrations? A: If it's too far away for them maybe. Or if it's too busy on their farms. (Programme interviewee)

> Q: What do you think discourages people from attending demonstrations? A: the location, if it's too far. (Host farmer)

6. 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 his attendance (Post participant's survey).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

In this case, the host farmer received compensation from the network. The Programme Interviewee described the funding arrangements for the programme/network:

> This demo day was part of an operational group, so this is funded by the Flemish government and the European Union, and a little part by Inagro. The operational groups exist for 2 years. (Programme Interviewee)

Funding did not extend beyond compensating hosts.

> We try to provide a decent compensation. Because there's always some damage to a demo-field and they have to put time in the organisation. It's definitely not a big compensation. If it's a small group who comes to the farm, it might not always be necessary. (Programme Interviewee)

2. Motivations for host farmers

In this case, the Farmer was motivated by a strong desire to 'spread the word' for organic farmers.

> I can stand up for the fact that I'm an organic farmer. It's still regarded as a little odd. It's getting better, but still. I think farmers should be more open with that, that is my main reason. Today I dare to stand up for the fact that I'm an organic farmer, before I didn't dare to stand up for that. In the past people would look at you weird. (Farmer)

According to the Programme representative, hosts – relating to this case study – were particularly motivated by a desire to assist develop/improve organic farmers. He also offered some more general motivations.

> Programme Interviewee: The organic weed control techniques have developed a lot the last years. The average farmer doesn't know enough about this yet. So the demand is there and also the organic farmers are looking for the best ways, we have a lot of new organic farmers.
>
> Interviewer: And in general, apart from this demo? Why do farmers host demonstrations?
>
> Programme Interviewee: I think because they also our proud somehow to show what they are doing, and they want to contribute a little bit to the idea.

3. Motivations for participants

The Farmer felt the opportunity for participants to get access to expensive or innovative machinery was a key motivation.

> The machines [...] the farmers can see how they work and if they want to buy it themselves or with a group of farmers. (Farmer)

The Programme Interviewee talked more broadly about motivations for participants; he noted how demonstrations were providing much needed knowledge on important developments in organic farming. He also suggested there was interest from conventional farmers due to tightening legislation.

> We also have some new organic farmers who are looking how they can organise themselves, also the conventional farmers are curious (because of the stricter legislations). (Programme Interviewee)

Participants themselves stated as main motivators to attend the demonstration: information on the purchase of a new machine; to keep up to date; to know more about organic farming; to know how to combine with something that works myself; support organic farming; interest; gather knowledge for own business; use less spraying; see the machines.

4. Target audience

The target audience for the demonstration events is made up mostly of organic farmers, but this can also extend to conventional farmers and researchers, and even extends into the supply chain and sales market. Participants are invited via Inagro whose overall aim is to promote a product/chemical-free method of weed control, in line with recent tightening of legislation.

5. Advertising and recruitment

The Farmer stressed the importance of having enough advertising for demonstration events. The importance of a clear and personalised invitation was also highlighted by the Programme representative.

> I believe so yes, a clear invitation, a clear programme, and somehow 'individual' meaning that it is in the specific newsletters. (Programme Interviewee)

It was also clear that exploiting or responding to gaps in knowledge – or problems faced by – burgeoning organic farmers (as well as conventional farmers concerned about legislation changes) was a good way of recruiting farmers.

T2: Appropriate demonstration and interaction approaches

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

According to the Programme Interviewee, the approach to providing demonstration activities across the network was 'Mostly top down'. Whilst the network had an 'operational group', made up – in part – of farmers who had some input into the programme design and demonstration activities, demonstration topics were decided on by the Flemish government who announce specific project calls. The operational group have some input into what projects they take on and shaping exactly how they are delivered. For this reason, the Programme Interviewee felt the approach was a mixture of bottom-up and top-down.

> Yes, well we have the advisory board, we have the operational groups, also when the Flemish government spreads calls for projects, then we look if we have something that fits [...] So actually it's both bottom-up and top-down. (Programme Interviewee)

With reference to the case demonstration topic, the Programme Interviewee described the topic's inception:

> Programme Interviewee: We said to the farmers, it's the photo machines. But the farmers from the group were also interested in weed control machines. So that's how the combination came up: camera controlled weed control machines.
>
> Interviewee: Are you happy with this approach? Or would you rather do it differently?
>
> Programme Interviewee: Well, I'm happy with how the day went yes, but let's say... for me the farmers could have been more actively engaged. But when we look at the attendance rate we had, maybe the group was too big for that.

In the case of this particular farm demonstration, the Host Farmer was not interested in leading the session, but was happy to 'open up the farm'. As a consequence it was more top-down than perhaps other demonstrations in the network.

2. Focus and Design

The Farmer and Programme Interviewee disagreed on the focus of the demonstration network. The Farmer felt their focus was **'In between'** 'Whole farm' and 'Single focussed', whereas the Programme Interviewee felt they were more **'Single focussed'**.

The Farmer also described the demonstrations design as **'A mixture'** of 'Experimental' and 'Exemplary', whereas the Programme Interviewee felt they were more **'Exemplary'**. The Programme Interviewee felt that an emphasis on the innovative and new was important, whereas the Farmer expressed a preference in a mixture of both elements.

3. Group size

The nature of this demonstration (machinery-oriented) was key to determining the optimum number. Both the Farmer and the Programme representative felt that machinery demonstrations could cater for hundreds of people (between 100-200), but they also both appreciated it was dependent on the topic and this number was unique to this kind of event.

> Well that depends I think, now for machine demonstration 200 people is good, doesn't have to be more. Sometimes when you want to focus more on a practice or if you want verbal interaction, smaller groups with for example five people is better. It really depends on the topic. (Farmer)

Interestingly, the Programme Interviewee suggested a larger number of attendees was required to attract high-calibre machinery companies to the demonstration. He also mentioned how a larger group can reduce farmers' feelings of loneliness and isolation.

> The size of the group motivates the machine builders to come again a next time. And also it gives the attending farmers the feeling that they are not alone, the sense of being part of a group [...] If it had been 20 people, we could have made probably very interactive, then I would have restructured my preparations. But then maybe the farmers would have gone home and said: well I had a very nice afternoon, but I was kind of alone there. The machine builders will say: well we had a good talk with the farmers and we could have a beer together, but if I have to come from the Netherlands for that. (Programme Interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The Farmer in CS2 placed a strong emphasis on the inclusion of practical elements in the day.

> I think you should go out on the field or in the stables. Going in and see the real practice is always better I think. Of course for hygienic reasons, that is not always possible. (Farmer)

The Farmer drew on a range of different techniques:

> Demo on the field, machine demo on the field, pictures in a big meeting room is not the same I think. (Farmer)

The Programme representative suggested the structure and content 'depends on the content and the goal'.

The Farmer listed the ability of 'Participants to ask questions and talk openly' as the most important characteristics of a demonstration event. In contrast, the Programme representative suggested the most important facet was 'Good quality expert advice and technical presentations', however added, 'I believe it's depending on the theme and day'. With reference to the specific demonstration event (CS2), he noted 'the visual experience was very important, but when we talk about smaller groups – I also give them for about 10 people – then it's much more important that they can ask their questions and have the expert advice'.

2. Taking into account variation in learning

Neither the Farmer, nor Programme representative felt they took into account variation in learning styles in the demonstrations.

T4: Effective follow-up activities

1. Follow-up activities and materials

As it was the first demonstration the Farmer had undertaken, he had – by default – not had the opportunity to continue to engage with participants after events. The Programme Interviewee claimed that participants and demonstrators continued to be engaged with the programme network in an informal/ad hoc basis. Both participants noted that materials such as 'flyers and brochures' were available for participants on the website after the event.

2. Assessing impact

Given the Farmer's lack of previous demonstration experience, he was understandably unable to judge whether there had been an impact. At the Programme level, the interviewee noted how an assessment of impact was only conducted informally:

> Only verbally and informally: We visit farms often, then you talk about for example, so did you buy one of the machines? But not structurally with questionnaires or something. (Programme Interviewee)

5. Event analysis: effective peer learning characteristics

Event details

	n° survey participants	adviser	baker	employee	farmer	product manager	teacher	Unknown
occupations	*26*	1	1	1	20	1	1	1
working area	*26*							
local area	*22*	1	1	1	17	1	1	
not local area	4				3			1
gender	*26*							
male	22	1	1		19		1	
female	4			1	1	1		1
age	*24*							
18-30	4			1	1	1	1	
31-40	4	1	1		2			
41-50	3				3			
51-60	7				6			1
60+	6				6			

T1: Learning processes

1. Communication initiation by participants

We don't believe they had a problem sharing knowledge, but the setting (about a 100 people listening to one demonstrator using a microphone) to do it wasn't supporting. They did share informally in smaller groups between the explanations of the different machines. They never were put in small groups on purpose. A little time was made for questions when the questions came up as very pressing, but there were almost no questions asked in front of the whole group. It felt like only the demonstrator was talking the whole time.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	3/18	9/18	6/18	0
I asked at least one question during the demonstration .	12/18 yes				
I shared my own point of view at least once during the demonstration.	16/18 yes				
I **felt encouraged to ask questions** during the demonstration.	2/18	5/18	11/18	0	0
When there were any discussions, **I felt comfortable sharing my opinion**.	1/18	0	11/18	5/18	1/18

	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	1	0	0	0
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	1	0	0	0
I **encouraged the participants to formulate questions** during the demonstration.	0	1	0	0	0

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

More than one hands-on activity was demonstrated very clearly since the different machines were demonstrated thoroughly. No hands-on activity could be carried out by participants. The participants could see and hear about the machines in practice on a real field. They could touch and investigate the ground after the weeding machines had passed by.

Discussion opportunities and negotiating conflicting points of view

The adviser was talking most of the time, but he didn't facilitate guided discussion. He did answer a few questions during his explanation about the different machines. Informal discussion was possible at the end.

There was no intention to foster any open discussion, because this was mainly not feasible with such a big group. There was no elaboration or further explanation on shared critical points of view, even if this happened scarcely. Again, there were too many participants, so this wasn't possible in the big group. We believe that they discussed critical points of view amongst each other afterwards over a drink.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	1/18	2/18	10/18	5/18	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	1/17	4/17	8/17	2/17	2/17

	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	0	0	0	1

3. Engagement during the event

Participants all seem to know each other well, but are not close friends. Even though it was a big group, a lot of smaller groups were formed, talking together informally. Even though he is originally from the neighbourhood, the demonstrator acts more distant then open. Afterwards during the drinks he was quite open for an informal talk.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I **felt actively involved** during the whole demonstration process.	0	7/20	10/20	3/20	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	1/20	4/20	13/20	1/20	1/20
I could **relate well to other participants** (because they have an agricultural background similar to mine).	0/20	6/20	7/20	5/20	2/20
A lot of the **other participants** are **part of the same farmer network** as me.	0	3/18	11/18	3/18	1/18
I felt like I could **trust the knowledge of (most of) the other participants**.	0	3/18	12/18	3/18	0
The demonstration **felt like an informal activity** to me.	1/18	2/18	9/18	6/18	0
I thought **the host farm was comparable enough to my own farm**.	5/18	5/18	7/18	0	1/18
I had the feeling the **demonstrator was like one of us.**	0	4/18	11/18	3/18	0
I had the feeling **I could trust the demonstrators knowledge**.	0	1/18	9/18	8/19	0
I **got along very well with the demonstrator.**	0	1/18	9/18	6/18	2/18

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were **participants** (farmers, advisers, researchers etc.) **involved in the overall development of this demonstration**? If yes, how?	only a small percentage, through being involved in the operational group. It was also a joint				
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	0	1	0	0
The demonstration felt like **an informal activity** to me.	0	0	1	0	0
I think the **host farm** was **well suited** for this demo.	0	0	0	1	0
I **got along well** with the participants.	0	0	1	0	0

T2: Learning outcomes

Explained knowledge was sufficiently understandable. Very monotonous, but in depth and informative. There was no focus on trying out practical skills. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. The main topic of the demo was organic (mechanical weed control), which is an alternative for pesticides for traditional farmers, but no group discussions about it. Common methods or ways of thinking on learning were not questioned.

	participant answers				
What would you **ideally like to learn** today?	To see the working of new machines in weed control; variety and working in machines; new possibilities weed control; what is possible today?; if the mechanical weed control works well or not; differences between machines; different ways of organic weed control; control of camera machines; feasability				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	1/20	10/20	9/20	0
The **demonstration exceeded my expectations.**	0	9/19	8/19	2/19	0
I felt surprised at some point(s) during the demonstration.	0	5/20	10/20	5/20	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	3/20	14/20	3/20	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	1/20	11/20	8/20	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	1/20	14/20	4/20	1/20
I **reflected on my own point of view** at some point during the demonstration.	0	3/20	15/20	2/20	0
I learnt about **the principles underlying a practice**.	0	9/19	8/19	2/19	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	0	8/19	6/19	5/19	0
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	1/19	3/19	11/19	4/19	0

	demonstrator answers				
what do you **intend for the particpants to learn** today?					
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	0	1	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	0	0	1	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	1	0	0	0
I obtained a clearer understanding of the topic(s) myself.	0	1	0	0	0
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	1	0	0	0
I **reflected on my own point of view** myself at some point during the demo.	1	0	0	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.	1	0	0	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	0	0	1	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,6 on 5, participants rated the event overall as effective. Everybody would recommend the demonstration. They stated as most effective characteristics of the event: to see a variety of machines working; the practical approach; to know what is on the market; lots of interaction between the participants; instructive; that everything was possible.

Suggestions for improvement included: none; different kinds of crops; to know the price of the machines/price in relation to acreage; more machines; more put into practice.

Demonstrator:

The demonstrator reported that a lot of people showed up, and that is something that made it effective for him. He has no idea on what could be improved.

Observed main strong points of the event:

The adviser had profound background knowledge on organic farming, he was an expert in the field. The demonstration was held on a nice realistic field to show a lot of machines (+- 8). There was room to talk afterwards for the participants.

Observed main improvements of the event:

There was no plenary discussion ant not much room or support for questions from the participants. There were too many people at once to see clearly the working of the machines.

6. Annex: Case study Poster July 2018

FarmDemo

CASE STUDY Belgium: Demo mechanical weeding in maize

Hanne Cooreman & Lies Debruyne, ILVO

The demonstration was organized on 'Hof ten Torre', a farm situated in the western part of Flanders. In the past, the farm had mainly pig production activities, but has now converted to organic farming, and main activities are now arable farming and agritourism. The farmer cooperates with his son, who has an organic dairy farm nearby. This demonstration was the first of its kind to be organized on this farm (organized by an experimental research center), but the farm has previous experience with open farm days.

Objectives

- Demonstration of 7 new types of machines for mechanical weeding in maize
- Show possibilities of mechanical weeding to a wide audience (conventional + organic)

Motivations

- Show significant improvements in available weeding techniques (advisor)
- Farmer is part of an operational group, with an interest to jointly purchase a machine
- To support overall development of the organic sector

Topic selection

- Demonstration was initiated by operational group
- Topics for research/operational groups: are decided jointly researchers and technical advisory board, consisting partly of farmers
- Single technique

Audience & participation

- Mainly farmers, but also researchers, advisors, teachers, ...
- Conventional farmers were also targeted, because of expected changes in legislation
- No participation fee

Demonstration set-up

- Set-up was designed by the researchers, topic originated from the operational group.
- Actual demonstration mainly by advisor, only a small active part for the farmer during the demonstration event.
- Short introduction, followed by on-field demonstration of 7 machines, and concluded with a network event (to allow time for discussion)
- There is no formal evaluation of the demonstration, but feedback is certainly collected during the networking

Evaluation peer-to-peer learning environment (8th June 2018)

- 80-100 visitors
- The on-field demonstration allowed the participants to see the machines in action, and evaluate them in a working context. Direct comparison between the different machines was possible.
- Prior knowledge was recommended (to make a proper evaluation of the results in the field)
- Intense interaction and evaluation between the participants, both on the field and afterwards

- Host farmer has little to no experience in hosting demonstrations in his farm. This is in fact quite typical for the way on-farm demonstrations are organized in Flanders.
- Host farmer is willing to open his farm and fields for demonstration, but organization and actual demonstration is in the hands of the advisor/researcher. However, due to the technical advisory board: relevance of the demonstration for a wider farming audience is guaranteed
- One-off demonstration, because of the context (operational group for 2 years)
- Key areas to explore: cooperation between experimental research centers and local farmers, possibilities through operational groups for demo's, on-field demonstrations make it tangible

PLAID AGRIDEMO

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ILVO

Belgium Case Study 3

1. Background

Programme

The demonstration was held to inform dairy farmers on a newly developed calculation tool to make smarter decisions on a dairy farm. The demonstration represented the dissemination phase of the project 'Routeplanner dairy' and was held two times: once in the East of Flanders and once in the West.

Funding and Governance

The programme partners existed of a strong collaboration between Inagro, Hooibeekhoeve, Boerenbond and ILVO. It was funded by Europe for the project 'Routeplanner dairy'.

Participants did not have to pay a fee.

Actors and networks

About 40 farmers attended the demonstration. First, three presentations were given on the profitability of growth, the outsourcing of young cattle and the use of the calculation tool to guide decision making on a dairy farm. After the presentation, a networking opportunity with drinks and dessert was organised. To end, a guided farm walk was led by the host farmer. She did her best to show every innovation on their dairy farm.

This was a one-off demonstration in the context of the project on the calculation tool.

Event Farm and location

The demonstration was organised on a dairy farm, situated in the north-eastern part of Flanders. Innovative breeding and producing milk are key objectives for the farm. The farm recently embraced and invested in technological advancements like milking robots and their brand new stables, equipped with the latest innovative elements. This because they believe in their added value for the wellbeing of the cows and to make their own life easier. They also invested in a meeting room with lookout from above on a 'bridge' in the new stables. The farm only started hosting demonstrations, inspired by their success during the latest 'open doors day of Flemish farms' in September 2017.

Event date: 21/06

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 (Level 1) and Farm level interviews with demonstrators/hosts (Level 2) to reveal how the functional and structural characteristics enable learning. Analysis is reported in Sections 3 and 4. Data is sourced from interviews with 1 Programme member (Programme interviewee) and the host farmer (Farmer), who were both interviewed in June 2018 (not on the same date as 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.
3. Event tools and surveys (Level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 21 pre and post demonstration surveys for participants, a post demonstration host farmer interview 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.

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. For the Belgian and Dutch cases, a workshop was held on the 9th of November.

3. Structural characteristics

T1: Programme/network level

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

The organisations involved in this case study are ILVO, Hooibeekhoeve, Boerenbond and Inagro.

ILVO, the Flanders research institute for agriculture, fisheries and food (ILVO) performs multidisciplinary, innovative and independent research aimed at economically, ecologically and socially sustainable agriculture and fisheries.

Hooibeekhoeve is a research centre of the Province of Antwerp (Flanders) that carries out applied research and demonstrations and provides information in the domains of dairy farming, forage crops, rural development, landscape, environment and animal welfare.

Boerenbond is a professional association of farmers in Flanders, which works to promote the interests of farmers working within its regions of activity

Inagro is a spin-off agency of the province of West Flanders, which delivers advice to the farming and horticultural sector with a focus on economy, ecology and society. Its aim is to devise farming and cultivation techniques ready for practical use, to take the new know-how to the agricultural and horticultural businesses and guide them in how to implement them.

This demonstration was organised as a dissemination event of an EU funded project which aimed at developing a calculation tool to support smart decisions in dairy farming, and optimise dairy cattle management. It was the second event on the same topic, with the first one organised at a different part of the region in order to reach-out to as many dairy farmers as possible and reduce the risk of low attendance rates due to distance and mobility constraints (observation tool). While an ad hoc event, developed under the project's requirements, it illustrates clearly how a phenomenally top – down approach can be informed from the field and apply an inclusive approach and structure.

The organisations' proximity and close links to the farming community governs the decision making progress in organising demonstrations as well as their objectives. This is both at the level of selecting the theme a project will work on as well as on the topics that will be demonstrated. Overall, a mainly bottom up approach is being followed, through which farmers are consulted in various ways.

> The projects ask for this more and more somehow, even if it's just in the form of discussion groups beforehand... You're never completely bottom-up… (Programme interviewee)
>
> How do you identify/select topics: For us it usually starts with the projects. The themes for this projects are already connected to what is going on in the sector. Do we ourselves also do this? Yes, because for example, we have our 'open doors day', and then we ask farmers to write down what they think we should put more time in. Then we get a lot of answers, also impossible ones. But if there are things in there that return a couple of times, then you know this 'lives' within the community. Then we have to try to fit this in somewhere. We don't want to organise things that interests nobody. (Programme interviewee)
>
> We are a practice research centre. So our mission is researching new things in our sector and testing them at our centre. Or making sure that we organise demonstrations or something similar so farmers can learn about it from each other. So that is actually or reason of existence. (Programme interviewee)
>
> Management: it's a practice centre, so we have a technical work group, who comes together once a year. There we present the topics we are working on. And there we also try and find out what is happening in the sector. What they think is important... (…) And further more… you

> hear from farmers you visit what is going on. The technical work group represents the work field in a small format.

Partners seem to have a long cooperation under several projects which improves synergies and allows organisations to build on their advantages and competences in delivering project and demo objectives. In this regard, they also mobilise their national and/or international networks in order to inform steps and benchmark results.

> Yes, through our project work we are connected…after a while you start to get to know each other. So it's become a logical process to ask each other who is going to write what, or how we could work together. We also have partnerships with ILVO and the University of Leuven, which means we try at least once a year to discuss together how and what we are doing. We both have similar infrastructure, so we have to make sure that what we do is not exactly the same, which would be unfortunate. So we try to communicate about that. For example we just had a project that we arranged that there was first an edition at ILVO and the next edition was at our centre, so we try to supplement each other. (Programme interviewee)

This collaboration extends also to the recruitment of host farmers, which according to the programme interviewee is pursued through the mobilisation of contacts and networks. This process often results to long-standing connections with farmers willing and able to host events.

> How are host farmers targeted: mostly through contacts. Asking around… Now it was through Boerenbond, because they are also partners in the project. Often these are farmers you already know somehow. It's often the same farms who are willing to do this. After a while you know that. It's also easier if you already know them from somewhere. (Programme interviewee)

Thus, engaging farmers into the organisation of individual demo events comes as a natural step that builds on prior collaboration and contacts. When one goes, though, beyond a specific project's arrangements then farmers' involvement is less pronounced and self-evident.

> Are host farmers involved in individual demo organisation: Always. I was here for example on this farm for this event 2 weeks ago, to make arrangements… in her guided walk, she can choose whatever she wants to say, how they made their decisions and why. So I discussed with her a bit. She asked me what we wanted her to highlight in the story, and I gave her the advice to tell the people how the farm got where it is now, but it's completely up to her. I believe that if you go to see something on a farm, it's logical that you involve the farmer? When we arrange demos in our own research centre, we don't do that, it doesn't really have an added value then… (Programme interviewee)

> Are host farmers involved in the development of overall demo programme: Sometimes. You notice that the farmers who open up their doors, are the ones who are also active at other study days, involved in local boards and show engagement towards agricultural organisations. A farmer who doesn't go beyond his own field, will certainly not open up his farm for visitors. So it's quite logical. (Programme interviewee)

According to the programme interviewee, the organised demo activities are described as in between whole farm and single focus events, while, depending on the project, they rather follow a mixture of experimental and exemplary approaches, with the latter being the most natural for her organisation.

> We usually test new techniques who are already ready for practice. To communicate further to the farmer. Does it work or not? How did we do it? What should be noted? What does it cost? So mostly exemplary I think. (Programme interviewee)

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

Host farmer and demonstrator

The farm has quite recently started hosting demos, a decision that was triggered by their successful participation in a yearly event (open day of agriculture days) in September 2017. Despite their limited experience, as till the specific event they had hosted less than five events, they seem to be quite interested in engaging further into demo activities. Their recent investments on a new barn as well as the adoption and use of technical innovations offer a promising starting point and motivates them to invest in hosting demo events. It might be interesting to note that they see in demos and opportunity for peer learning among farmers, but also a promising way to attract young people, and showcase how technology can co-exist with and actually improve farming activities (Observation tool)

> Obviously we want to earn a little extra money with this and we want to tell the story of our new barn for dairy cattle with a lot of new technologies, started in 2015 and finished now. If ILVO or another organisation want to have a meeting in our annex building, we can work together and we could add a company visit if they want this. (Farmer)

> But I would like to have youngsters who are at the end of high-school. The agricultural sector needs workers and maybe some of them are interested to go and work on a farm. Also, we use a lot of technologies on our farm, and today it is all about technology, so I believe it might be inspiring and nice to see for them that this happens on dairy farms too. (Farmer)

The host farmer describes the events organised as one-off, with an exemplary character, which generally follow an approach that falls in between a single and a whole farm focus (Farmer).

> People ask why our cows don't go out in the field anymore, and I want to emphasise that they have every comfort inside of the barn, even better then when they are in the meadow outside. They are protected from the sun, they have massage brushes inside, the milking robots are inside, they have a good bed to lay on, and also the nutrition of the cows is very important. (Farmer)

For the host farmer the economic benefits of on farm investments seem to have an equal footing with a positive impact on animal welfare as well as the quality of the farmer's work and life balance.

> We are first of all a working company, so the risks can't be too big if we do huge investments like milking robots. It should have economic benefits in the long run or benefits that relate to animal welfare (massage brushes), because we believe it's also a lot about 'care', and we should care in a right way for our animals. (Farmer)

The host farmer argued that having in place the appropriate infrastructure is considered critical in organising events and facilitates greatly further engagement into relevant activities and future plans. Still, she highlighted the importance of having supporting material, such as videos and/or follow-up material, to couple farm visits; at the same time she indicated an area where external support would be needed and highly appreciated.

> We believe our brand new annex building with the bridge that looks out into the barn provides great accommodation to facilitate these visits. (Farmer)

> You can still do a farm visit, but there's is a lot that you cannot show in winter time. I would think of it as very positive, to be able to let them watch a small video when they enter, or to put on the website, but actually I don't know how to start with that. (Farmer)

Demo activities hosted in the specific farms are managed by the farmer's family, in collaboration with the organisation(s) when relevant. Finally, as pointed out earlier the demo topics selection is a co-working process which allows the host farmer to inform and adopt the event to the farm's characteristics and interests.

> It's part of the family business, so I can organise the demo activities myself or in consultation with an organisation that wants to use our annex building for their own meeting and combine it with a visit to our farm. (Farmer)
>
> How are demo topics selected? On request by the visitors and discussed with me, always related to dairy farming …everything that is important for a modern dairy farm with the latest technologies, but I also want to emphasise the welfare and care for the cows. (Farmer)

With regard to funding arrangements when hosting demo events, the farmer indicated both the need for remuneration for her services as well as the limits of this side activity even if compensated.

> We will ask contributions from everybody who wants to visit, of course depending on if it's a company visit or a school. But we can't do it for free. To the organisations I send an invoice. (Farmer)
>
> I do this next to our everyday farming activities. Of course I don't want to do this every day, which would be too much. (Farmer).

Finally, the fact that farmer is found in her first steps in holding demonstration activities, reflects on her replies on less evident characteristics of the demo process such as evaluation/feedback requested from participants and follow up materials. While the farmer is currently not engaging consistently in those dimensions, she acknowledges the need to organise herself and benefit from feedback and post-demo engagement of participants.

> Do you request feedback from participants? No. But I would want to do that, ask what they thought about it afterwards or something like that. (Farmer)
>
> Engage participants after demos? Not relevant yet, might be the case in the future with youngsters who want to work a little bit on the farm. (Farmer)
>
> Follow up materials? Not yet, but I want to provide something on the website or some videos. (Farmer)

3. Evaluation and follow-up

Feedback is requested from demo participants, although not always in a structured way. In addition, the partner organisations evaluate internally and/or within their consortia meetings the overall demo programme. Thus, the overall programme assessment does not seem to integrate farmers in the process, unless a farmers' organisation is a project partner.

> Feedback from participants: Sometimes, through a survey. Sometimes it's asked by a project. We do it ourselves sometimes for a big study day. And verbally you ask quickly something like, what did you think of it? Most of the times, we don't ask actively though. (Programme interviewee)
>
> Overall assessment: verbally at the research gathering with all researchers. Yes, with the partners in a project it happens too, which is very interesting to notice, if for example something was way more important here than in a partner country. (Programme interviewee).

Finally, there seem to be some actions taken to engage participants after the event, whereas the internet and the organisations' websites are mainly used for the dissemination of follow-up material (flyers, leaflets and presentations).

> Not actively, but it happens that we tell them we have a newsletter where they can subscribe into if they are interested. Through the newsletter we ask for participation in discussion groups and so on. Sometimes we tell them during demos about related topics or demos. Sometimes

> they ask us themselves to keep them up to date and leave their contact details. (Programme interviewee)

4. Resources, finances and incentives

References of interviewees on the funding arrangements for the organised demonstration activities relate mainly to the projects under which these are developed. Most of the arrangements though as well as the incentives offered to host farmers are pretty much project specific. While partner organisations do hold their own demo events, and may safely assume that this is part of their own budget arrangements, no further details were shared on the financial streams used to organise and deliver them, and/or if participants usually have to pay a fee, or not, when attending one. In this specific demo event, though, participation was free for all attendees, farmers and non-farmers.

> ...and how does it get financed? This also depends from the project. Sometimes it's 100 percent subsidies. Sometimes you need co-financing... it really depends on the project if we need to look for additional financing or not. (Programme interviewee).
>
> Incentives to host farmers: yes, we always try that. For example here we had the meeting room and the food and drinks that were provided, we obviously compensate them for that. And for the specific demo we asked a 'teachers compensation'. She puts a lot of time in that, I've already been here for the preparation for example. Often it's calculated in the project that they get something ... sometimes its money, but usually they get some form of compensation. (Programme interviewee)

Finally, it seems that partners use their in-house experts, researchers and advisers, when delivering demos, both in project related events as well as in the ones they regularly organise in their centres and or collaborating demo farms.

T2: Farm (event) level

1. Practice/technology demonstrated

The demo evolved around the following topics (observation tool):

- The calculation tool for optimising dairy farm management
- A new barn recently installed in dairy farm
- The latest technologies/machines the farmer has adopted

2. Event Farm location and layout

The demonstration was organised on a dairy farm, situated in the north-eastern part of Flanders. Innovative breeding and producing milk are key objectives for the farm. The farm recently embraced and invested in technological advancements like milking robots and their brand new stables, equipped with the latest innovative elements (observation tool + background info).

In total some 40 participants attended the event, of which 26 filled in the surveys. Travel time to reach the demo farm varied from 15 to 120 minutes. One out of five respondents placed considerable effort to attend, mainly due to their demanding on farm job that was left behind (pre-event participants' survey). Only one respondent felt that the farm was somehow not appropriate for the demo event (post-event participants' survey).

3. Farm's infrastructure and further arrangements

The first part of the demo was held in the newly established meeting room located above the barn. It was guided by researchers and advisers from partner organisations who used a PowerPoint presentation to explain in details the calculation tool. Different experts shared their view and explained the different parts of the tool, shedding light to the benefits deriving from its use on cattle management and farmer's decisions.

The theoretical part was followed by a short networking break with drinks and dessert prepared by the host farmer, in the same meeting room which offered a lookout in the new barn.

The last part was devoted to a guided tour around the farm and the new barn during which the farmer showed the new technologies and innovations used around the farm.

Participants were moving as single group, which seems to have been a deliberate decision of the organisers. The reported unwillingness of participants to engage into plenary discussions and disclosure of their own personal on farm conditions, i.e. a reaction that reflects clearly, as the observation tool argues, a competition fear among participants. Still, the break and the guided tour, were possibly conceived as more informal and offered participants the opportunity to talk to each other about the topic in informal small groups.

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

Demonstrations were funded in different ways depending on who was attending the demonstration and the topic/nature of the demonstration. Farmers typically receive a compensation, but this is aimed at covering their time and expense, or a gift.

> Here [at the demonstration] we had the meeting room and the food and drinks that were provided, we obviously compensate them for that. Often it's calculated in the project that they get something, sometimes it's a basket with local products, sometimes its money, but usually they get some form of compensation. (Programme Interviewee)

As a consequence of this, the Farmer noted how she typically charged for participants to attend an event, claiming she *cannot* provide demonstrations for free.

> We will ask contributions from everybody who wants to visit [...] we can't do it for free. (Farmer)

2. Motivations for host farmers

In this particular case, the farmer had a range of reasons for wanting to do provide demonstration activities. Interestingly, the potential to make a 'little extra money' to support their farm development (a new barn and annex building) was the first reason they offered, but they also wanted to 'tell the story' of the new dairy cattle barn and respond to queries/concerns others had about their inside cows.

> Obviously we want to earn a little extra money with this and we want tell the story of our new barn for dairy cattle with a lot of new technologies, started in 2015 and finished now. People ask why our cows don't go out in the field anymore, and I want to emphasise that they have every comfort inside of the barn, even better then when they are in the meadow outside. They are protected from the sun, they have massage brushes inside, the milking robots are inside, they have a good bed to lay on, and also the nutrition of the cows is very important. (Farmer)

The Programme Interviewee felt host farmers were motivated by a desire to share their good practice and learn from interactions. Interestingly, she noted how there was a social benefit of being involved. She also recognised this was sometimes hard for farmers and put many farmers off, as they can be opening themselves up to criticism. Talking about the Case Study farmer and his wife, she noted ...

> I think mainly because they are proud of what they did, which makes them open to share this. Not everybody does this. Because you also get critical questions when you do that. But I think the ones who open up also want to learn more by doing that: showing what they did, and learning from others. The farmer's wife here for example, she needs the social part. She really likes to interact with people. So I think the fact that they can share their knowledge with others and get other knowledge, stories or experiences back for that, or similar experiences... I think that is a very big motivation for them. (Programme Interviewee)

3. Motivations for participants

The Farmer cited a number of different reasons that participants attend her demonstrations. This was dependent on the type of visitor they were. Amongst farmers, she felt that the ability to see technology and innovations in action was a key motivation – particularly amongst younger farmers.

> I think people from the city like to go out in nature from time to time. I also believe that the technologies you can see in use at our farm are very interesting for youngsters nowadays. Other farmers might want to see how we put this innovations into practice. (Farmer)

The Programme Interviewee felt that participants were motivated to attend by a desire to learn and specifically, to learn from colleagues. For farmers, the Programme representative suggested that, the opportunity to see another farm – 'a real farm' – in action is a key motivational factor.

Participants themselves stated as main motivators to attend the demonstration: info on the tool, how to use it on our own farm; always want to learn something new; to stay up to date; to learn something from this farm; produce cheaper compared to other farms; orientation of the farm; content of the training day; networking; advantages and disadvantages for rearing young cattle; to have an honest wage in an honest way; nice farm and really close by; interest; a son who will start new in the farm and to learn more about possible choices in the future of my farm.

4. Target audience

Dairy farmers, as well as horticulturalists were the most common attendees across the demonstration programme, although the Programme Interviewee claimed that anyone was welcome.

> Our main group are these farmers and their suppliers and advisors, because they have a direct link... But we also have project around education for which we target students and teachers. (Programme Interviewee)

Whilst the Farmer reiterated the diversity of their audience, she noted that she particularly liked to encourage young people to attend demonstrations because of the industry's need to recruit a younger generation. She felt that the nature of the demonstrations – which showcased technologies – was a good way of attracting young people.

> I would like to have youngsters who are at the end of high school. The agricultural sector needs workers and maybe some of them are interested to go and work on a farm. Also, we use a lot of technologies on our farm, and today it is all about technology, so I believe it might be inspiring and nice to see for them that this happens on dairy farms too. (Farmer)

5. Advertising and recruitment

The way in which the demonstration events are advertised was also dependent on topic. If the event related to a specific technology or technique, then participants were targeted. However, if events were more generic, the Programme Interviewee claimed they would aim to advertise as broadly as possible using adverts on Facebook, local newspapers and via their network newsletter.

The demonstration topics are decided on the programme/network's 'open doors day' where farmers write down things they want demonstration provision to target. This ensures that when it comes to advertising the topic and recruiting participants, they can be sure there is some degree of interest.

> We have our 'open doors day', and then we ask farmers to write down what they think we should put more time in. Then we get a lot of answers, also impossible ones. But if there are

things in there that return a couple of times, then you know this 'lives' within the community. Then we have to try to fit this in somewhere. We don't want to organise things that interests nobody. (Programme Interviewee)

T2: Appropriate demonstration and interaction approaches

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

The Farmer felt the nature of the interaction was **'Mostly top-down'**, with Institutions such as ILVO facilitating what should be said, although within this, she noted how she felt she had a good degree of freedom within this.

> If we do a demo for another institution like ILVO, we [ILVO and farmer] will talk shortly on what I will say, or what I will talk about. But I always have a lot of freedom in this and how I want to tell my story. (Farmer)

She continued, noting that if she is doing a demonstration that is not associated with a programme/network then she will have the freedom to choose the content herself.

> Interviewer: Are farmers involved in the overall design of the demonstrations?
>
> Farmer: Only slightly, since the content will be shortly discussed with the researchers. But if it's not for a farmer's organisation, I will choose myself what the content of the demos will be and how I will arrange them.

The Programme Interviewee elaborated on this process of discussion/negotiation with the Host Farmer.

> I was here for example on this farm for this event 2 weeks ago, to make arrangements… in her guided walk, she can choose whatever she wants to say, how they made their decisions and why. So I discussed with her a bit. She asked me what we wanted her to highlight in the story, and I gave her the advice to tell the people how the farm got where it is now, but it's completely up to her. I believe that if you go on see something on a farm, it's logical that you involve the farmer. (Programme Interviewee)

The Programme Interviewee therefore felt the programme/network activities were **'Mostly bottom-up'**. She noted how there was an increasing trend to conform to this. As above, the 'open doors day' gave farmers some input into the topic areas and themes adopted by the programme/network.

2. Focus and Design

Both the Farmer and Programme Interviewee felt the demonstration network activities were **'In between'** 'Whole farm' and 'Single focussed'.

The Farmer also described the demonstrations design as **'Exemplary'**, whereas the Programme Interviewee felt they were more **'A mixture'** between 'Experimental' and 'Exemplary'. The Programme Interviewee felt – in their capacity as a practice centre – it was not in their business to trial new things.

> We are a practice centre, so it's not our goal or focus to try new things, to be really experimental. It could be a piece of a bigger project. We usually test new techniques who are already ready for practice. To communicate further to the farmer. Does it work or not? How did we do it? What should be noted? What does it cost? So mostly exemplary I think. (Programme Interviewee)

3. Group size

The Programme Interviewee felt there was no ideal group size and it was dependent on the topic.

> I think that strongly depends on the goal. If you want to talk about really practical stuff and you want interaction, I think it's better to sit around the table with 10 people about three times. If you have discussion groups, it might not really be a real demo, but its knowledge exchange too, and if it's with a lot of people, you always have the more silent farmers who don't dare to say anything. (Programme Interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The Farmer suggested a good way to structure demonstration days was around food breaks. She also placed a strong emphasis on walking around the farm, enabling participants to compare what they see to things they may have seen elsewhere.

> With a meeting, and coffee in the morning. I order bread rolls for lunch, and then I provide dessert to eat on the bridge as a break in the afternoon. I also want to make a walking trail around the farm, I've seen this on another farm somewhere and I liked this, which could be a next step. (Farmer)

The Farmer also described the different learning tools, materials and techniques she deployed.

> Things like the trivia [...] or pictures of the farm and the cows in different stages of labour. (Farmer)

The Programme Interviewee simply stated that a 'combination' of activities worked best in terms of structuring the day.

Whilst the Farmer – who was new to demonstrations – felt she was unable to comment on the most important characteristic of a demonstration day. The Programme Interviewee listed the fact **'Participants can ask questions and talk openly'** as the most important facet to delivery of demonstration activities.

2. Taking into account variation in learning

Although the Farmer was too new to demonstrating to reflect on previous practice, she talked about her plans to use a variety of teaching and learning activities. She was aware of her audiences' different learning needs – particularly the needs of children – and had some plans of how to cater for this going forward.

> I want to do that; I want to provide a sort of game and pictures of cows and calves to make it more interesting and interactive for kids. I also want to install 'pick nick' tables on the bridge so schoolchildren can eat their lunch there with this view on the barn. I also like putting up trivia and pictures all over the farm. (Farmer)

The Programme Interviewee felt the network were quite proactive in taking to account variation in learning styles and differing levels of prior knowledge, but she also noted the limitations of this if, for example, they are catering for a very large group.

> We try as much as possible to combine learning from a screen, learning from farmers and giving just a presentation, and the more practical. Sometimes it's not possible, when it's a really big group. But we try to take it into account. You notice that you have to do that otherwise you lose focus. (Programme Interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

As it was one of the Farmer's first event, she was unable to comment on follow-up activities and materials.

The Programme Interviewee suggested how a range of materials, including 'flyers, leaflets and presentations' were available to participants after event, via their website.

2. Assessing impact

The Programme Interviewee claimed that 'Sometimes' they assessed if participants had acted on the lessons from the demonstration. She did add that it was only an informal assessment, but recognised that the programme/network could do more of this.

The programme/network did not currently try to assess impact of their demonstrations beyond their immediate participants.

5. Event analysis: effective peer learning characteristics

Event details

	n° survey participants	advisor	farmer	farmer and advisor	farmer and software dairy
occupations	*21*	1	18	1	1
working area	*21*				
local area	18	1	17		
not local area	3		1	1	1
gender	*21*				
male	15		14	1	
female	6	1	4		1
age	*21*				
18-30	4	1	3		
31-40	3		3		
41-50	6		4	1	1
51-60	7		7		
60+	1		1		

T1: Learning processes

1. Communication initiation by participants

Most of the participants were rather closed about their own situation in the whole group (± 40 people). Room to share was also not really made, except during a networking break, where they had conversations over a drink and a dessert in smaller groups. We believe they talked a lot together informally during breaks. During the guided tour, they did talk to each other about the topic in informal small groups. There was some time for questions and some (5-10) questions were asked. Participants weren't willing, but there was definitely room for questions if they wanted to ask some. There were a few participants trying to formulate their own points of view regarding the topic but most weren't willing, time was not the biggest issue.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	2/14	10/14	2/14	**0**
I asked at least one question during the demonstration .	9/14 yes				
I shared my own point of view at least once during the demonstration.	8/14 yes				
I **felt encouraged to ask questions** during the demonstration.	0	3/14	8/14	3/14	**0**
When there were any discussions, **I felt comfortable sharing my opinion**.	0	0	7/13	3/13	**3/13**

	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	1	0	0	**0**
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	1	0	0	**0**
I **encouraged the participants to formulate questions** during the demonstration.	0	0	1	0	**0**

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

Some hands-on activities were demonstrated, but only very shortly. The farmer's wife showed how she fed the young cattle and showed the working of the milking robots as an example. No hands-on activity was carried out by participants. The participants could hear, see (and touch if they wanted to) the new barn. The calculation tool was only presented in a PowerPoint.

The demonstration included a guided farm tour while the farmer was explaining about the innovations and investments they did.

Discussion opportunities and negotiating conflicting points of view

There was not really a discussion facilitator, the presenting advisor tried to take up this role but the audience wasn't very willing to share info about the own farm (competitors).

There was time for an open discussion, but nobody really engaged, so it could have been possible if participants wanted to. Shared critical points of view were clarified/rephrased so more people could understand but participants generally were not sharing enough.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0/14	4/14	8/14	1/14	**1/14**
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	0/13	4/13	3/13	0/13	**6/13**

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

3. Engagement during the event

The participants act more distant than open. The demonstrator/host farmer acts open and friendly, but not as close friends with the participants. She was a very friendly and honest farmer's wife, who enjoys conversation with everybody. Participants didn't seem very willing to stay around afterwards or share a lot with each other, even though they know each other. We believe they saw each other as competitors.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I **felt actively involved** during the whole demonstration process.	0	6/15	6/15	3/15	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	0	7/15	5/15	2/15	1/15
I could **relate well to other participants** (because they have an agricultural background similar to mine).	0	2/15	11/15	1/15	1/15
A lot of the **other participants** are **part of the same farmer network** as me.	1/13	0	11/13	1/13	0
I felt like I could **trust the knowledge of (most of) the other participants**.	0	0	11/14	2/14	1/14
The demonstration **felt like an informal activity** to me.	0	1/14	7/14	5/14	1/14
I thought **the host farm was comparable enough to my own farm**.	1/14	3/14	8/14	1/14	1/14
I had the feeling the **demonstrator was like one of us.**	0	1/14	7/14	6/14	0
I had the feeling **I could trust the demonstrators knowledge**.	0	6/13	7/13	0	0
I **got along very well with the demonstrator.**	0	0	5/14	7/14	2/14

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were **participants** (farmers, advisers, researchers etc.) **involved in the overall development of this demonstration**? If yes, how?	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	0	1	0	0
The demonstration felt like **an informal activity** to me.	0	1	0	0	0
I think the **host farm** was **well suited** for this demo.	0	0	0	1	0
I **got along well** with the participants.	0	0	1	0	0

T2: Learning outcomes

Explained knowledge was very clearly understandable (e.g.: explaining the same thing in different ways). The PowerPoints were very clarifying and the illustrating guided walk around the farm supported the different talks very well and made the participants grasp the info better. There was no focus on trying out practical skills. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. For example, the dairy cattle on the demo farm doesn't leave the barn anymore, because they have everything they need in the best way inside the barn. This is different from traditional dairy farms and this was discussed. The investment of the farm in milking robots, the fact that the calculation tool shows that more cows doesn't necessarily lead to more income led to interesting points to think about for the participants. Common methods or ways of thinking on learning were not questioned.

(The demonstrator/host farmer didn't complete the whole survey, therefore we are missing some data in the next table.)

	participant answers				
What would you **ideally like to learn** today?	How to use the tool on my own farm; Why would someone expand? Working more precise with the data of a farm; making better choices for the farm added value of the tool and advising; Planning for the future; How colleagues handle this problem and look at it; Insight in the building of the new shed; Maybe some tips and tricks about farm management				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	1/15	0	7/15	7/15	0
The **demonstration exceeded my expectations.**	0	3/15	10/15	2/15	0
I felt surprised at some point(s) during the demonstration.	0	4/14	6/14	4/14	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	0	13/15	2/15	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	1/15	7/15	5/15	2/15
I **thought about how I could implement** some of the ideas and practices on my own farm.	1/15	1/15	4/15	8/15	1/15
I **reflected on my own point of view** at some point during the demonstration.	0	1/15	7/15	6/15	1/15
I learnt about **the principles underlying a practice**.	0	3/15	7/15	3/15	2/15
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	2/15	2/15	8/15	2/15	1/15
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	5/15	6/15	3/15	1/15

	demonstrator answers				
what do you **intend for the particpants to learn** today?					
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn.**	0	0	1	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	0	1	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	1	0	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	0	0	1
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	0	0	0	0
I **reflected on my own point of view** myself at some point during the demo.	0	0	0	0	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	0	0	0	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	0	0	0	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	0	0	0	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	0	0	0	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 4 on 5, participants rated the event overall as effective. Only 1 on 13 participants who answered the question would not recommend the demonstration. They stated as most effective characteristics of the event: I've learned that more cow doesn't mean more income; guided walk; talking about current topics; combination/balance theory and practice; info was applicable; info on the new tool; exchange knowledge; more insight in how to work with the tool on the long term

Suggestions for improvement included: none; go more into depth in the topics; more answers from the participants; more examples from practice (fictional is also fine).

Demonstrator:

The demonstrator reported she thought it was nice that the participants first got more technical presentations in the meeting room and afterwards could look out into the new stables standing on their newly build bridge. During the farm walk, the participants could see all the innovations.

Observed main strong points of the event:

Different researchers and advisors shared the highlights of their knowledge about the tool and showed how to practically implement it on a farm. This was very useful info for the farmers. They can use this knowledge immediately at home. The guided farm walk showing all the innovations was also strong.

Observed main improvements:

There was no plenary discussion planned or fostered. There were also not many questions because participants mainly didn't feel comfortable enough to share.

6. Annex: Case study poster July 2018

Background info

https://www.ilvo.vlaanderen.be/language/nl-NL/NL/Agenda/articleType/ArticleView/articleId/4927/Demonamiddag-voor-melkveehouders-Maak-onderbouwde-keuzes-op-je-melkveebedrijf.aspx#.W5jXd-gza70

Poster

FarmDemo

CASE STUDY Belgium: Korenblokhoeve

Hanne Cooreman & Lies Debruyne, ILVO

The Korenblokhoeve is a dairy farm, situated in the northeastern part of Flanders. Innovative breeding and producing milk are key objectives for the farm. The farm recently embraced and invested in technological advancements like milking robots and their brandnew stables, equipped with the latest innovative elements. This because they believe in their added value for the wellbeing of the cows and to make their own life easier. The farm only started hosting demonstrations, inspired by their success during the latest 'open doors day of Flemish farms' in September 2017.

Objectives

- Tell the story of our finished new shed for dairy cattle with new technologies, started in 2015
- Emphasize benefits of the comforts of the shed compared to outside meadow
- Earn a little extra money

Motivations

- Inspire young people about technology in agriculture
- Inspire other farmers about the technological innovations
- Social aspect
- Financial aspect

Topic selection

- Depending on the audience, and is discussed beforehand with the organizing party (the new meeting room can be used to discuss anything)
- (Innovations in) dairy production

Audience & participation

- Very diverse: children, high school students, farmers, families, researchers, companies, ...
- Participation fee: always, but depends on the audience and required facilities (timing, catering,...)

Demonstration set-up

- Farmer's wife organizes the demo's and enjoys the social aspect. She has a lot of ideas to expand in hosting of demonstrations.
- They are very new to demonstrating and only started now because the investments are finished.
- Based on consultation with requesting party and audience
- Usually involves an explanation of how the farm got where it is now and a guided tour.
- New meeting room with bridge looking out into the stables provides great opportunities to facilitate visits

Evaluation peer-to-peer learning environment (21th of June 2018)

- Diverse group of approx. 30 researchers and farmers, open to anyone interested who subscribed, farmers were the target.
- Guided farm visit was linked to presentations on a new decision support tool to optimise dairy cattle management
- Prior knowledge on dairy farming was not required, though clearly an advantage

- Farm is new to hosting demonstrations and started this now because the installations of their recent investments are finished.
- No real structural support in Flanders for farmers who have an interest in hosting demonstrations.
- One-man show: farmer's wife is central in organizing and conducting the demonstration. She has a lot of ideas for the future on expanding the amount and audience coverage of the demonstrations.
- Key areas to explore: guidance/support for farmers interested in hosting demonstrations, structural support for on-farm demonstrations (besides projects) – business model, creation of local networks, development of demonstrator skills

PLAID AGRIDEMO

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ILVO Institute for Agricultural and Fisheries Research

Belgium Case Study 4

1. Background

Ferme de Froidefontaine is a farm of 45 hectares which hosts several different agricultural and livestock activities and produces a variety of products such as such as orchards, honey, cider, potatoes, poultry, and market gardening.

Event date: May 19, 2018 at Ferme de Froidefontaine.

See the case study poster in 6. Annex for more details.

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 (Level 1) and Farm level interviews with demonstrators/hosts (Level 2) to reveal how the functional and structural characteristics enable learning. Analysis is reported in Sections 3 and 4. Data is sourced from 1 host farmer interview, who was interviewed in June 2018. 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.
3. Event tools and surveys (Level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 6 pre and 4 post demonstration surveys for participants, 2 pre and post demonstrator survey, a post demonstration host farmer interview 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.

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.

3. Structural characteristics

T1: Programme/network level

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

Ferme de Froidefontaine

Ferme de Froidefontaine is an interesting and innovative in many dimensions venture, which, although not a farm in legal terms, aims to address several challenges that small scale farmers face in their attempt to have access to land but also to embrace organic agriculture and even further to apply agro ecology practices and an holistic permaculture approach (Farm level interviewee + poster). They are the owners of a 45 hectares land in east/south-east Belgium, in which they are inviting farmers to organise their production in an environmental friendly way; The overall objective is to build a mesh of productive activities that would, eventually, lead to a brand name under which alternative farming and further rural activities (such as agri-tourism) will flourish. Being an incubator of food business and artisans, as the case study interviewee prefers to describe it (post host farmer interview), their business model is built around a co-ownership of farming economic activities (an interesting application in agriculture of a model traced in boosting ICT start-ups/ventures, but still more sustainable and committed in its perspective); access to market services to farmers' production; and supplementary administrative services offered to hosted agri and rural businesses (farm level interviewee +poster). In this model, demonstration activities are seen as a device that could serve multiple goals, which range from building a proof of concept of a legal innovation that would mitigate the problems deriving from farmers' lease of land-owners fields ("biaferme"), or increasing the visibility of environmental friendly practices, to even a simple additional income stream that would strengthen the sustainability of the venture (Farmer).

> So, the idea started from access to land. Now we realise there's a secondary realisation that people that want to do small scale agriculture have burning passions. […]So, one of the bets we make here economically is that by having a multitude of enterprises here, we can beneficially mutualize. So, what we want to offer is administrative services. We want to do accounting which we can't do now for cheaper than an accounting bureau. We want to offer a commercial identity, access to markets. This we still have to work on. (Farm interviewee)
>
> So, we start legal - juridical - structures, entities, and business basically and we take 50% of the investment by bringing the land, by bringing all types of services and we take 50% of the risk. If there would be a bad year, then Froidefontaine would help the farmer out and if there would be a bad year, then we don't sell as much and we have losses on our side as well (Farmer).
>
> So, what we try to set up here is a legal alternative where there's a clause in the law that says if you, as the landowner, take part in minimum 50% of the undertaking itself and 50% of the risks, then you can have a normal type of contract. It doesn't have to be farming-related. So, what we try and do here is try to bridge the gap between landowners and farmers by actually renting the land from a landowner (Farmer).
>
> So yeah, this is all…the idea here by taking 50% and getting out of the "biaferme" is not to put the producer in a precarious situation. We really want to do long term and this is for obvious environmental reasons. (…) our minimum is organic (…) but we want to then, the more we can, towards agro ecological principals. So, polyculture is a big one, hedges, beneficial agrobiodiversity, really holistic water management. (Farmer)
>
> Here, we're not really an education centre, we're not really a farm in the legal terms of it, so …. (Farmer)

In that direction, Ferme de Froidefontaine has organised in the last five years both one off and recurrent events depending on the topic or demonstrated practice (post host farmer interview). These demos were the "side" responsibility of a small core team in the organisation, and although quite random in their selection of topics and focus, they were guided by the "farm's" culture and approach that focuses on hands-on experiences of participants and the visibility and transfer of the innovative structure of the initiative. Events included workshops on water management and permaculture applications, as well as open farm days which started as daily events and turned to whole weekend ones with a large number of attendees. Moreover, efforts were also extended to cultural events, such as concerts, that would attract more people and bring them closer to the initiative. This accumulated experience has forced the host organisation to consider that in order to meet the overall strategy of the venture, demo events should be organised in a more structured way. Thus, a new employee was recently hired in order to take lead in developing a strategy and keeping a common thread in organising demos. The overall idea is to create synergies between different activities so focus is also placed on the products of farmers as well as on the launch of new ones.

> Up to now, it's been quite random. (….) it's been more about just random meetings and then acting upon it. Now, we've just hired Camille full-time and the idea is really to be able to now start having a common thread, a real vision. It's not really determined yet but we really want to do different types of cycles of demos. One would be much centred on growing citizens and another would be centred on growing farmers, so different types of demos for different audiences. (Farmer)
>
> Q: So, the main people involved in the demonstrations and their roles? R: (…) Generally, we're 3. So Camille was now hired so she will be doing that mainly (…) So, like this weekend, I'm the one doing the attendance, but she did all the administrative work behind it…the idea is to run it as a team but Camille will be in charge. (Farmer)
>
> In 2017 there were organised: 5 x farm open days; training for apple trees with trunks higher than 1,6m; training on water management. In 2018: Show by musical group "La Crapaude"; 3 x open-farm weekends; trainings. (Post host farmer interview)
>
> Yeah. It's a five-day workshop we give here at the farm. It's on holistic water management and planning at a farm level. (Farmer)
>
> Q: what is the typical timespan for the demonstration activities and why? R: Nicholas: One year because it's a whole agricultural cycle for this one or a couple of days where it's a specific topic and it takes time to get in depth into it. (Farmer)
>
> There's also lots of things we want to do related to culture. We have had two concerts in the past… The idea is really to get the people here actually through workshops (Farmer)
>
> One other thing I didn't mention are the "Journées Fermes Ouvertes". This year it's going to be weekends. We do three weekends where we try and organise big activities and we open our doors. It's in an initiative … which is also subsidized by the region and they estimate that between 1,400 and 1,500 during the weekend (Farmer)
>
> Two weeks ago we launched the new product of the cider farm which is the distilled cider like calvados. This is really good and we had 200 people over for dinner and then a concert and everything and we served them the first chickens of the farm as well. One activity helped the other and it all worked. (Farmer).

While the organisation of the demo events is pretty much top down in its nature both in the selection of scope and topics, when it comes to the structure of the event and its content the managing team seems

to give sufficient degrees of freedom to the trainers and demonstrators. It should be noted that although till now demonstrators were external experts/trainers and/or advisers and practitioners which have been invited to deliver demos on specific topics of their expertise, the organisers intend to develop a strand of demo events which will be designed and delivered by the farmers hosted in Ferme de Froidefontaine. Finally, depending on the topic of the demo its focus ranges from showcasing a specific application/farming practice to more whole farm ones related to environmental and/or sustainability issues.

> Q: is there something you would say to demonstrators? That you want it to be really hands-on? Or you leave them that they take care of that part? R: Generally, they take care of that part but it's our philosophy. I doubt we would work with a teacher that would say "OK, we're going to stay in the classroom and they're going to listen to me, show some images on the Power Point". We would really want the hands-on approach. (Farmer)
>
> It would depend on the coordinator. I don't give courses myself so… (Farmer)
>
> Q: How would you describe the demonstrations, the workshops that you provide are they whole farm, single focus or somewhere in between. R: We do both, we do the whole spectrum, this would be one activity, and water management would be looking at the farm as a whole. (Farmer)

Intended Audience/type of participants and communication activities

As the Ferme de Froidefontaine is focusing both on farming and on additional agri- and rural related activities, its planned events aim to attract and engage different target groups of participants. These could range from farmers willing to embrace organic agriculture and agro ecology schemes, consumers willing to support short supply chains and even citizens willing to consider the potential of an alternative organisation of the market for agricultural products and food consumption.

In order to reach out to them, Ferme de Froidefontaine uses a variety of communication tools. These consist of newsletters, with recipients built up of previous attendees, flyers and posters on forthcoming events as well as social media applications such as Facebook. A powerful tool seems to be the local media which seems to have spotted the farm's activity in their radar and monitor and publicize its activities.

> Who is your intended audience for the demonstrations? Is it farmers? Is it the general public? R: It depends on the demonstration. We're going to do demonstrations on crafts, on food, probably at one point it's going to become also on reflection, maybe economics for transition, maybe healthy living…the people I am most interested in having, and for obvious social reasons, are really our neighbours. We want to do the maximum we can in selling directly to the end consumer. A big question here is always going to be the right price. How can we correctly reattribute the producer for his work, a sales person for his works, and not have a cucumber that is a ridiculous price for the end consumer. So, try and re-appropriate the chain so you can do a just distribution for everybody. ….Also, what we want to do with the events is create such a social fabric. (Farmer)
>
> For the moment, we're building up a newsletter. So, I think now we must be around 750…Generally, people that have already followed a workshop are part of that…. we make posters that we go and put a bit everywhere around the place. We do flyers so when we go to markets, when there's workshops here, people can go with flyers. Then we use Facebook, now a bit more than 1,000 people on Facebook and we know…. (Farmer)

We start being quite present on the local media. Sometimes we contact them but mainly they contact us…. Like the cider farm, it's mainly once a month that they're in the local papers. (Farmer)

2. Networks

Demonstrations of Ferme de Froidefontaine are not part of a network or programme. However, its managing team is linked to different emblematic farms and networks both within Belgium and internationally. Although not a network, according to the farm level interviewee, this interaction facilitates the exchange of practical information and knowledge and thus strengthens the developmental potential of the venture and the sustainability of farming practices. Moreover, through those contacts the organisers see the potential of having joint events with similar-minded ventures.

Q: Are the demonstrations here part of any broader network of demonstrations? R: Not yet. One partner we're talking with is Nata Goa and we might start developing workshops with them. They might use our farm but it's at a discussion stage, so it's an idea. (Farmer)

Q: To what extent is the demo farm connected to other demo farms and/or other knowledge exchange organisations? (A colleague) worked at *La ferme du Bec Hellouin*. […] They're basically the one that proved scientifically and then the INRA, the national institute for agriculture, admitted that permaculture was a viable way of cultivating land. (Farmer)

Q: So, you're connected to them? R: (a colleague) had experience there. Two of the founders [of Ferme de Froidefontaine] studied agro ecology so they are really close friends to the founders of Agro ecology in Action. Agro ecology Europe. Otherwise… BioWallonia, Diversiferme, Crelan, Mimosa. (Farmer)

It's difficult to say we're in partnership with because they're existing and we're in contact. Sometimes when there is a specific question, we might pick up the phone and call them. They know who we are but it's not like we're in a continuous partnership where they depend on our functioning for their functioning and vice versa. There's no deal. (Farmer)

3. Resources, finances and incentives

Funding of demonstrations seems to be both a concern and a challenge for the organisers. Participation fees are the sole funding of events, which in turn challenged the organisers to focus on quality and practical outcomes of their offered services. At the same time, however, the farm level interviewee indicated some indirect benefits that may result from those events. These relate mainly to the opportunities offered for direct sales when people visit the farm, and the multiplying effect of spreading the news on the innovative structure. At the same time, the organisers highlighted that benefits may also result from synergies and cross-selling of services and products between participating business ventures (such as for instance through booking in their B&B and extending their staying on the farm).

Q: What are the funding arrangements for your demonstration activities? R: Well for the moment, it's self-funded. It's by the participation by the people doing the workshop. (Farmer)

Well, if we can make it viable and people are willing to pay. Of course, the funding will be the determining factor if it works or not. So, yes. If people are willing to pay. It's quite difficult in Belgium. (Farmer)

The thematic are going to be around food and agriculture and we cannot compete with subsidized workshops… Here, we're not really an education centre, we're not really a farm in the legal terms of it, and so it's very hard for us to get these kind of helps. So, we can't compete, so

our workshops will mostly be based on more, let's say innovative, or like [main demonstrator on the day we visit] is doing… (Practical things) (Farmer)

The idea is that we can benefit from people coming over - synergies between the different aspects we have. If a group would come and they would go picking in the fields, then Renaud would get a little bit out of it. They could book and stay in the B &B and then we could do a visit to the cider farm the day after that. Then bit by bit, the fact that people come over, we can have the different activities support each other. (Farmer)

So if you would have a sheep shepherd, an orchard, a B&B, a lady making natural colours, a cider farm, you could attract people directly to the farm. So, skip distribution and re-appropriate the margins made by distribution and diversify you incomes with visits, workshops, and a restaurant. So that's kind of the economic bet that the farm takes as a whole based on the legal innovation. (Farmer)

4. Materials and assessment

Apart from the newsletter the organisers regularly send to participants and the wider public, currently they do not seem to provide any other material during and after the demonstrators to participants.

More structured seems to be their approach of requested feedback from participants during the event. This is done both through questionnaires/forms and informally through discussions after the events. The evaluation of the demo though seems to be pursued only through their informal interaction of the event, a decision justified by the farm level interview by their close proximity to the actual process and close contact with groups of participants.

Finally there does not seem to be any structured or informal process in place aiming to assess if participants have engaged to any action on the info/lessons learned during demos, nor of the extend participants or non-participants were somehow influenced by the demo events and learnings.

Q: what materials, if any, are provided during demonstrations? R: None for the moment. (Farmer)

Q: do you continue to engage with participants after the demonstrations? R: Yes, they're added to our list and we send them reminders. (Farmer)

Q: Are follow-up materials made available to participants afterwards? R: No. (Farmer)

Q: Do you request any feedback on the event day from any participants? Yes, generally we do. Q: So you usually do anyways, it's a forms and they collect them up after? R: Yes, and also oral. (Farmer)

Q: Do you as the host, do you evaluate the demonstration activities. R: We're quite close to the actual process, so yes we do in a very informal way. It' more feeding based, I would say then methodological approach. (Farmer)

Q: do you assess if participants have engaged with the lessons in the demonstrations or workshops? R: No (Farmer)

Q: do you try to assess the extent of influence of your demonstration? R: No (Farmer)

Q: Do you try to assess the extent of influences at the diffusion from the demonstration to people who haven't, who haven't maybe an article written up about it. R: No, we don't even do direct. (Farmer)

T2: Farm (event) level

The event took place on May 19, 2018 at Ferme de Froidefontaine, a farm of 45 hectares which hosts several different agricultural and livestock activities and produces a variety of products such as such as orchards, honey, cider, potatoes, poultry, and market gardening (post host farmer interview).

On the day, Ferme de Froidefontaine staff's involvement in the demonstrations was focused on welcoming and interacting with the participants and providing refreshments.

1. Topics/ Practice/technology demonstrated

The topic of the event was on care and treatment of orchards. The whole context of the training was organic cultivation and an alternative way of producing apples that looks at traditional/indigenous varieties and which moves away from monoculture.
Although focusing on orchards, the demonstrators talked a lot about the wider context by mentioning biodiversity and spoke at length about genetic resources in terms of varieties, seed and grafting. Moreover, environmental sustainability was a core focus of the training day. (Observation tool)

2. Structure of the event and actors' roles

The event had a morning and afternoon session.

The training day started with a classroom setting. The host farmer was the one to welcome the group. The main demonstrator had prepared slides which he used to show the participants images of plant diseases and pests etc. The two demonstrators had a very open dialogue with the participants and there was an informal atmosphere. The majority of the participants posed questions or made remarks during this session. There was a pause for lunch together and then the group went into the orchard itself to see first-hand some of the material they had learned about.

The afternoon of the training day was outside in the orchard and the participants had the chance to see (and sometimes touch) different plants and insects up-close. However, there was no hands-on activity as such. The demonstrator showed the participants some equipment he uses for taking care of the apple trees. Participants didn't try to use the equipment themselves, and instead they just watched the demonstrator do it.

At the end of the day, the main demonstrator showed to the participants some books he had brought with him and told them where they could buy them. He gave advice on which ones were better than others.

There was no facilitator present in the event. However, since it was a small group, there was a natural flow of questions continuously during the day. Although there wasn't any time set aside specifically for questions, the open atmosphere during the event offered ample opportunities to participants to speak up, pose questions and comment on the topics demonstrated and knowledge shared on the specificities of care and maintenance of orchards. Finally, acquiring new knowledge was facilitated for the participants through the use of photographs and through the visit to the orchard where the demonstrators pointed out different things. In sum, it was not a very hands-on training day. It was also more focused on knowledge than skills. (Observation tool)

3. Participants

No one of the six participants that were interviewed was a farmer and none of them lived in the local area. . (Pre demonstration participant survey)

4. Frequency

This was the third training day of a series of five which were spread across the year. There were not any follow-up activities planned for each training day. Participants kept building on what they have learned in their previous two meetings. (Observation tool)

5. Farms' infrastructures or arrangements

The host farmer prepared tea and snacks that were available in the morning before the training started and prepared the lunch for everybody. (Observation tool)

6. Accessibility

The travel time of participants to reach the demo farm, ranged from 40 to 90 minutes, with an average time close to 65 minutes. All participants rated their travel effort to participate as very little or little effort. (Pre demonstration participant survey).

7. Fees for participation

All participants but one stated they had to pay a fee to attend the workshop and demonstration. None of them had received any financial compensation for his attendance (Post participant's survey).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

The host does not receive any financial support for the workshops.

> For the moment, it's self-funded. It's by the participation by the people doing the workshop.

He says that the lifespan of a workshop is based on what people are willing to pay for.

> Of course, the funding will be the determining factor if it works or not. So, yes. If people are willing to pay. It's quite difficult in Belgium. People here pay 65EUR per day, which I think is a really fair price, and people find it expensive.

2. Motivations for host farmers

Ferme de Froidefontaine started from questions around the access to land and the realisation that people who want to do small-scale agriculture have the passion but face many administrative and commercial hurdles. Ferme de Froidefontaine tries to bring a multitude of enterprises together on their 45ha and offer those administrative services, a commercial identity, and access to markets.

Motivations of the host farmer are linked to sharing knowledge with people who are interested in learning about orchard production, sustainable water management, and foraging.

> Well, I find it fun, it's a very personal type of motivation. I guess in the farm sense, it would be "sensibilisation" and economic viability. What we try to set up here has a high cost in the sense that it's a very heavy structure for not that many – at least now – agricultural activities so we have to be able to find our own sources of revenue so the B&B is one, the workshops is another.

The host is also really inspired by environmental reasons.

> We really want to do long term and this is for obvious environmental reasons. So here, our minimum is organic and we want to transition, because it takes a couple of years to do the conversion, but we want to then, the more we can move towards agro ecological principals. So, polyculture is a big one, hedges, beneficial agrobiodiversity, really holistic water management.

3. Motivations for participants

The host believes that gaining knowledge and the name of the demonstrator for the workshops are the aspects that attract participants. Also, their 'full immersion' programme might attract participants. Their location is a barrier he believes.

> Knowledge, sometimes the name of the teacher, I would say. Let's say, we have __ coming to give a talk here. People will come probably more for her than what she talks about and then of sounds they would listen to what she talks about and use that as knowledge, but they would be attracted by the name.

> We're far away. We're not very central. We're more than an hour away from Brussels and the closest town to here is "Ney" which is a big city with a train, Ciney which is 20 kilometres away. So yeah, I think that would be a major downturn.

> One of the advantages here maybe and one I really count on is, I haven't discussed yet, is full immersion. The fact that if we can give a workshop over four or five days, we can have people

> contributes to the everyday life on the farm. We can have people sleep well for five days, people get of their screens for five days that people eat well for five days and people be inspired by what they learn and be just in a beautiful context where they don't have to be in traffic and have their phone ring every five minutes. I think this will play a very big role in how we develop this year.

Participants themselves stated as main motivators to attend the demonstration:

> To learn to manage an orchard with apple trees whose trunk is more than 1.2 metres high; For the production of fruit and ecology; To create a micro-farm; Personal commitment; Interest in nature and orchards; Budding interest in this type of fruit tree cultivation and for processing (juice, cider); Discovery and learning.

4. Target audience

The host wants to focus people living close by, as target audience. He also believes it depends on the demonstration.

> It depends on the demonstration. Representing the commercial side of the farm, the people I am most interested in having, and for obvious social reasons, are really our neighbours. We want to do the maximum we can in selling directly to the end consumer. A big question here is always going to be the right price. How can we correctly reimburse the producer for his work, a sales person for his works, and not have a cucumber that is a ridiculous price for the end consumer. So, try and re-appropriate the chain so you can do a just distribution for everybody. So, for me, that's the most interesting. It's the people from around here. Also, what we want to do with the events is create such a social fabric.

5. Advertising and recruitment

The host farm usually uses their newsletter, Facebook, posters and flyers to advertise workshops.

> For the moment, we're building up a newsletter. So, I think now we must be around 750 subscribes, we hope to reach as much as we can. Generally, people that have already followed a workshop are part of that. What else? Generally, we make posters that we go and put a bit everywhere around the place. We do flyers so when we go to markets, when there's workshops here, people can go with flyers. Then we use Facebook, now a bit more than 1,000 people on Facebook.

The local press and papers are also believed to be a good way to advertise and recruit participants.

> We start being quite present on the local media. Sometimes we contact them but mainly they contact us. Like the cider farm, it's mainly once a month that they're in the local papers. Especially recently with the launching of the new product. It's good to have the press with you. We realised that if we want people to come, we have to.

T2: Appropriate demonstration and interaction approaches

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

Participants are not involved in the process of planning the workshops. The host believes people attend for different reasons.

> They just arrive on the day, the last open farm day weekend we're doing we're organising with "Le nuit", (section 3, 3:38) which is a local gathering of people that want to create a social fabric and we're doing it with an association with a local market, a farmers market it's from Ciney. So we try to co-organise with other grassroots organisation but participants in themselves no.
>
> If you have practical based aspects then there are things you need to cover and things you need to do, they will relate to specific tasks. If it's theoretical based then maybe on subjects that are a bit broader like "sovereignty" or ecological agriculture then probably it would be a lot easier to have an open classroom and a discussion, maybe even a reverse classroom where people learn beforehand and come have the debates but already instructed. I don't know, but for the moment no, participants are taking care of, because it's on very specific subjects. Today as you followed this morning, people come for that reason.

2. Focus and Design

If a workshop is organised top-down or bottom-up depends a lot on the content.

> I doubt we would work with a teacher that would say "OK, we're going to stay in the classroom and they're going to listen to me, show some images on the Power Point". We would really want the hands-on approach. I think it's really important to mix mind and body. But whether it's top-down or bottom-up is up to the teacher and is very much up to the content as well. Theirs is a lot of content that you can't do bottom-up, you have to do top-down and I don't see this particularly as a bad thing.

The same goes for a single of whole farm approach. The host says it depends on the theme.

> We do both, we do the whole spectrum, this would be one activity, water management would be looking at the farm as a whole. It depends on the "theme".

When dealing with the design of the demo's and workshops, the host farmer believes 'exemplary' is for them the best and safest option.

> We're at the very beginning so I don't think we're allowed the experimental parts, we really can't "own" this as a financial income and if we want to become renowned as an educational centre I think exploration is risky, a risk we can't afford to take so I'm going for exemplary and I'm very confident that within the year when we have sufficient infrastructure we can get very interesting people here.
>
> Because we are not subsidised, we have to go for a nice quality, so we take people with renowned experience, and bring them, at least that's we're going to try do and what we've done.

3. Ideal group size

20 people with 2 teachers who can rotate is seen as ideal by the host.

> Cedrick has a very good voice and generally, if you have a good voice you can't go over 25 and 25 for one teacher already is a big group. Unfortunately our breakeven level, generally is around 10-12 people so, and often it can get to 15. So if 25 is too big a group, then I would say 20 would be perfect and it would allow us to make some profit and it would allow maybe a more personal approach to the teacher. Maybe 20 people per 2 teachers that would be the best and they would be able to rotate, so that they don't tire too much and a second teacher, one is giving explanation and the other is available to answer personal questions.

T3: Enabling learning appropriate to purpose, audience, context

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

Depending on the topic and the goal, the host doubts between farmer to farmer or adviser to farmer as being the most efficient.

> If you talk about production, knowledge sharing about production, then I would say yes farmer to farmer is the most efficient. But if you talk about the activity and technological viability "and" the activity as a whole then are most, in our case, the most efficient role we have is adviser to farmer.

The organisation of the workshops has been quite random so far. The vision of the host farm only changed recently in this respect when they hired someone to work on cycles of demo's.

> Up to now, it's been quite random. It's been meeting teachers and having a good chat with them… a good feeling with them… and co-organising something. It hasn't been particularly around a theme, it's been more about just random meetings and then acting upon it. Now, we've just hired Camille full-time and the idea is really to be able to now start having a common thread, a real vision. It's not really determined yet but we really want to do different types of cycles of demos. One would be much centred on growing citizens and another would be centred on growing farmers, so different types of demos for different audiences.

They do have clear vision for the content of these demo's, but they also know that it will be impossible to compete with subsidised workshops.

> So maybe I'm going to explain what we want for different types of groups. So, we are opening a B&B, we are going to have different types of activities. So, we are going to give workshops as a whole, which are going to be given by the producing partners. We're going to have workshops that are given by external teachers. We did one last year on permaculture over five days with Holzer, the son of Jens and Jozef Holzer. They're known in Austria. So, this is the idea. So, this is the idea, firstly the thematics are going to be around food and agriculture and we cannot compete with subsidized workshops.

The host strongly believes in learning by doing and hands-on approaches.

> Hands on approach, they learn by doing. Or you can learn by learning, a lot of people can but I think, anything that's really worth knowing you learn by doing, I would say. Because, learning is a personal experience you have to be able understand the things that you fail to understand and you can only do it through questioning.

2. Taking into account variation in learning

The host says it depends strongly on the habits of the teachers, and that he doesn't have a preference in their way of instructing, as long as it works and it's not straight forward one way transfer.

> It's very difficult again because I'm not one of the teachers, so it would be would very much depend on the teachers , the one on the water management we had was a farmer and they tend to just explain what they do. I think here Cedrick is very much a teacher in the proper sense, the word where he interacts with his audience more than elaborates on what he's saying. But I don't have a preference, the message that the teacher has to convey and we'll select teachers that do it, how would you say, with a certain value set and with a certain interest and we won't have somebody here who just bulldozes information into people's minds, it's not the idea.

T4: Effective follow-up activities

1. Follow-up activities and materials

None at the moment. The attendees get added to the newsletter if they want to, that's it.

Yes, they're added to our list and we send them reminders.

2. Assessing impact

They assess impact orally and informally, but not in a structured way at all.

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of about 10 participants, of which 6 filled in the pre survey and 4 the post survey. Nobody works in the local area.

	n° surveys	Commercial exporter organic chocolate	Employee	Food Legislation	Industrial Engineer	Landscaper	Scientist
occupations	*6*	1	1	1	1	1	1
gender	*6*						
male	5	1	1		1	1	1
female	1			1			
age	*6*						
18-30	1	1					
31-40	4		1	1		1	1
41-50							
51-60	1				1		
60+							

T1: Learning processes

1. Communication initiation by participants

More than 50% of the participants had no problem sharing their knowledge and experiences related to the topic/ there was a very open atmosphere and participants were happy to speak up. The participants were never broken up into smaller groups. There was a natural flow of questions continuously during the day. However, there wasn't any time set aside specifically for questions. There were many questions and comments and most of the participants posed questions. There wasn't any particular reflection on the participants' points of view. The training was more focused on the specificities of care and maintenance of orchards than on getting the participants to formulate their own opinions.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	0	1/4	3/4	0
I asked at least one question during the demonstration .	4/4 yes				
I shared my own point of view at least once during the demonstration.	4/4 yes				
I **felt encouraged to ask questions** during the demonstration.	0	0	3/4	1/4	0
When there were any discussions, **I felt comfortable sharing my opinion**.	0	0	1/4	3/4	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	2/2	0	0
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	0	2/2	0	0
I **encouraged the participants to formulate questions** during the demonstration.	0	0	2/2	0	0

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

A hands-on activity was demonstrated, but only very shortly. The demonstrator showed the participants some equipment he uses for taking care of the apple trees. The participants didn't try to use any equipment themselves, they just watched the demonstrator do it.

The afternoon of the training day was outside in the orchard and the participants had the chance to see (and sometimes touch) different plants and insects up-close. However, there was no hands-on activity as such.

Discussion opportunities and negotiating conflicting points of view

There was no facilitator. However, since it was a small group, the questions flowed freely without the need for one. There weren't any open discussions as such, but there were plenty of questions. There weren't any conflicts about points of view.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	0	1/4	3/4	**0**
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	1/4	1/4	0	1/4	**1/4**

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

3. Engagement during the event

This was the third time that most of the participants met so they did seem to know each other and there was a good rapport between them and between the main demonstrator and them. Both demonstrators were approachable and seemed to be well-liked by the participants.

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

T2: Learning outcomes

Acquiring new knowledge was facilitated for the participants through the use of photographs and through the visit to the orchard where the demonstrators pointed out different things. It was sufficiently understandable. It wasn't a very hands-on training day. It was also more focused on knowledge than skills. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. The whole context of the training was organic cultivation and an alternative way of producing apples that looks at ancient varieties etc. and which moves away from monoculture. In that sense, the demonstrator spoke about questioned the "received knowledge" on the dominant ways of producing apples at the moment, but didn't question organic methods as such, nor the return to old production methods. It was implied that this was better. The training didn't question how it is that we learn, nor the best methods of teaching people.

	participant answers				
What would you **ideally like to learn** today?	Management of pests without treatments; Theory/practice				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	0	0	4/4	0
The **demonstration exceeded my expectations.**	0	0	0	4/4	0
I felt surprised at some point(s) during the demonstration.	1/4	1/4	2/4	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	0	2/4	2/4	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	0	0	4/4	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	0	4/4	0
I **reflected on my own point of view** at some point during the demonstration.	0	0	2/4	2/4	0
I learnt about **the principles underlying a practice**.	0	0	2/4	2/4	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	1/4	0	1/4	2/4	0
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	1/3	1/3	1/3	0

	demonstrator answers				
what do you **intend for the particpants to learn** today?	Analysis and observation; To become independent in their orchards				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	1/2	1/2	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	2/2	0	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	2/2	0	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	1/2	0	1/2
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	0	2/2	0	0
I **reflected on my own point of view** myself at some point during the demo.	0	1/2	1/2	0	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	0	2/2	0	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	1/2	1/2	0	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	2/2	0	0	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	1/2	1/2	0	0	0

T3: Overall comments on the effectiveness of the event

Participants:

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

As main effective characteristics of the demo participants mentioned: Very practical and entirely effective.

None of the participants made a suggestion on how to improve the demonstration.

Demonstrator:

As main effective characteristics of the demo, the demonstrators reported: An interested audience and orchard setting, 'on the ground'.

As suggestion for improvement the demonstrator mentioned: 'Carrying out the treatments together.'

6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY Belgium: Ferme de Froidefontaine

European Landowners' Organization

Ferme de Froidefontaine started from questions around the access to land and the realization that people that want to do small-scale agriculture have the passion but face many administrative and commercial hurdles. Ferme de Froidefontaine tries to bring a multitude of enterprises together on their 45ha and offer them administrative services, a commercial identity, and access to markets.

Objectives

- Improve the sustainability of small-scale agricultural businesses by working together.
- Develop a community based of entrepreneurs with a focus on organic and agroecological farming systems.

Motivations

- To share knowledge with people who are interested in learning about orchard production, sustainable water management, and foraging.

Topic selection

- Selected based on what could be demonstrated using Ferme de Froidefontaine as a base.
- The process of finding interested demonstrators has been quite organic for the workshops that have taken place so far. There is no specific strategy.

Evaluation peer-to-peer learning environment (19 May, Care and Treatment of Orchards)

- The first part of the workshop was a traditional "classroom style" with a PowerPoint presentation. The participants were very open in posing questions to the demonstrator(s).
- The walk through the orchard was more hands-on for spotting different issues with the trees.

Audience & participation

- Primarily made up of local people (travelling up to 1 hour to reach it).
- This demonstration was the third of a five part series so the group already knew each other.
- There was a participation fee.
- Ferme de Froidefontaine hopes to attract international attendees in the future and they have the capacity to host them in the B&B they are setting up.

Demonstration set-up

- The choice of demonstration is top-down. When the Ferme de Froidefontaine staff meet a demonstrator they like, and if they fit with their ethos, they invite them to come to do a demonstration at their farm. However, the content of the workshops is left up to the demonstrator.
- Ferme de Froidefontaine staff are responsible for promoting the workshops and arranging the bookings.
- On the day, Ferme de Froidefontaine staff's involvement in the demonstrations was focused on welcoming and interacting with the participants and providing refreshments.

- Overall, it seemed like the participants took a lot from the day. There was a very good rapport between the participants and the demonstrators and between one another.
- The approach to having a series of connected workshops over the year is quite innovative, rather than having a stand-alone day.
- It would be interesting to find out more about the individual motivation of the participants for joining the workshops in a structured way at the beginning or end of the demonstration. The demonstrations are a new venture for Ferme de Froidefontaine but their approach seems to be working well so far.

PLAID AGRIDEMO

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ELO

Denmark Case Study 1

1. Background

Programme

In Denmark, we do not have any specific programmes for demonstration activities. The demonstration for case study 1 was organised and held by an organic extension service called ØRD. They organise several demonstrations and events each year as a service for their customers and to attract new customers. ØRD is a private organisation, which acts as advisory service to organic farmers.

Funding and Governance

The demonstrations are usually funded by ØRD itself but this particularly event also had an entrance fee.

The events are planned and organised by the employees at ØRD and usually held at one of their client's farm/fields.

Actors and networks

ØRD works closely with *Organic Denmark* and Seges Organic Innovation, two organisations in Denmark working with innovative projects to develop organic agriculture.

How it works

The employees at ØRD continually discuss which event they want to make. They then find a suitable host farmer (one of their clients). If other companies are invited, they involve them in preparing the program. ØRD has the contact information of their 800 clients (organic farmers) and they usually send them an email or text message with an invitation for the event.

Event farm and location

- ØRD use different host farms for their events. It depends on what they want to show.
- Event date: 15th of May 2018

The demonstration event on 15th of May 2018 was the first large scale demonstration held by the local extension service ØRD (Observation tool).

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 2) to reveal how the Functional and Structural characteristics enable learning. Structural and functional analysis is reported in Sections 3 and 4. Data is sourced from interviews with two programme level actors. The first interviewee is a consultant at Seges, a private organisation, which works as a knowledge centre that builds bridges between research and practical farming. The interviewee is also in the steering committee for the organic part of Danish Agriculture Extension. S/he gave a presentation during the demonstration event (demonstrator) and filled out the survey for demonstrators. The other interviewee is the director of ØRD. The director gave an introduction to the day at the demonstration event. The analysis followed four themes: (1) Coordinating effective recruitment of host farmers and participants; (2) Appropriate demonstration and interaction approaches; (3) Enabling learning appropriate to purpose, audience, context; (4) 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. This data is sourced from 17 pre and 4 post demonstration surveys for participants, and 10 pre surveys and 3 post surveys for 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.

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 the Danish and Swedish case studies was held on the 17th of October, 2018.

3. Structural characteristics

T1: Programme/network level

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

In Denmark, they do not have any specific programmes for demonstration activities. The demonstration for case study 1 was organised and held by an organic extension service called ØRD. They organise several demonstrations and events each year as a service for their customers and to attract new customers. ØRD is a private organisation, which acts as advisory service to organic farmers.

ØRD organisation and ØRD employees' roles

ØRD plans and organises demonstration events usually held at one of their customers' organic farm/fields. Its employees select after discussion a suitable host farmer depending on the event they want to organise and the 'innovativeness' of the farmer with respect to the specific demo goal/idea.

> We have 800 farmers as clients, so we choose the farmers we think has something interesting to show. Farmers that do something special lead the way or do something new. (Programme interviewee 2)

> The employees of ØRD are the main people involved in demonstration activities. (Programme interviewee 2)

> ØRD makes an action plan based on a demonstration idea/goal. Then, they decide on the timing of the event and the intended audience. The planning and preparation period of an event varies, ranging from 1 year to a shorter time horizon, depending on the characteristics of the event. Finally, they organise one-off events, with topics emerging from the field. (Programme interviewee 2)

ØRD involves multiple actors on the demonstration topic selection to meet its audience interests (Program interviewee 2). When the event focuses on machinery exhibition, the topics are related to what the collaborating companies find interesting to demonstrate.

> We involve the host farmers, the local advisors here at ØRD, and sometimes external people, where we make a brainstorm. (Programme interviewee 2)

> The events differ in some way. For example, last spring a new machine was introduced in Denmark that none had seen before. A farmer bought it and then we thought that other farmers could be interested in seeing it on the field. Therefore, we called the farmer and asked when he was going to use it in his field and then we texted our customers to tell them when and where they could see the machine. This kind of event does not require any form of planning. The only thing we do is send a message. Other events are planned one year ahead and we control what it is that we want to communicate. (Programme interviewee 2)

ØRD's demonstrations are exemplary according to the Programme interviewee 2, although at his point of view, experimental approaches are more preferable as an effective decision-support tool.

> In most cases the farmers have different types of treatments in their field and then the difference is shown at the demos. But as a decision support experiments are more effective because they can be reproduced more easily than best practices in a farmer's field. If we had the money to do experiments I would prefer this approach. (Programme interviewee 2)

Finally, farmers are sometimes involved in the overall development of demos at the program level, although indirectly and mainly through professional groups.

> Some farmers are involved in the development of the overall programme through a professional group that are selected to give input to the advisors and input to demonstrations. On which topic, such as soil fertility, climate or animal welfare, we need to focus on? 10 farmers are selected for the group each year. They meet 3-4 times a year. (Programme interviewee 2)

SEGES organisation and employees' roles

Seges' approach concerning demonstrations, is quite participatory. They aim at the involvement of as many actors as possible such as representatives from the intended audience, advisors, host farmers, machinery demonstrators etc. The project director is responsible for the final decision after this multi-actor consultation. Additionally, when a demo is organised in the context of a project the host farmers are selected in relation to the project's requirements.

> You never do it alone, that is simply too dangerous, because then we miss some of the obvious people we needed to include. So, you should always work with some representatives from the intended audience, typically we work together with advisors, and a host (one of the intended audiences), and if machinery is demonstrated those people demonstrating the machines are also represented. And they have great influence. (Programme interviewee 1)

> So, all parts are involved in the process, and there is a project manager that takes the final decisions. It does not work without involving the other parts. (Programme interviewee 1)

> We choose the host farm so it matches with what we want to demonstrate. (Programme interviewee 1).

> Seges makes use of its network in order to select suitable farmers to host demonstration events. In cases, the local extension services are often approached to suggest possible suitable host farmers. (Programme interviewee 1).

> We use our network. We know a lot of farmers but we can also ask our colleagues at the local extension services if they know someone who would be good at hosting a big or a small demo and then they come up with some suggestions. It is necessary with some knowledge. (Program Interviewee 1)

With regard to the selection of a demonstration topic, Seges employs a rather flexible approach, making use of its knowledge and experience, or in consultation with other actors, considering also audience needs and interests. In case of a project, topic selection depends also on project requirements. The criteria for the topic selection are both the topics the organisation has already worked on as well as new interesting topics, as the organisation aims to correspond to issues organic farmers' face. Finally, a demonstration could be also built upon an occasional good farming example, as a one-off event.

> It requires that we have our fingers on the pulse. And that I think we have. Otherwise we talk with other people. But here in this house it very much depends on the projects we have and if they require reporting. It should be consistent with the needs they have on the farms, otherwise we have a problem. (Programme interviewee 1)

> What are the topics we have worked with and what new can we tell. That is typically something we worked on for two or three years at a time. The second is: what is relevant right now. Suddenly there are *Psylliodes chrysocephalus* in the fields and then we must go the field with rapeseed and see how it looks and what we can do about it. That is the good

> thing about a demo, you can change the programme up to one week before it is held. (Programme interviewee 1)
>
> Our big and small demos are situational. We can make very small and narrow demos, for example for a person who has made a fantastic machine for ridging up potatoes. And then we make a demo just for him. That is very narrow. And then we make these bigger events where we cover a lot of different subjects. So, we can do both. (Programme interviewee 1)

The evaluation of the organisation and implementation of the demos is carried out by Seges in collaboration with other actors involved.

> We talk with the others who helped to plan, organise and carry out the demo, to evaluate how things went. For the big events, we use a survey. (Programme interviewee 1)

Companies / machinery representatives

Sometimes ØRD collaborates with commercial companies for its demonstrations. In this case, ØRD sets the agenda for the demo day in consultation with the companies they invite and they are planning together what they want to demonstrate. Sometimes these companies sponsor the demonstration activities of the organisation. (Programme interviewee 2)

> Seges and *Organic Denmark* are permanent partners and then we also cooperate with different commercial companies… We invite companies that have created some technology or product that can create added value for the farmers e.g. new machines or new cultivars. (Programme interviewee 2)
>
> Some are funded by projects, other are sponsored by companies, and sometimes the farmers pay a fee. (Programme interviewee 2)

Host farmer

ØRD uses different host farms from its customer list (organic farmers) for their events, depending on what they want to demonstrate (Programme interviewee 2). The host farmer is involved in the topic selection.

> Q: How do you identify/select relevant topics that will interest farmers? R: We involve the host farmers, the local advisors here at ØRD, and sometimes external people, where we make a brainstorm. (Programme interviewee 2)

Both Programme interviewees stated that host farmers are always involved in the overall development of individual demonstration activities. Program interviewee 2 considers that this involvement is necessary for the effectiveness of the demo, while, according to Programme interviewee 1, the host farmer's presentation is desirable but not compulsory.

> Because the activities are taking place at their farms and it is best if they are involved to some extend to make the event a success. If the farmer is involved in the activities that take place at his farm and tell stories about these activities the participants will be more responsive. (Programme interviewee 2).
>
> We choose the host farmers because they can do something. They have either taken some decision or have some special machines or they do farming in a special way they can tell about. That is the frame and then we have some specific demos. But their presentation of the farm is important. If they host farm isn't included enough in the demo we get bad evaluations. People want the story of the farm……. It is not necessary that he is a good communicator, because most farmers are uncomfortable with talking in front of big

> crowds. Then we do the talking. That is not a problem. We ask them if they want to do it and if not, we do it. (Programme interviewee 1)

Demonstrators

Demonstrators usually have different occupations like advisers, sellers, product manager, company owners, agronomist product specialists etc. Most of them participate as demonstrators from 5 to 50 times per year while some hold over 50 events per year (Pre survey demonstrator).

None of the demonstrators of the case study has ever received any training to become demonstrator. (Pre survey demonstrator). Additionally, two out of three demonstrators strongly disagreed that they could benefit from some extra training as a demonstrator (Post survey demonstrator).

Advisors

Advisors are involved at the organisation of the demonstrations according to Programme Interviewees, as they are in direct contact with the farmers. Advisors are also involved at the demonstration topic selection in order to meet the audience interests. Finally, the engagement of demo participants after specific events comes through advisors' engagement.

> Q: How is the programme/network managed? R: You never do it alone, that is simply too dangerous, because then we miss some of the obvious people we needed to include. So, you should always work with some representatives from the intended audience, typically we work together with advisors. (Programme interviewee 1)

> We involve the host farmers, the local advisors…, and sometimes external people, where we make a brainstorm. (Programme interviewee 2)

> Q: What is the most effective way to encourage engagement after specific events? R: Our problem is that we don't have the direct contact to the farmers. Local advisors have this contact. (Programme interviewee 1)

Extension services

Seges seems to cooperate with local extension services either for host farmer's selection or for demo dissemination actions.

> Some places you only use once. We use our network. We know a lot of farmers but we can also ask our colleagues at the local extension services if they know someone who would be good at hosting a big or a small demo and then they come up with some suggestions. (Programme interviewee 1)

> Q: Are follow-up materials made available to participants after demos? R: If we cooperate with the local extension service, the power points are placed on their homepage and our homepage. Sometimes we also use short films. (Programme interviewee 1)

Networks

ØRD organises several demonstrations events. They work closely with *Organic Denmark* and Seges Organic Innovation, two organisations in Denmark which develop innovative projects on organic agriculture. Seges cooperates with any organisation that could fit in its demonstrations. Sometimes they cooperate with local extension services, as well as with other organisations/partners at several EU or national projects in which they participate. Finally, as stated earlier Seges uses its own network, to draw either host farmers and/or demo participants.

> Seges and *Organic Denmark* are permanent partners and then we also cooperate with different commercial companies. (Programme interviewee 2)

> When we make bigger events, we cooperate with whomever it makes sense to cooperate with. Sometimes two, three or four different project activities. It is complicated because they all need to have something unique to report. It could be some EU programmes, Interreg that we work together, which work together with some of our own GUDP projects. The GUDP projects are very much about development and innovation and they are often very good to cooperate with, since they have same outgoing nature. And other very narrow theme projects, for example projects on faba beans, they also need to tell a story, but they can seldom do that themselves, so it is very good when they get embedded in some bigger projects. So, we cooperate on all kinds of levels. (Programme interviewee 1)

> Trial and error. Some places you only use once. We use our network. We know a lot of farmers but we can also ask our colleagues at the local extension services if they know someone who would be good at hosting a big or a small demo and then they come up with some suggestions. It is necessary with some knowledge. (Programme interviewee 1)

The host farmer of this specific event participates to a farming network called ERFA-groups (grazing, roughage) and to Facebook-groups. While the majority of the demonstrators of the event were not part of a network, two of them reported their membership in the steering committee for the organic part of Danish Agriculture Extension and the second in the plant breeding committee at *Organic Denmark* (Pre survey demonstrator).

2. Funding arrangements

The demonstration activities organised by ØRD are funded in different ways such as projects, participation fee, or by companies. In the same vein Seges in most cases makes use of project funding and/or participation fee. It should be noted that for Seges charging a fee to participants is considered as an interesting coordination mechanism, which also indicates a high added value potential for participants. Finally, an interesting point is that funders tend to be more positive towards demo programs that involves multiple partners.

> Some are funded by projects, other are sponsored by companies, and sometimes the farmers pay a fee. (Programme interviewee 2)

> Nine out of ten are some projects that contain some dissemination obligations. But we are more and more looking at the commercial part of it, because 'for free' is not always the best. It is experienced as more exclusive. Of course, some may not come and you reduce your audience. Then of course, you need to get something extra; a presentation, some extern people, something new. That is a very important part of how we develop our demos that we are aware of it is a narrow reporting or it is something developing where people walk away with a feeling of learning something new, then there must be something exclusive in it and then you can charge a user fee. (Programme interviewee 1)

> In my opinion, it is always perceived positively by the funding provider if you work with other partners so it gets a broader appeal. (Programme interviewee 1)

ØRD offers incentives to farmers in order to host demonstration activities. Depending on the funding arrangement of its demo, these incentives vary from small gifts to a direct payment. On the other hand, in the case of Seges, demonstration partners very seldom get money for their involvement.

> Small gifts, for example wine. If the demo is funded by a project, it is sometimes possible to pay the farmer. (Programme interviewee 1)

> Because the ones who are participating and contributing (representatives from the intended audience, advisors, host , people demonstrating machines) they very seldom get money for it, but they must see some other benefits such as business development. It is very important that they are positively involved. (Programme interviewee 1)

3. The decision-making process in organising demonstrations

Seges makes use of multilevel feedback and two-way communication before and after the organisation of a demonstration event.

> The overall goal is to tell what we work with in the projects, especially why we do it, and get some feedback to see if it is the right things we work with. Of course, we try to clarify it before we start a project, but it is very important for is to get it checked. We are very aware of that it is a two-way communication. It should be designed in a way so that we also benefit from the demo. (Programme interviewee 1)

> You never do it alone, that is simply too dangerous, because then we miss some of the obvious people we needed to include. So, you should always work with some representatives from the intended audience, typically we work together with advisors, and a host (one of the intended audiences), and if machinery is demonstrated those people demonstrating the machines are also represented. And they have great influence. So, all parts are involved in the process there is a project manager that takes the final decisions. It does not work without involving the other parts. (Programme interviewee 1)

However, it seems that the general approach of the organisation is mostly top down. The starting point of the demo is to deliver a concrete expert knowledge to participants. In this frame, Seges invests in dialogue and communication. Similarly, ØRD has a mostly top-down approach, as it follows a specific agenda and plans on what they want to demonstrate.

> I recognise that there are many experts in the world that knows more than I do. So, it is very seldom me who push expert knowledge. You expect some expert knowledge that is disseminated with great confidence. Then they can discuss it afterwards but it is delivered as “expert-to-receiver”. It is important that we give people the conclusions on how to solve different problems. That is step one. And then hopefully someone will oppose or have some experience. But to get a discussion you do not start with a question. We must tell what we think and what we have learnt. (Programme interviewee 1)

> We set the agenda for the day together with the companies we invite. So, we have a plan for what we want to demonstrate. We have some information we want to give and we think that the participants expect that something happens. (Programme interviewee 2)

4. Goals / objectives

The overall goals and objectives of the two organisation were not detailed in the two programme interviews. Creating benefits for the farmers and getting multilevel feedback on their projects were the main goals stated.

> The overall goal is always to create added value for the farmers. They are the intended audience. (Programme interviewee 2)

> The overall goal is to tell what we work with in the projects, especially why we do it, and get some feedback to see if it is the right things we work with. (Programme interviewee 1)

Turning though to the specific event, its objectives were to promote ØRD's extension services, to develop organic dairy production, to demonstrate field trials as well as to exhibit farm machinery. Moreover, ØRD intends to get new customers, and develop new services for its current customers.

As far as the demonstrators' goals are concerned, these are more related to sales and commercial issues. Seven out of ten demonstrators participated at the specific event stated that new costumers for their products and sales were their main goals. Networking and knowledge dissemination were a less frequent answer (Pre survey demonstrator).

T2: Farm (event) level

1. Event farm and location

The demonstration event took place at a large sized private farm, named Vejgaarden, which is an organic dairy farm located in the Western part of Jutland. The farm has 550 organic dairy cows and 440 hectares of clover grass and corn. In addition, the farm cooperates with six plant breeders in the area with a total of more than 300 hectares (Poster info). The farm has had demos on different themes concerning cattle and arable production, e.g. Housing systems, grazing of rye, nutrients, etc. (Post host farmer interview).

The demonstration event took place on the 15th of May 2018, and it was the first large scale demonstration held by the local extension service ØRD. During the event, different machines were exhibited and some of them were actually demonstrated in the field. Moreover, the demonstration included presentations of experiments, field walks and generally a common area where participants could discuss and socialise.

During the demonstration event, people were divided into three groups going to three different stops in turn. (Observation tool). Demonstrators, were either advisors who made presentations in the fields of maize, clover and rye and supply chain actors demonstrating machinery equipment.

The first stop addressed the production of maize and clover-grass. The demonstrators (two local advisors) talked about maize and clover-grass cultivated in different test strips. Those presentations occurred in the field of the crop in question. In the maize field, two different machines (hoeing machines) for weed control were tested and demonstrated. In the clover-grass field a "Plate-meter" was used to measure height and density of the sward (Observation tool).

The second stop was in the pasture where several demonstrators talked about rye and grass-clover pastures. In the clover-grass field, three or four advisers talked about different mixtures of clover-grass, different strategies for cutting the grass etc. In the field of rye, presentation about grazing of rye and measurement of the sward occurred (Observation tool).

The last stop was at the exhibition of machinery and other farming equipment such as machinery for weed control, grass cutting, processing of the crop etc. Different companies exhibited their machines with supply chain actors standing next to the machines giving information about their products (Observation tool).

2. Topic and group size

The Topic is Roughage for organic milk cows (Observation tool) with the following Subtopics: (Practice/technology/machine) demonstrated:

- Maize: soil treatment, pests, cultivars and weed control and two hoeing machines demonstrated in the field
- Clover: Different mixtures of clover-grass, different strategies for cutting the grass and "Plate-meter" machine demonstration in the field.
- Rye: Grazing of rye and measurement of the sward.
- Machinery and farming equipment exhibition: machinery for weed control, grass cutting, processing of the crop and cultivars were exhibited etc. (Observation tool)

Attendees were approximately 100. The organisers expected 200-300 participants but only 110 had registered and less than 100 showed up (Observation tool). The demo was held in the first warm week in Denmark, so all the farmers were very busy doing field work and they think this was the main reason for the low attendance. More than 80% of the participants did not work at the local area where the demonstration event occurred. The vast majority (over 88%) of the interviewed participants were farmers (Pre demonstration survey participant).

3. Event Farm Location and layout

Both Programme interviewees stated that the demos organised by their organisations fall in-between single focus and whole farm approach. In this specific event, however, one demonstrator stated that he did not aim to apply a 'whole farm approach' during the demonstration. The observation tool confirms this statement, noting that no notion of whole farm approach was demonstrated but only isolated practices. Each presentation addressed isolated practises concerning roughage for dairy cows. (Observation tool). The other two demonstrators being product sellers or managers, found the question as not applicable to their situation.

The event was classified as a showcasing of existing practices by two out of three demonstrators and as exemplary by one of them (Post survey demonstrator).

According to the observation tool, there were both fields with comparison and fields without comparisons in the farm. More specifically, the organisers had made some test strips in the farmer's field. They had shown different cultivars of maize, showing the differences between traditional and new cultivars in test strips. They had also made test strips in the clover grass-field with different treatments (sowing date, level of fertiliser, date of cutting the grass etc.).

4. Frequency, duration and timing

The timing of a demonstration event is an issue of great importance. If an event takes place at the same time with important seasonal farming activities, it will be difficult for farmer participants to attend the event, due to heavy workload.

> If they need to travel a long way or if they don't have time. If the events are held in the middle of the sowing or harvest season it will discourage people from attending. (Programme interviewee 2).
>
> The demo was held in the first warm week in Denmark, so all the farmers were very busy doing field work and I think this was the main reason for the less attendance. (Observation tool 1)

5. Farm's infrastructure and arrangements

The analysis of this case study points out the importance of specific arrangements when organising a demonstration. The host farmer and the organisers had made some arrangements for hosting the specific event. They took care for the good looking of the farm, they offered water and organic pizza to participants.

> The extension service has planned everything. I have spent some time making everything look fine at the farm. (Post host farmer interview)
>
> It also has something to do with pride. You don't do demos on farms that look awful. The farmer must be proud to show his farm. (Programme interviewee)
>
> The weather was beautiful with sun and 25 degrees. It was very warm but the organisers provided water for the participants during the entire day. (Observation tool)
>
> For lunch, they had arranged a food truck with a pizza oven who made organic pizza for the participants. This was a very good way to feed so many people with delicious food. (Observation tool)
>
> There is a lot of logistics. It can be very banal, but when we are making big events, we hire people to guide the cars, provide fruit and coffee etc. If it does not work it will always be a part of a bad evaluation. (Programme interviewee)

It was also pointed out that a demonstration event is a "day out" for farmer attendees and an occasion to eat and discuss with peers. The machinery exhibition was placed far away from the eating area, which resulted to a very low attendance.

> For me and my company this day was not very effective. There was not enough people visiting our exhibition. It was placed too far from the eating area. There were generally too few visitors at this event... our stand should have been located immediately near the area where food was served so that visitors could walk around the stands while eating. (Post survey demonstrator 3)

6. Farms accessibility and fees for participation

Farm's location and travel time for attending a demo have been pointed out as factors of great importance.

> Q: What do you think discourages people from attending demonstrations? R: If they need to travel a long way or if they don't have time. (Programme interviewee 2).

The travel time of farmers to reach the demo farm, ranged from 20 to 90 minutes, with an average time close to 48 minutes (Pre demonstration survey participant). On the one hand, 50% of participants interviewed have rated their travel effort to participate as no effort or very little effort, with the remaining half rating their travel effort to participate as quite some effort or great effort (Pre demonstration survey participant). We cannot draw any clear conclusion in relation to the organisation of the specific event and the farm location. Some participants travelled for 30 minutes rated their travel effort to participate as great effort or quite some effort and some participants travelled for 90 or 60 minutes rated their travel effort to participate as no effort or very little effort. So, the effort rate may be also related to other factors i.e. participants motivations, free time etc. apart from travel distance.

Time is an issue for host farmer and participants. The analysis of this case study points out "time issues" as a crucial factor for demo effectiveness. The available time of participants to travel and the good

organisation of the event in order to be consider as worth the time spent by participants is very important.

> Q: What do you think motivates participants to attend demos? There should be a professional programme in order for participants to be willing to spend the entire day or morning on it. That is necessary. (Programme interviewee 2)

Additionally, the time is a quite important issue for the host farmers involved at demo events.

> They do not do it without a great professional interest, because it is very troublesome. When planning the demo everything goes fine, but the last two or three days before and during the event, it is in the way and they could have used the time in the field. But they already know that. We return to those who are good at it, so they have tried it before. So, they know it and they think it is fun. (Programme interviewee).

Finally, during the specific demonstration event, a lack of sufficient time for interaction and a general rush is pointed out as an organisational issue.

> The first session addressed the production of maize and clover-grass. In the maize field two advisers told about soil treatment, pests, cultivars and weed control and two hoeing machines were demonstrated in the field. The participants seemed interested in the demonstration, but everything was a bit rushed, since there was very little time for each presentation. This also meant that there was very little time for questions and no time for discussion. (Observation tool)
>
> After this we drove to the clover-grass field where 3-4 advisers told about different mixtures of clover-grass, different strategies for cutting the grass etc. Again, there was very little/no time for questions and discussion. (Observation tool)

As already mentioned the demonstration activities organised by ØRD and Seges are funded in some cases by participants' fees. This was also the case in the specific demonstration event, as there were fees for participants. Moreover, farmer participants were not compensated somehow for attending the demo. Only one participant, an agriculture teacher, reported that he was compensated in order to attend the demo without clarifying how this happened.

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

The Programme interviewees described how the funding arrangements differed, and what farmers received to host the demonstration events differed accordingly.

> Some are funded by projects, other are sponsored by companies, and sometimes the farmers pay a fee. (Programme interviewee 1)

It was felt that events that charged a fee were viewed as more exclusive or likely to be more professional, and thus they can attract more participants. Therefore, the network were increasingly focusing on the commercial aspects of demonstration events.

> We are more and more looking at the commercial part of it, because "for free" is not always the best. Sometimes it is good if it costs something, 200-400 DKK. It is experienced as more exclusive. (Programme interviewee 2)

This arrangement meant that more often than not, host farmers received some kind of payment – but this may simply be a gift, temporary labour or compensation for their expenditure and time (as opposed to something they can make a profit from).

> Small gifts, for example wine. If the demo is funded by a project, it is sometimes possible to pay the farmer. (Programme interviewee 1)

> If it is possible, we pay them for their hassle. If they need some men to broom the courtyard and put new gravel on and so on. (Programme interviewee 2)

2. Motivations for host farmers

Both Programme Interviewees concurred that financial gain was not a key motivation for farmers to host demonstration activities. Programme Interviewee 1 talked about the opportunity to improve one's social standing by hosting such events, accompanied with a desire to show off their farm.

> Social standing is the most important factor and also because they want to show their farm to other. It is important for farmers to be recognised by other farmers for what they do. They do not have any financial interest in it. (Programme interviewee 1)

Programme Interviewee 2 suggested that hosts simply had a 'great professional interest' in farming and the topic.

> They do not do it without a great professional interest, because it is very troublesome. When planning the demo everything goes fine, but the last two or three days before and during the event, it is in the way and they could have used the time in the field. (Programme interviewee 2)

3. Motivations for participants

The Programme Interviewees described a range of motivating factors for participants. An interest in seeing inside prestigious estates was something that Programme Interviewee 2 felt 'always works'.

> An important trigger is if the demo is held at one of the bigger estates such as Gram Gods or Stenalt Gods. That always works. It is something people want to see. (Programme interviewee 2)

The importance of being able to see something 'new' or interesting at work in the field was highlighted by Programme Interviewee 1. He also cited the opportunity to network with other farmers and develop cooperative agreements.

> If they can see a new machine, a new cultivar or something new in the field or in the stable. They are also motivated if other farmers attend. There is a commercial aspect in networking with other farmers and make cooperation agreements. (Programme interviewee 1)

Data from the pre-survey revealed how participants themselves stated as main motivators to attend the demonstration:

- Learn something new
- Improve my grass products
- Learn about new initiatives
- I am curious
- Learn about roughage
- Professional knowledge
- I need to buy a harrow
- Sharing of knowledge

4. Target audience

Although the interviewees both stressed that the target audience for the event was mainly farmers and advisors, they also recognised that it extended beyond this to include a variety of other stakeholders connected to the industry in different ways.

> Typically, our intended audience is farmers and advisors. But also, to get a good dialog with scientist, developers and supply chain actors, those who sell machinery. But it can also be someone who wants some new commodities such as quinoa, that we have a dialog with at the demos and bring people together, so that they can get an understanding of what is happening at the farms. And then maybe this can help them when they develop new products. But the primary audience is farmers and advisers. (Programme interviewee 2)

5. Advertising and recruitment

The Programme Interviewees claimed that participants were nearly always targeted when recruiting for demonstration activities. They used various methods ranging from the formal to the informal. Programme Interviewee 2 talked about a very novel method of purchasing access to farmers via their Facebook profiles. This was supplemented with more traditional methods of advertising, e.g. via newspaper.

> We send out emails and text messages to the farmers we think will find the demo interesting, according to where they live and their type of production. We use our own database with lists of our clients. (Programme interviewee 1)

> I cannot say always since we are not allowed to have a list of relevant people because of the data protection act. The last time we had a big event we bought hits on Facebook. For example, you can buy the email of people who have the word "organic" in their field of interest. Then they will get the news about the specific event. And it works. Otherwise we have ads in Landbrugsavisen (agriculture newspaper). (Programme interviewee 2)

The Programme Interviewees both stressed the need to "push" advertising on as many different platforms as possible.

> It is a combination of advertising in the medias, personal emails, and that their local advisor tells them about the event. So, they hear about from different places. (Programme interviewee 1)

> You need to spam people to the limit of nausea. But not more than that. Then it becomes annoying. Sometimes we make short movies on Facebook and they get a lot of views. (Programme Interviewee 2)

Programme Interviewee 2 suggested that the programme of events needed to be sufficiently professional looking to entice participants to it. He emphasised how farmers could be spending their entire morning or even day away from the farm, therefore the programme must be well-designed and professional looking, and highlight the benefits to participants.

> There should be a professional programme in order for participants to be willing to spend the entire day or morning on it. (Programme Interviewee 2)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

Both Programme Interviewees agreed that the nature of interaction tended to be 'Mostly top down'. Generally, host farmers were heavily involved in individual demonstrations, after they had been selected to be involved

> We choose the host farm so it matches with what we want to demonstrate. (Programme interviewee 1)

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

As above, host farmers had a significant role in the design of the individual demonstration activities, but input to the overall programme was a little more exclusive. A select number of hosts/demonstrators, as opposed to participants, were invited to participate in a group meeting 3-4 times a year.

> Some farmers are involved in the development of the overall programme through a professional group that are selected to give input to the advisors and input to demonstrations. Is it soil fertility, climate or animal welfare we need to focus on? 10 farmers are selected for the group each year. They meet 3-4 times a year. (Programme interviewee 1)

It was important to the network that they were 'across' or attuned to the issues that farmers wanted to know about, and they felt they were achieving this. He stressed the need to talk to farmers to find out what issues they were facing.

> It requires that we have our fingers on the pulse. And that I think we have. Otherwise we talk with other people [...] It should be consistent with the needs they have on the farms, otherwise we have a problem. (Programme interviewee 1)

> We choose the host farm so it matches with what we want to demonstrate. (Programme interviewee 2)

3. Focus and Design

Both Programme interviewees described the network as 'in between' a 'Whole farm' and 'Single focus' approach. The Programme Interviewees differed in their opinion of the network approach; Programme Interviewee 1 felt it was 'Exemplary' in nature, where was Programme Interviewee 2 felt it was 'Experimental' in nature. They both expressed a preference for a more 'Exemplary approach', although Programme interviewee 1 recognised the value of an 'Experimental' approach, he was concerned this was often costly.

4. Ideal group size

Both Programme interviewees suggested a number between 30 and 40 is an ideal size group. Programme Interviewee 1 talked about the different dynamics that can emerge in a group of 30-40 which allows for discussion and exchange. He suggested this kind of thing does not happen amongst larger groups.

> A group of 30-40 people. Then different dynamics can be created among the participants and they can contribute with different things and experiences. It offers better opportunities for discussion and more people dare to say something than if there were 150 participants. (Programme interviewee 1)

T3: Enabling learning appropriate to purpose, audience, context

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

Both interviewees talked about the integration of practical activities into the day, as well as the opportunity for participants to see things for themselves.

> The best is a lot practical activities where you see things in the field or in the stable and you can touch it. (Programme interviewee 1)

Programme interviewee 1 later commented that space to discuss and ask questions was crucially important to the structure and content of the day.

> And people asking questions is crucial for the dynamics of the demo. You learn much better by asking questions than when a person is talking for twenty minutes. (Programme interviewee 1)

Despite this statement, Programme interviewees 1 and 2 both agreed that 'Problem solving' was the most important characteristic of farm demonstration.

> The most important thing is that the farmers think that they get closer to a solution to their problem by participating in a demo. (Programme interviewee 1)
>
> You need to come home with a solution on how to solve a problem, and that requires that the participants talk and the technical tools are just facilities for that. (Programme Interviewee 2)

2. Taking into account variation in learning

It was apparent that the Programme did not take into account variation in learning styles or different levels of prior knowledge. However, Programme Interviewee 2 recognised that all participants 'must be challenged' for the event to be a success. With this level of understanding/appreciation for different

learning needs, this could be something the network looks into providing or accommodating for in the future.

T4: Effective follow-up activities

1. Follow-up activities and materials

The Programme interviewees claimed that there was no attempt at continuing to engage participants after the event, although they recognised this as a priority for the future development of the programme. Interestingly, Programme interviewee 2 suggested that the ability to do this was limited by new Data Protection laws. Considering ways round this might be something the programme administrators wish to explore.

> I have to say no but it is our intention to contact some of the participants after the demo and ask them if they got something out of the demo or if there was something more we could have done. (Programme interviewee 1)
>
> You could do that but because of the data protection act it is limited what we are able to do and how we can use the list of the participants. (Programme Interviewee 2)

In terms of the follow-up materials available to participants after the event, the Programme offered a range of materials, typically made available on their website. Materials included presentations, pictures and even short films.

> The presentations and pictures of the day are available at our homepage afterwards. (Programme interviewee 1)
>
> If we cooperate with the local extension service, the power points are placed on their homepage and our homepage. Sometimes we also use short films. (Programme Interviewee 2)

2. Assessing impact

The programme did not attempt to assess any kind of impact of the demonstration event amongst participants, nor in the broader context.

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of 100 participants, of which 17 filled in the pre survey and 4 the post survey.

	n° survey participants	agriculture teacher	farmer	office worker	unknown
occupations	*17*	1	13	1	2
working area	*16*				
local area	3		3		
not local area	13	1	9	1	2
gender	*17*				
male	14	1	12		1
female	3		1	1	1
age	*8*				
18-30	2		2		
31-40					
41-50					
51-60	6	1	5		
60+					

T1: Learning processes

1. Communication initiation by participants

There were approximately 100 participants at this demo. They were not asked questions when they were together in the big group so participants were rather closed and didn't share their knowledge and/or experiences related to the topic willingly. Some, not more than about 10% of the participants had no problem asking questions but most of them where silent and just listening to the presentations. A little time was made for questions, about 5%, and only a few questions were asked. Some of the participants, formulated their own point of view but they were not encouraged to do so. Primarily the same persons asked questions.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	0	2/4	0	**2/4**
I asked at least one question during the demonstration .	4/4 yes				
I shared my own point of view at least once during the demonstration.	2/4 yes				
I **felt encouraged to ask questions** during the demonstration.	0	0	4/4	0	**0**
When there were any discussions, **I felt comfortable sharing my opinion**.	0	0	3/4	0	**1/4**

	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	1/3	1/3	1/3	**0**
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	1/3	0	1/3	**1/3**
I **encouraged the participants to formulate questions** during the demonstration.	0	1/3	0	1/3	**1/3**

2. Interactive knowledge creation

Hands-on opportunities and other multi-sensorial experiences

More than one hands-on activity was demonstrated very clearly/ instructively. The machinery for weed control was demonstrated in the field and the measuring device for measuring grass density was also demonstrated in the field. But most of the sessions did not have any hands-on activities. Participants could take part in a hands-on activity, but didn't get any feedback on their doing. At one session, the participants were invited to use the device for measuring grass density, but they were not that interested in trying.

The visitors were invited to use the "plate-meter" for measuring the density of the sward, but only two people in the observed group (out of approximately 30 people) tried it out. In the fields, the participants could see and feel the different crops.

Discussion opportunities and negotiating conflicting points of view

At the demonstration site, participants were divided into three groups going to three different stops. The first stop was in the field where several demonstrators (local advisors) told about maize and clover-grass in different test strips in the field. Each demonstrator guided the questions and one person was responsible for the group and kept track of time. The second stop was in the pasture where several demonstrators told about rye and grass-clover pastures. The last stop was at the exhibition of machinery and other farming equipment, but there was not a facilitator to guide this part, so most of the farmers did not go and talk to the exhibitioners. Instead, they talked with the other farmers and walked around at the farm.

No open discussions were held and there was no elaboration/further explanation on shared critical points of view.

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

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	1/3	1/3	0	**1/3**
If participants **didn't agree with each other during discussions**, somebody (me or somebody else) **tried to reach consensus** between them.	1/3	1/3	0	0	**1/3**

3. Engagement during the event

Participants all seem to know each other well, but are not close friends. Many of the participants knew each other already. They sat together at the tables where there was a lively talk. Most of the demonstrators have worked in the sector of organic agriculture for many years and know most of the farmers and people from the supply chain companies very well, so they mostly acted as friends with the participants.

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

	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	1/2	1/2	0	0
A lot of the participants **are part of the same network as me**.	0	0	2/2	0	0
The demonstration felt like **an informal activity** to me.	0	0	2/3	1/3	0
I think the **host farm** was **well suited** for this demo.	0	0	0	2/2	0
I **got along well** with the participants.	0	0	1/3	2/3	0

T2: Learning outcomes

The different demonstrators were relatively clear in explaining their knowledge. However, some of them tried to dodge some of the questions from the participants, which could have interfered with the clearness of the presentation. Skills were not sufficiently addresses since there were only very few hands-on activities. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. For some parts of the presentations demonstrators gave examples of where the knowledge behind the ideas came from. Learning methods or approaches were not mentioned at all.

	participant answers				
What would you **ideally like to learn** today?	See what is new; Learn about roughage – fodder – maize - organic agriculture; A bit of everything; Brush up on technics for organic production.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	1/4	3/4	0	0
The **demonstration exceeded my expectations.**	1/4	2/4	0	0	1/4
I felt surprised at some point(s) during the demonstration.	0	2/4	2/4	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	0	4/4	0	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	1/4	2/4	1/4	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	1/4	2/4	0	1/4
I **reflected on my own point of view** at some point during the demonstration.	0	2/4	1/4	0	1/4
I learnt about **the principles underlying a practice**.	0	1/4	3/4	0	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	0	1/4	1/4	0	2/4
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	0	1/4	0	3/4

	demonstrator answers				
what do you **intend for the particpants to learn** today?	To think in new possibilities for production of clovergrass and maize; Spread our concept; Get information about the company; That they buy our cultivars and understand our way of thinking about maize; That our products are better than the ones from our competitors; The benefits they can have of our machines; More focus on the details in precision farming and hoeing.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	1/3	2/3	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	2/3	1/3	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	1/3	1/3	0	0	1/3
I obtained a clearer understanding of the topic(s) myself.	0	2/3	0	0	1/3
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	2/3	0	0	1/3
I **reflected on my own point of view** myself at some point during the demo.	0	2/3	0	0	1/3
I encouraged participants **to reflect on their own point of view** during this demo.	1/3	1/3	1/3	0	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	1/3	1/3	0	1/3
I encouraged participants to reflect **on how we learn something new** on demonstrations.	0	2/3	0	0	1/3
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	1/3	1/3	0	0	1/3

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,5 on 5, participants rated the event overall as effective. 4 on 4 participants who answered the questions would recommend the demonstration.

As main effective characteristics of the demo participants mentioned: The sessions about rye for pasture; the timespan for each session; the number of different subjects.

No participant mentioned suggestions for improvement.

Demonstrators:

As main effective characteristics of the demo, a demonstrator mentioned: Known and available technology was directly demonstrated to the users.

As suggestion for improvement two demonstrators mentioned: 'For me and my company this day was not very effective. There were not enough people visiting our exhibition. It was placed too far away from the eating area. There were generally too few visitors at this event.'

Observed main strong points of the event:

It was a tight program so the demonstrators prioritised sharing their knowledge rather than making time for discussion. The host farmer also presented some facts of his farm. This gave a very good impression of the venue.

The weather was beautiful with sun and 25 degrees. It was very warm but the organisers provided water for the participants during the entire day. For lunch, they had arranged a food truck with a pizza oven who made organic pizza for the participants. This was a very good way to feed so many people with delicious and informal food.

Most of the farmers thought it was a good day but they were not surprised by the content or presentations.

Observed main possible improvements of the event:

Timing. They expected 200 participants but only 110 had registered and less than 100 showed up. The demo was held in the first warm week in Denmark, so all the farmers were very busy doing field work and they think this was the main reason for the less attendance.

The participants seemed interested in the demonstration, but everything was a bit rushed, since there was very little time for each presentation. This also meant that there was very little time for questions and no time for discussion.

In the end, the visitor groups had time to visit the exhibition of machinery and the stands where supply chain actors gave information about their products (cultivars etc.). The machinery was located on the other side of the road and the stands were placed on the small strip next to the stable. Very few of the farmers visited these stands and exhibitions and the exhibitors were very disappointed with the attendance. Perhaps there should have been a guided tour at the exhibition or the machinery and the stands should have been located closer to the "food court".

There was very little hands-on activities and discussion but the main goal for the organisers was to spread out knowledge on organic roughage.

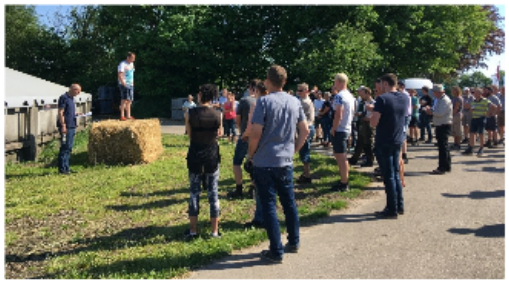
6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY "Denmark": Case 1, Grovfoderdag at Vejgaarden

Frank Oudshoorn, Seges

Vejgaarden is an organic dairy farm located in the Western part of Jutland. The farm has 550 organic dairy cows and 440 hectares of clover grass and corn. In addition, the farm cooperates with six plant breeders in the area with a total of more than 300 hectares.



Objectives
- Promote ØRD (the extension service)
- Develop organic dairy production
- Demonstrate field trials
- Exhibit farm machinery

Motivations
- ØRD: get new costumers/service for their current customers
- Host farmer: pride in his work
- Exhibitors: sell their products

Topic selection
- Determined by the extension service
- Dependent on the field trials at the host farm
- Dependent on the host farmer's production
- Exhibition (what the companies find interesting)

Audience & participation
- Farmers and advisers
- Participation fee
- ~100 participants

Demonstration set-up
- Exhibition of farm machines
- Presentations of experiments
- Demonstrations of machinery
- Field walks
- Common area where people could socialize

Evaluation peer-to-peer learning environment (15.05.2018 Grovfoderdag)
- A good mixture of field walks, presentations, demonstrations and time for socializing.
- Few hands-on activities were carried out by participants
- Very few questions and almost no discussion
- Many presentations – they varied in their level of innovation

- Good host farm. Presentations of both innovative and well-known subjects
- They expected more than 300 participants but less than 100 showed up – high level of competition from other similar demonstrations
- Workshop: How to... get more participants, engage the participants (hands-on activities, discussions and questions), engage companies and exhibitioners

PLAID AGRIDEMO

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SEGES

Denmark Case Study 2

1. Background

Programme

In Denmark, we do not have any specific programmes for demonstration activities. The demonstration for case study 2 was organised and held by the organic department of a local extension service called LMO, a private advisory service that consists of different divisions in which professional employees are responsible for its functions. They organise several demonstrations and events each year as a service for their customers and to attract new customers. The demonstrations vary in size and theme. The last two years they have held a big demonstration/event called "Økotræf" (loosely translated to Organic Meeting). Their goal is to make this a yearly event and to make it the main event for organic farmers in Denmark.

Funding and Governance

The demonstrations are funded by LMO itself. The events are planned and organised by the employees at LMO.

Actors and networks

LMO works closely with Seges, a knowledge centre that builds bridges between research and practical farming. People from the farming industry are also invited to participate in the event Økotræf, where they exhibit products relevant to organic farmers.

How it works

Økotræf is held at the farm of one of LMO's employees. At the farm, there are several field trials coordinated by LMO and Seges. The event is planned and organised by the host farmer (employee at LMO) and the director at LMO. Exhibitioners (people from the farming industry) and consultants from Seges give input to the programme. LMO has the contact information of their clients (organic farmers) and they usually send them an email or text message with an invitation to the event.

Event Farm and location

Økotræf is held at the same farm – an organic arable farm owned by one of the employees at LMO.

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 2) to reveal how the Functional and Structural characteristics enable learning Analysis is reported in Sections 3 and 4. Data is sourced from interviews with one Progamme/Network member and one Programme/network member who is also the host farmer at this demonstration. The two interviews were performed in May 2018. The analysis followed 4 themes: (1) Coordinating effective recruitment of host farmers and participants; (2) Appropriate demonstration and interaction approaches; (3) Enabling learning appropriate to purpose, audience, context; (4) 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. This data is sourced from 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.

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 and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the Danish and Swedish case studies was held on the 17th of October, 2018.

3. Structural characteristics

T1: Programme/network level

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

LMO: the organisation, its advisors and extension services employees

The demonstration events are planned and organised by the employees of LMO Organic. The planning processes of LMO are quite flexible and they depend on what the organisation wants to demonstrate each time.

> We design and plan the activity according to the specific case we want to demonstrate. So, we do not just use the same approach for all. We adapt it to the situation. (Programme interviewee)

LMO employees first agree on the demonstration event they want to make i.e. the topic and what exactly they want to show. In most cases demonstration topics are selected by them. In some cases, only a minimum set of interesting topics is defined by LMO and the topics/subjects are selected by other actors or in consultation with LMO. Finally, there are also cases in which topics may be entirely decided by interested farmers' groups and LMO facilitates the whole processes.

> The employees at LMO organic have the roles of choosing the case we want to demonstrate. Then we find suitable host farmers and after this we make a programme together with the host farmer and ask him, what he think could be interesting to do, so he also has some influence on the event. Then we use our communication and marketing department to communicate the events to the farmers. (Programme interviewee)
>
> The overall theme we decide here at LMO and then we involve the host farmer in the detail planning of the programme. For some of the events, as in the case with Økotræf, we set the frame and then the demonstrators/exhibitors decide what subject they want to demonstrate. (Programme interviewee).
>
> We need a grassroots democracy here in LMO so that farmers can provide input to what they want to be demonstrated. In our ERFA-groups the farmers themselves decide what they want to see and then we facilitate it. (Programme interviewee).

Thereafter, a group of LMO's advisors (employees of LMO) selects a suitable host farmer from their customer database, in accordance with the topic selected. The demonstration programme is, then, planned in detail together with the host farmer. Finally, LMO has a special department with advisors who organise and design trials in the host farmer's field.

> We sit down a group of advisers and discuss if we know some farmers with a farm that highlights the issue in question. We also consider how the farmer is as a person. Is he outgoing? All the hosts are selected from our own database of clients so it is all people we already know. (Programme interviewee)
>
> The trial department at the extension service where I work helps us decide where we can have the different trials. The overall goal and setup is planned together with the manager of the extension service… We control what kind of trials that are possible to have at the farm. (Farmer)

LMO makes use of informal feedback and keeps engaging with participants when specific questions pop up after the events. However, this does not seem to be a formal and well-structured process.

> We do not use surveys. We evaluate the atmosphere and usually some of the participants give feedback. (Programme interviewee)

> We do not engage the people that attended at the demo, but we keep on working with new demos and we answer questions that farmers have after the demo. Sometimes they want to make some changes at their farm because of a demo, and then we help them out. (Programme interviewee)

> The organisers walked around throughout the day and asked the participants for feedback and tried to sell their services from the extension service. (Observation tool)

LMO uses its in-house facilities to disseminate information on planned events. The organisation has the contact information of its customers (organic farmers) and they usually send them an email or text message with an invitation to the event.

> Then we use our communication and marketing department to communicate the events to the farmers. (Programme interviewee)

LMO collaboration with other organisations

LMO works closely with Seges, a knowledge centre that builds bridges between research and practical farming. Consultants from Seges give input to the programme (Background info). At the demonstration event farm, there were several field trials coordinated by LMO and Seges (Background info). LMO is also linked to projects of other organisations. Collaborating organisations are often invited to present their projects and results during the organised events.

> …for some of the events there is a link to some of the projects in the other organisations and then they are invited to present their projects and results. (Programme interviewee)

Host farmer

In this specific case study, the distinction between the host farmer and the organisers was not very clear, as the event was held at the farm of one of LMO's employees. At the specific farm, there were several field trials coordinated by LMO and Seges. The event was planned and organised by the host farmer (employee at LMO) and the director of LMO Organic (background info).

In general, LMO argues that host farmers are involved in the planning and design of its demo events.

> Then we find suitable host farmers and after this we make a programme together with the host farmer and ask him what he think could be interesting to do, so he also has some influence on the event. (Programme interviewee)

> Q: How do you identify/select relevant topics that will interest farmers? R: The overall theme we decide here at LMO and then we involve the host farmer in the detail planning of the programme. (Programme interviewee)

Although host farmers are involved in the development of the individual demonstration activities, their role, in the development of the overall demonstration programme is marginal, if any at all (Programme interviewee). In this specific case study, though, the host farmer is involved in the overall development of demos at the programme network level as he is an advisor in organic plant production of LMO.

> At my work in the extension service, I am involved in deciding which demonstration we want to have. (Farmer)

During the demonstration events, host farmers are expected to talk about their experience on their own farm, a parameter that influences positively the effectiveness of the event.

> Q: What do you think is the most effective way to arrange/structure a demonstration activity? R: It depends on the situation but Ithink it is best to combine a presentation, to demonstrate it at the farm and to hear the host farmers experience with it. (Programme interviewee)

Demonstrators

In the specific event, demonstrators were the host farmer, agricultural advisors, machine sellers and people within agricultural science. Demonstrators are involved after each demonstration event by giving feedback through an informal evaluation process.

> Q: Do you evaluate the demonstration activities overall? R: Yes. We also have an evaluation with the demonstrators/exhibitors after the demo. For example, at Økotræf, the demonstrators/exhibitors are invited to dinner after the event and then we have a talk about what worked and what did not work. (Programme interviewee)

> At each presentation/demonstration the presenter guided the questions and discussions. The presenters were either the host farmer, agricultural advisors, machine sellers, or people within agricultural science. (Observation tool)

Researchers

As already noted, LMO is linked to projects of other organisations. In that way, sometimes during LMO events partner organisations are invited to present their projects and results.

Companies

Sometimes, commercial companies and supply chain actors/ exhibitors are actively involved in demonstration activities. These actors present their products at the demos. Moreover, they are involved in topic/subject selection and in the informal evaluation/feedback process of the demo event (Farmer).

> We ask the machine companies for input and how they want to participate. The overall goal and setup is planned together with the manager of the extension service. (Farmer)

> Q: How are demonstration topics selected? R: What we (at the extension service) think is interesting subjects and also what the exhibitors find interesting. (Farmer)

> We also have an evaluation with the demonstrators/exhibitors after the demo. (Farmer)

During the specific event (Økotræf), people from the farming industry were invited to participate and they exhibited products relevant to organic farmers. In the case of Økotræf, LMO have set the framework of the event and then the demonstrators/exhibitors decided what subject they want to demonstrate (Background info + Programme interviewee).

> Exhibitioners (people from the farming industry) and consultants from Seges give input to the programme. (Background info)

> At each presentation/demonstration the presenter guided the questions and discussions. The presenters were either the host farmer, agricultural advisors, machine sellers, or people within agricultural science. (Observation tool)

> The salesmen from the different companies gave presentations/ an introduction to the machines exhibited. After this some of the machines were presented, demonstrated, and compared in the field. (Observation tool)

Other actors i.e. Regulators

At the specific demo event two people from the Danish Agriculture and Food Council gave their views on the organic market, its future and the relevant policies.

2. Networks

LMO keeps strong contacts and partnerships with supply chain companies, organic businesses, scientific programs, and other related organisations. However as already mentioned there is not a specific programme for the overall coordination and organisation of demonstration events managed by LMO. This is the case also for the specific demo farm which is not directly connected to other demo farms, and it is not part of a specific demonstration programme and/or a wider network. However, the host farmer is linked with specific farming groups/networks.

> We have a strong network with other companies in the organic business. There are not any overall programmes that coordinate the demonstrations but for some of the events there is a link to some of the projects in the other organisations and then they are invited to present their projects and results. For example, we have invited an organic dairy company to come and tell about their new concept of grass milk so they can inspire the organic farmers to do something new. (Programme interviewee)

> It is not directly connected to other farms. But from my work as an adviser I have contact with other organic farmers and exchange experiences. ERFA-groups. (Farmer)

3. Funding arrangements

The demonstrations are funded by LMO itself. The funding of demonstration activities is a strategic choice of LMO in order to achieve its dissemination goals. LMO does not pay the host farmers for hosting demonstration events but offers them some kind of gifts. (Programme interviewee). However, the companies pay for their involvement (3500 kr) and LMO pays their employees for their working time at the demonstrations (Farmer).

> They are funded by LMO's own funds. In LMO we have a certain amount for marketing and here in the organic department we have chosen to spend most of this on having these demonstrations instead of spending the money on ads in the newspaper or on social media. We rather want to make these activities where we can show the farmers different practices. (Programme interviewee)

> No. We do not pay the host farmers but we usually give them some bottles of red wine. (Programme interviewee)

> The companies that participate pay. The extension service pays by the hours the employees put in it. (Farmer)

4. The decision-making process in organising demonstrations

Both programme and farm interviewees stated that the general approach of LMO when providing demonstration activities is mostly top down. The starting point of the demo is to deliver deep knowledge that LMO owns as an organisation to participants. The LMO's employees as main organisers are responsible for crucial processes like topic selection, host farmers' recruitment, trials' design and presentations during events. Nevertheless, LMO also invests in dialogue, multilevel feedback and two-

way communication with many other actors, before and after the organisation of a demonstration event.

> We set the frame but we also invite people outside of our company to inform about the subject and we make room for the farmers to ask questions and debate. But we are the ones that have a deep knowledge of the subjects we have chosen. We need a grassroots democracy here in LMO so that farmers can provide input to what they want to be demonstrated. (Programme interviewee)
>
> We attach great importance to dialogue, but our knowledge and the results from the trials is something we provide. (Farmer)

5. Organisation's goals and objectives

LMO sets the overall objectives of demonstrations. The overall LMO goal is the development of organic production and demonstrations are one of the activities organised toward this direction.

> We define the overall objectives of our demonstration activities in our organisation together with the professional employees responsible for the different divisions. (Programme interviewee)
>
> Our overall goal is to develop the organic production so many of our activities are showing new or adapted methods that can inspire the organic farmers. (Programme interviewee)

T2: Farm (event) level

1. Event farm location and layout

The demonstration event (Økotræf) was held on the 13th of June 2018 in an organic arable farm (Højmark) owned by one of LMO's employees working as a local adviser. Højmark is a private farm focused on organic crop production for human consumption (i.e. wheat, oat and barley). The farmer also grows grass and clover for seed companies. In the last two years the host farmer has hosted demonstrations on organic plant production (Poster). The objectives of the specific demonstration event were the demonstration of field trials as well as the promotion of extension service offered by the organiser (Poster).

Both programme and farm level interviewees stated that the demos organised by their organisation fall in-between single focus and whole farm approach. However, during the specific event, the observation tool noted that no notion of whole farm approach was demonstrated but only isolated practices.

According to both the programme and the farm interviewees, LMO's demonstrations are a mixture of exemplary and experimental approaches. However, their points of view are different concerning the most preferable demo approach. The Programme interviewee believes that experimental approaches are more preferable since they support the finding demonstrated. On the other hand, the farm interviewee believes that a mixture of experimental and exemplary approach is more preferable, as each approach has its own benefits for the demonstration effectiveness.

> Experimental. The support for events with a whole-farm approach is not that big so we usually select two or three specific topics that are relevant. I would prefer an experimental approach since we then have repetitions and that supports the findings. (Programme interviewee)

> A mixture. We would like it to primarily be exemplary so that we could demonstrate the methods that are most efficient but we also have the experimental trials. (Farmer)

According to observation tool, there was a mixture of test strips within the farmer's commercial fields. All the test plots showed experiments with new and innovative ways of organic plant production, i.e. new cultivars, new mixtures of species, new types of and use of fertiliser, new methods, new machinery (e.g. robots) (Observation tool).

2. Actors' roles during the specific event

The event was planned and organised by the host farmer (LMO employee) and the director of LMO Organic. Exhibitioners (people from the farming industry) and consultants from Seges have been given input to the programme. The topic selection of the specific event has been determined by the extension service in accordance to the field trials that already existed at the host farm. The exhibitioner interests have also had influence in the selection of the topic (poster). At the demonstration farm, there were several field trials coordinated by LMO and Seges (Background info). The host farmer led one of the field demonstrations on faba beans, introduced the demonstration of machinery and the walk around to the different companies who were presenting their machines (Observation tool).

During the event, different machines for weed control were exhibited and some of them were actually demonstrated and compared in the field. In addition, many different activities have occurred such as presentations of experiments and field walks. Finally, according to the observation tool the demonstration was a common area where participants could discuss, socialise and network (Observation tool +poster).

The presentations/demonstrations were held in the fields where participants could actually see the different crops. At each presentation/demonstration the presenter guided the questions and discussions. Presenters were either the host farmer, agricultural advisors, machine sellers, or people within agricultural science (Observation tool). Presentations have been held also in the field in four different stations where an expert gave a 20min presentation about the specific experiments occurred. People divided themselves into groups which resulted to a smooth flow within different stations (Observation tool).

3. Topic and group size

Organic plant production was demonstrated. According to the observation tool 100-130 participants (including demonstrators and organisers) were present at the demonstration event. The participants were mainly farmers (organic plant producers) and advisers. Many of them were well-known to each other (Observation tool+poster). It was noted that it was difficult to get enough participants because of the high competition from competing extension services, as a similar demo was held the same day by another extension service (poster).

4. Frequency, duration and timing

The timing of the announcement of a demonstration event is highlighted as an important issue. So, it is not only when a demonstration event is going to be occurred but also the timing of the announcement of the event. Moreover, the synchronisation of the demonstration event with other similar local extension initiatives/activities has been pointed out as an important issue.

> Last year we were a bit late with the announcement at the social medias. This year we have tried to do it in better time to get the hard to reach. (Farmer)
>
> It was difficult to get enough participants because of the high competition from competing extension services (a similar demo was held the same day by another extension service). (Poster).

LMO demonstrations can be one-off or, depending on the situation, a series of consecutive/follow up events.

> Earlier I have arranged some meetings where we saw the effect of crop rotation on weed over several years. But at the event Økotræf at my farm, this is not how we do it. It is not long-term in the same way. (Farmer)
>
> Sometimes we have a follow-up event in the autumn where people can see the same trials we have showed them at the demo in June. (Farmer)

5. Farm infrastructures or arrangements

The events organised by LMO are intentionally very well organised in order to attract participants as well as keep them satisfied.

> To get some activities that attract the farmers. With car tires, barbecue sausages and good weather we come a long way. (Farmer)

More specifically the organisers of the event offered to participants parking and transportation facilities, gifts, the programme of the day, breakfast, lunch, drinks and refreshments. The farm has been marked with banners, so it was easy for attendees to find it. It was also easy to locate the organisers during the event, as they wore vests, caps and shirts with logos. Tables and shading tends were also available. (Observation tool+Poster)

> When we arrived, people showed us to the parking and gave us a programme of the day. It was very easy to find, since they had put banners outside the farm. They had rented a nice party tent and toilets. When we arrived, we could sit at long tables in the tent and have breakfast, coffee and a chat with the other visitors. After the field walk there was a nice lunch and a beer in the tent where people could socialise. Furthermore, attendees could win a bottle of organic whiskey produced at the host farm for their participation at the event. (Observation tool)
>
> After some presentations, the organisers have arranged a bus so participants went to see three different wetland projects in the local area. (Poster)

6. Farms accessibility and fees for participation

The analysis of this case study points out time issues as a crucial factor for demo effectiveness. The available time of participants to travel and the good organisation of the event in order to be considered as worth the time spent by them is very important. In that way, the farm's location and the travel time for attending a demo have been pointed out as important factors.

> If they have to travel far. Then they spend some time on that and get behind with the tasks at their farm. If it is very far away they have to pay someone else to do the work at their farm. If there is a fee for attendance it can also discourage people from attending but I think the main factor is finding time. (Programme interviewee)

At the specific demonstration event, there were no entry-fees for farmer's participation. The participation fee is mentioned as a reason for not attending a demo.

If there is a fee for attendance it can also discourage people from attending but I think the main factor is finding time. (Programme interviewee)

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

Funding for the demonstration event came from LMO's own funds. The Programme interviewee outlined how the organic department chose to spend their money on organising demonstration events – choosing demonstrations above less interactive techniques.

> They are funded by LMO's own funds. In LMO we have a certain amount for marketing and here in the organic department we have chosen to spend most of this on having these demonstrations instead of spending the money on ads in the newspaper or on social media. We rather want to make these activities where we can show the farmers different practices. (Programme interviewee)

2. Motivations for host farmers

The Programme interviewee noted how farmers were not typically paid, but they do receive gifts by way of thanks.

> We do not pay the host farmers but we usually give them some bottles of red wine. (Programme interviewee)

> It is primarily pride in what they are working on at their farm. Most of the farmers like to be evaluated on what they do and show their work and get some feedback. (Programme interviewee)

3. Motivations for participants

Interviews revealed a range of motivations for participants, including the social element, as well as more 'academic' motivations.

> I hope it is the programme and the wide palette of activities. There is also a social part. Good presentations but also demonstrations of new things that point forward. (Farmer)

The Programme interviewee talked about the importance of 'problem solving' as a motivational factor for farmers – offering a solution to an issue they are facing. There is also an element of curiosity driving farmers. The Programme interviewee reiterated the importance of the opportunity to engage with other farmers and colleagues.

> They want to see if there is something relevant for them. Typically we address different issues and then the farmers want to come and see if it is something they could use at their own farm. That is the main motivating factor. Some people also come out of curiosity and also for the social part, to get out and meet other people over a cup of coffee. They appreciate to come out and meet their colleagues. (Programme interviewee)

4. Target audience

According to the Programme interviewee suggested that the target audience was largely farmers – in particular organic farmers. It sometimes extends to conventional farmers. The Farmer suggested the target audience also extended to supply chain stakeholders. He highlighted that you need to invite guests that would be appealing to other participants, as well as providing the appropriate setting.

> Always organic farmers. 99% of our clients are organic farmers. Of course, it will make us happy if we can inspire conventional farmers to come to the demonstrations and see that we are going in a right direction. But basically, it's the organic farmers we are addressing to show what we think they should consider doing better or new ways of doing things on their farm we think they should pick up on. (Programme interviewee)

> The organic farmers. But to get their attention it is important to invite people to attract the farmers. For example, interesting people from the supply chain. To get some activities that attract the farmers. With car tires, barbecue sausages and good weather we come a long way. (Farmer)

> Primarily farmers and some advisers and a few researchers. Sometimes curious neighbours also show up. (Farmer)

5. Advertising and recruitment

The Programme interviewee and Farmer described a wide range of approaches to advertising the demonstration event. The importance of personal touches (personally addressed messages or a phone call), is most efficient. The Programme interviewee also noted the success of Facebook as a way of advertising, alongside more traditional methods. He described a broad brush approach, including advertising through different networks, followed by more targeted recruitment. The Programme interviewee talked about advertising the event via 'banners' on their website, as well as in their email signatures – this demonstrates the extent of their advertising.

> We advertise widely to try to get some people we do not know but also to advertise for our company. But in addition, we always send a personal message to our clients so they receive an email with a detailed programme for the day. We have an ambition to call to some of our clients so they feel more as VIP clients. (Programme interviewee)

> I have been pleasantly surprised by how effective it is that the farmers themselves share the events on Facebook. Then the event is advertised through the different networks of farmers. Then it is a more targeted recruitment. The more traditional way with ads in magazines and newspapers is more as a documentation for the event. Advertising banners on our homepage is also working. Ads for the demo as an add on to your email signature is also a way. Then the advertising gets out more widely. (Programme interviewee)

The Farmer felt that simply word of mouth was the best way to approach advertising and recruitment.

> The best way is word of mouth and if the participants at one demo had a good experience and want to come again the next time. (Farmer)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

Both the Farmer and the Programme interviewee described the nature of interaction as 'Mostly top down'. Whilst there was an emphasis on the involvement of host farmers, the point of the demonstration programme was ultimately to translate the results of the work at LMO.

> We attach great importance to dialogue, but our knowledge and the results from the trials is something we (LMO) provide. (Farmer)

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

As above, the demonstration programme is fundamentally routed in the work of LMO, involving farmers in the specific details of how to deliver the sessions. LMO 'set the frame', and host farmers have the ability to shape delivery within this 'frame'.

> The overall theme we decide here at LMO and then we involve the host farmer in the detail planning of the programme. For some of the events, as in the case with Økotræf, we set the frame and then the demonstrators/exhibitors decide what subject they want to demonstrate. (Programme interviewee)

> We set the frame but we also invite people outside of our company to inform about the subject and we make room for the farmers to ask questions and debate. But we are the ones that have a deep knowledge of the subjects we have chosen. We need a grassroots democracy here in LMO so that farmers can provide input to what they want to be demonstrated. In our ERFA-groups the farmers themselves decide what they want to see and then we facilitate it. (Programme interviewee)

3. Focus and Design

Both the Farmer and Programme interviewees described the network as 'in between' a 'Whole farm' and 'Single focus' approach. They also both described the network approach as 'A mixture' of 'Experimental' and 'Exemplary'. Whilst the Farmer felt this mixed approach was preferable, the Programme interviewee expressed a preference for a more experimental approach to provide data to support the network's research findings.

The Programme interviewees differed in their opinion of the network approach; Programme interviewee 1 felt it was 'Exemplary' in nature, where was Programme interviewee 2 felt it was 'Experimental' in nature. They both expressed a preference for a more 'Exemplary approach', although Programme interviewee 1 recognised the value of an 'Experimental' approach, he was concerned this was often costly.

4. Ideal group size

The Programme interviewee claimed that the size of the group depends on the topic or the type of demonstration. He recognised that smaller groups allow more scope for discussion.

> It is very different. I prefer a larger group, but I know that most farmers want smaller groups. For ERFA groups we are only 10 people. With more people, we can sometimes have a bigger

> discussion but then there is a risk that some in the group doesn't want to talk. (Programme interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

In terms of the structure, both the Farmer and Programme interviewee felt that a mixture of elements was important to a demonstration day. Inclusion of something practical, was also essential.

> We try to mix short presentations, talks and activities. With time and space for people to walk around and talk to each other. (Farmer)

> Practical demonstration. Something they can see and feel and then we have the discussion. (Farmer)

> It depends on the situation but I think it is best to combine a presentation, to demonstrate it at the farm and to hear the host farmer's experience with it. (Programme interviewee)

In addition, the Programme interviewee felt that the most important characteristic of a demonstration day is that the context is accessible and relatable for participants.

> It is a mixture of many things. But an important thing is that the host farm has a production that people want to identify with. It does not have to be the size of the farm they identify with. (Programme interviewee)

Because LMO projects provided the foundation for the demonstrations, 'results and recommendations' made up most of the content and materials on the day.

The Farmer suggested 'Problem solving' was the most important characteristic of farm demonstration. He claimed, 'if they get the feeling of how to solve a problem then it is very efficient'.

By contrast, the Programme interviewee suggested 'Visualisation techniques and other sensorial experiences' were the most important facets. He highlighted the virtues of doing and seeing things above more traditional formats:

> It is good to ask questions or to read something, but being able to feel something, see something, evaluate it and put it into your own context is the most important thing to stimulate and inspire. (Programme interviewee)

2. Taking into account variation in learning

The Farmer involved claimed to take into account variation in learning, but this was generally concerned about the prior knowledge of participants.

> I know the background of some of the farmers and know what they are asking for. There is a very huge difference between people. (Farmer)

The Programme interviewee had a more nuanced understanding of how different people learn and was confident in implementing this. He claimed to have different ways of demonstrating, which accommodate different learning styles.

> By having different ways of demonstrating the subjects, for example by giving a presentation, having something the farmer can feel or see. We alternate between different ways of demonstrating. (Programme interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

In terms of follow-up activities and continual engagement, the Farmer suggested there were sometimes further events, open to participants, where they could see the progress of the trials.

> Sometimes we have a follow-up event in the autumn where people can see the same trials we have showed them at the demo in June. (Farmer)

At neither the farm nor programme level was there effort to continue to engage with participants after the event.

> We do not engage the people that attended at the demo, but we keep on working with new demos and we answer questions that farmers have after the demo. Sometimes they want to make some changes at their farm because of a demo, and then we help them out. (Programme interviewee)

At the Programme level, they would typically approach farmers at the demonstration (participants) if they want to take on/implement their project ideas on their farms.

> We usually ask the farmers at the demo if this is something they can use and implement at their own farm. (Programme interviewee)

2. Assessing impact

Whilst there was no formal process in place to assess the impact of demonstration events, it was nonetheless something both the Farmer and the Programme interviewee were engaging with on a more informal basis. The Farmer recalled how he would discuss impacts with participants if/when he saw them.

> The ones I meet afterwards I ask if they have acted on the lessons and if they haven't I ask them why. (Farmer)

> When we meet our clients that participated at the demo, we ask them why they participated and if it has triggered a change. (Programme interviewee)

5. Event analysis: effective peer learning characteristics

There were between 100 and 130 participants approximately.

T1: Learning processes

1. Communication initiation by participants

When in the whole group, about 5% of the participants hesitated but shared their knowledge and/or experiences related to the topic. Just a few participants asked questions when everyone was gathered in the beginning of the event. When in small groups about 20% of the participants had no problem sharing their knowledge and/or experiences related to the topic. When they were separated into smaller groups, participants were often asking clarifying questions. There was some time available for questions, about 20% of the total time, and a lot of questions were asked.

There were a lot of participants formulating their points of view regarding the topic since there were lots of opportunities for discussion.

2. Interactive knowledge creation

Hands-on opportunities and other multi-sensorial experiences

A hands-on activity was demonstrated, but only very shortly, involving two machines for weed hoeing. No hands-on activity was carried out by participants.

The presentations/demonstrations were held in the fields where you could see and feel the different crops. Some of the crops were dug up so you could see their roots. You could see and touch the different machines at the exhibition and demonstrated in the field. Smaller companies were showcasing their products in the farmers' barn, where people could touch, smell, feel and talk about the products.

Discussion opportunities and negotiating conflicting points of view

At each presentation/demonstration the presenter guided the questions and discussions. The presenters were either the host farmer, agricultural advisors, machine sellers, or people within agricultural science.

Open discussions between a few participants were stimulated. Shared critical points of view were clarified so more people could understand. There were for example critical questions about the layout of the experiments which were discussed and elaborated on.

3. Engagement during the event

Many of the organic plant producers know each other and the advisers who participated. There were many opportunities for the participants to talk, discuss and socialise. Most of the demonstrators are well known to the network so they act open and friendly, but not as close friends with the participants.

T2: Learning outcomes

Most of the presentations required a high level of prior knowledge since they explained new methods that are not traditionally used in Danish farming. It was explained very detailed and people could ask questions during and after the presentations. Practical skills were not addressed.

Since all presentations concerned alternative ways of organic plant production and discussions took place, common methods or ways of thinking on farming were clearly questioned and alternatives were extensively elaborated on in group.

Common methods or ways of thinking on learning were not questioned.

T3: Overall comments on the effectiveness of the event

The event was very well structured. Upon arrival, people were shown the parking and given the programme of the day. It was very easy to find, since there were banners outside the farm. They had rented a nice party tent and toilets. Participants could sit at long tables in the tent and have breakfast, coffee and a chat with the other visitors. While having the coffee, the organisers gave a presentation of the event and two people from the Danish Agriculture and Food Council gave their views of the organic market, the future and the politic strategies.

After this, participants went to the field which had four different stations where expert gave a 20 min presentation about the specific experiments in the field. People divided themselves into groups which went smoothly.

After the field walk there was a nice lunch and a beer in the tent where people could socialise.

Next, the whole group went on a tour around to see the machines exhibited where salesmen from the different companies introduced the machines. Some of the machines were then presented, demonstrated, and compared in the field. The day ended with coffee and cake in the tent. Afterwards, those that came late were taken through the field walk with the former mentioned experts. During breaks, lunch and after the demonstrations people were circulating through the small fair in the farmers' barn, where smaller companies were showcasing their products.

Overall, the demonstration day was very well planned, with free participation, nice food/soft drinks and easy to recognise the organisers (they wore vests, caps and shirts with logos).

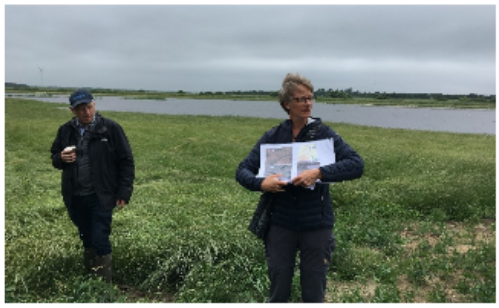
6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY "Denmark": Buffertech

Frank Oudshoorn, Seges

The event was a part of the project "Buffertech" which conducts research into optimisation of the ecosystem services of buffer zones (BZ). The aim of the day was to discuss intelligent BZ, since Danish farmers from 2019 will be met with various environmental requirements.
One of the intelligent BZ was located on a farmer's property but he did not participate in the demo.



Objectives

- Discuss the effect of BZ on retention and removal of N and P, importance for biodiversity and ecological benefits in watercourses.
- Prepare the Danish farmers for the new regulations.

Motivations

- Dissemination is a requirement in the project.
- Get farmers interested in the environmental initiatives.
- Get a discussion between scientists and farmers.

Topic selection

- By the partners in the project.
- Results from each work package were presented.

Audience & participation

- Scientists, advisers, politicians
- No entry-fee
- ~20 participants

Demonstration set-up

- Started out by a light lunch and conversation at the tables.
- Followed by several presentations, using slideshows, by researchers from the project.
- Hereafter participants went by bus to see three different wetland projects in the local area.

Evaluation peer-to-peer learning environment (Debate meeting Buffertech, 18.06.2018)

- All the presentations required a high level of prior knowledge.
- The participants seemed to know each other very well – many questions and lively discussions but also easy to feel left out if you were not a part of the project.

- The event was supposed to be a debate between scientists, advisers and farmers, but no farmers participated even though it was held by an agricultural extension service.
- It worked very well with the mix of presentations and visit to the sites.
- All presentations were very scientific and not targeted farmers.
- Workshop: How do you get farmers to participate (and get interested in environmental subjects), who do they want to target and what is required as prior knowledge.

PLAID AGRIDEMO

PLAID and AgriDemo-F2F have received funding from the the European Union's Horizon 2020 Research and innovation program under grant agreement N° 727388 (PLAID) and N° 728061 (AgriDemo-F2F)

SEGES

Denmark Case Study 3

1. Background

Programme

In Denmark, we do not have any specific programmes for demonstration activities. The demonstration for case study 3 was a part of the project "Buffertech" which conducts research into optimisation of the ecosystem services of buffer zones (nature, environment and production) by constructing them in a differentiated and cost-effective way in the landscape with the use of novel and innovative management methods and technological solutions. The project is primarily run by Aarhus and Copenhagen University in collaboration with local extension services etc.

Funding and Governance

The project is funded by The Danish Innovation Fund. Dissemination of the project's results is one of the deliverables in the project and all expenses for the event were thus paid by the project. The event was planned and organised by the work package leaders in the project in close cooperation with the local extension service.

Actors and networks

The project partners include universities, scientific and research institutes, extension services and private companies. One of the activities of the project was dedicated to the dissemination of the project's results, under which this demonstration has been set. The demonstration event has been planned and organised mainly by:

- The work package leaders of the project i.e. The University of Aarhus and the University of Copenhagen, both public institutions.
- The local private extension service

The project partners are:

Universities (Aarhus University, Department of Bioscience, Aarhus University – Department of Agroecology Section: Agricultural Systems and Sustainability, Aarhus University, Department of Engineering, Department of Food and Resource Economics; University of Copenhagen (IFRO, KU), Department of Biology, University of Southern Denmark; The James Hutton Institute; extension services (The Farmers' Union of Southern Jutland (SLF); The Farmers' Union of Western Jutland); and private companies (SEGES, Orbicon A/S, Arwos).

How it works

One of the deliverables in the project is dissemination of the project results. This is specified in the application for funds. This particularly event was held at a local extension service. Employees from the extension service coordinated the day and work package leaders from the universities presented their results from the project.

Event Farm and location

The first part of the day was held at the local extension service. Afterwards we visited different pilot areas from the project (wetland projects). Some of them was on land owned by the municipality others was on land owned by local farmers. The aim of the day was to discuss intelligent buffer zones (BS).

Event date: 18th of June 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 the functional and structural characteristics. How these functional and structural characteristics can enable learning is reported in Sections 3 and 4. Data is sourced from interviews with 1 Programme member, who was interviewed in May 2018. 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. This data is sourced from 10 pre and post demonstration participant surveys, 3 pre and post demonstration demonstrator surveys 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.

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 and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the Danish and Swedish case studies was held on the 17th of October, 2018.

3. Structural characteristics

T1: Programme/network level

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

In Denmark, we do not have any specific programmes for demonstration activities. The demonstration for case study 3 was a part of the project "Buffertech" which conducts research into optimisation of the ecosystem services of buffer zones (nature, environment and production) by constructing them in a differentiated and cost-effective way in the landscape with the use of novel and innovative management methods and technological solutions. The project is primarily run by Aarhus and Copenhagen University in collaboration with local extension services etc.

SEGES-project partner (one of the private companies)

SEGES is one of the three private companies (along with Orbicon A/S, Arwos) in the consortium of the "Buffertech" scientific project. Seges is a private organisation, which works as a knowledge centre to build bridges between research and practical farming, and seems to have been one of the main partners of the project.[2]

According to the Programme interviewee, many people are involved in the planning of a demonstration. These could be Seges, farmers, advisors, scientists, people from the government. Usually there is one or two coordinators of the demonstration processes.

> In my world more people are involved in the planning of a demo but one or two are the main coordinators that controls the planning….. Seges, farmers, advisors and scientists (are involved). And sometimes people from the government (boards). And it is very good when the ones who decide what the farmers should do also come out and see how things work in practice and how to carry out the initiatives. (Programme interviewee).

Seges people work hard to find suitable host farmers for demonstrations. On the other hand, Seges has several criteria for choosing a farmer to host an event, the ability of the host farmer to devote his time for demonstration activities being an instrumental one. The host farmer's willingness and personal interest are equally important, as (s)he has to share more or less the same visions and directions with Seges. Finally, the host farmer must be friendly and good communicator of the common principles.

> Q: How do you target farmers to host demonstrations? R: We chase them. Sometimes I take a map and look at the landscape and then I call or visit the farmers and ask if they want to participate. Usually they want to participate. Sometimes we work with farmers in the different projects and then they volunteer to host the projects. (Programme interviewee).

[2] As only one programme level actor who works as an environmental consultant at Seges has been interviewed, it is rather difficult to have the overall picture of the demonstration programme level processes through this interview. Sometimes the programme level interviewee talks about the project, other times about other partners and sometimes about Seges activities. Secondly, although Seges is an active partner of the project, the project is primarily run by Aarhus and Copenhagen University in collaboration with local extension services.

> Demonstration activities are important but it is difficult for farmers to find the time to participate. You need to work with those you have the possibility to work with…. It is always a good thing if people are friendly. (Programme interviewee).
>
> I think that you work with the ones who wants to participate. They are positive about what you want to demonstrate and when they implement it then they neighbour will do the same. You cannot pressure people. That does not make any sense. (Programme interviewee).
>
> You need to choose hosts that aren't negative of our projects. If we want to go in one direction we cannot choose a host that is against this. So, if Seges wants to go in a specific direction we need to find farmers that will go in the same direction. You cannot just choose anybody as a host. Some farmers are better communicators. (Programme interviewee)

Seges employees have both the knowledge and the know-how of specific topics because they work on them. They select also innovative topics in order to present something new to farmers. While following a mainly top-down approach, farmers are generally not excluded during the topic selection process.[3]

At the specific demonstration event, the topic was selected by the project partners. In this case, the initial aim was the presentation of the project results, which determined a lot the demonstration topics (Poster).

> Q: How do you identify/select relevant topics that will interest farmers? R: It must have a news value. (Programme interviewee)
>
> You cannot come as an advisor without have an opinion. We want the things we work with here at Seges to be implemented. So, it has to be top-down. But the farmers must be involved. (Programme interviewee)

All interviewed demonstrators agreed that participants (farmers, advisers, researchers etc.) were involved in the overall development of the specific demonstration, without though any detailed reference to specific roles participants held (Post survey demonstrator data).

Extension service (The Farmers' Union of Western Jutland)

The event was planned and organised by the work package leaders of the project, in close cooperation with the local extension service (main organiser). Moreover, the local extension service employees coordinated the demonstration event (presentations and site visits). During the event, there was one employee of the extension services who run the facilitation/coordination process.

The first part of the day took place at the local extension service where work package leaders from the universities presented the project's results. Afterwards some visits to different pilot areas of the project (wetland projects) took place. So, at a first level, the local extension service hosted the event (Background info).

> A woman, working part time at the extension service and part time at the municipality, coordinated the day. She coordinated the different presentations, the questions and the tour to the different sites, and kept track of time. (Observation tool)

The extension service uses their homepage and newsletters and/or the local newspaper to disseminate information on scheduled demonstrations.

[3] There are no further data concerning the topic selection, the decision-making process and the extent of farmer's involvement in it.

> The most effective way is to give them a call. The average of farmers is relatively high. And they are a generation like myself that prefers talks. They don't always read their emails. But it is difficult and time consuming to call everyone so that is not how it really gets done. The local extension services advertise on their homepage, their newsletters or in the local newspaper. (Programme interviewee)
>
> Q: Are participants targeted in demo recruitment? R: Don't know…. Often the extension service does the advertising. (Programme interviewee)

Host farmer

As already mentioned, the first part of the demonstration day was held at the local extension service, where work package leaders from the universities presented the project's aims and results. Hereafter, participants went by bus to see three different at some pilot areas/wetland projects at the local area. Some of these pilot areas were on municipality owned land and some others were on land owned by local farmers. The host farmer to whom observation tool is referred to, is one of those local farmers. During the specific event, the host farmer did not participate in the demonstration at all.

> One of the intelligent buffer zones was located on a farmer's property. But he did not participate and he was not involved in the event at all. (Observation tool)

Host farmers are one of the main people involved in the demonstration activities between other actors. However, their role is not very well defined.[4]

> Q: Who are the main people involved in the demonstration activities and what are their roles? R: Seges, farmers, advisors and scientists. And sometimes people from the government (boards). (Programme interviewee)

Sometimes the host farmers are involved in the development of the individual demonstration activities in the frame of Seges. What Seges claims, is that the cooperating farmer has to have a real interest and active involvement in the decision-making process.

> You need to be sure that the farmer is interested in the initiatives we want to try out at his farm. He must be able to see himself in the project and to have a feeling that he is involved in the decisions. You must always involve the ones you cooperate with. (Programme interviewee)

As far as the host farmer's involvement in the development of the overall demonstration programme is concerned, Programme interviewee said that sometimes this happens. However, this happens only when host farmer is a member of the sector board of Seges. The sector board of Seges consists of farmers only. The board has an indirect influence in the decision making of the organisation i.e. projects applied, demonstration activities etc.

> The sector board at Seges consists only of farmers so indirectly they decide which projects we apply for and thereby indirectly which demonstrations that are held. But if the host farmer isn't a part of the board, he is not involved. (Programme interviewee)

According to Programme interviewee, there are two important types of the host farmer's involvement: First, the implementation of new practices and second, to talk about their own experience to other farmers. It is pointed out that the host farmer must do the talking as much as possible, regardless of the demonstration topic.

[4] The programme level interviewee had some general references to the involvement of host farmers to demonstration initiatives, without being more detailed. Most probably, the programme interviewee is referring on how Seges manages demonstration activities. Again, we have to highlight that we cannot make clear conclusions in relation to the specific project or demonstration event through this interview.

> There is a task to get people to start doing these things they haven't done before. The crucial part is to get the first farmers to do it, otherwise we won't get any further. And then we use these farmers to tell other farmers what they have done. This is the pinnacle when it comes to agricultural extension that you let the farmers do the talking. (Programme interviewee)
>
> I usually use the method where I get the farmer to do the talking regardless of the topic. (Programme interviewee)

Advisors

Advisors are one of the main actors involved in the demonstration activities, and according to the Programme interviewee, their interaction with farmers is very important during a demonstration. However, their role is not sufficiently defined in the interview. On the other hand, many of Seges employees and extension workers are advisers. In that way, we assume that some of the main roles mentioned in the frame of Seges or extension services employees, have to do with the advisers' roles and responsibilities, which probably explains the presence of many advisors in the event.

According to the Programme interviewee, local advisors are adequately experienced and skilled to plan an event for the variation in learning capacities and learning styles of individual farmers.

> It is intuition. You need to meet the farmer at his level. When you talk with them you get the feeling of where they are. It is a very human quality. Most of the local advisors have this quality. Otherwise, they would not survive in the agricultural extension. (Programme interviewee)

Demonstrators

As mentioned earlier, the host farmer is expected to do the talking/to be the demonstrator (or one of the demonstrators) during the events when organised by Seges. In this specific event, however, none of the five demonstrators involved was the host farmer or farmer in general. Their occupation and experience vary i.e. advisers, project partner members, researchers etc., who participate as demonstrators between 5-50 times per year, one between 0-5, and one to more than 50 events per year (Pre survey demonstrator).

The work package leaders from the universities presented the project results. They were the main demonstrators of the event held at the local extension service's premises. Researchers gave several presentations, using slideshows, all of which required a high level of prior knowledge.

Hereafter participants went by bus to see three different wetland projects in the local area. At these sites, there was a facilitator-demonstrator by the local extension service, who coordinated the tour to the different sites and kept track of time (Poster + Background info). A few posters were used at the sites of the intelligent buffer zones to get an overview of the layout (Observation tool).

None of the demonstrators of the case study has ever received any training in order to be demonstrator (Pre survey demonstrator). Moreover, all demonstrators strongly agreed that they could benefit from some extra training as a demonstrator (Post survey demonstrator).

Researchers and scientists

Researches and scientists are extensively involved in the demonstration activities, both in terms of organising and in participating in organisation of the event. This is probably because the meeting was planned in a scientific context with its primary aim to present the project's results. It was stated that the interaction between researcher and farmers is quite rare and maybe problematic, as researchers are often too distant from/approach too theoretically the real farming world (Programme interviewee).

> Q: Who are the main people involved in the demonstration activities and what are their roles? R: Seges, farmers, advisors and scientists. And sometimes people from the government (boards). It is easy to sit at the office in Copenhagen and make theoretically decisions but they also need to come out in the real world. The interaction researcher-to-farmer is almost non-existent in Denmark, but I would like it to be more extensive. Many of the scientists in Denmark want to hide at their institutes but they need to come out and feel what is happening. (Programme interviewee)

Networks

The researchers from the universities have a wide nation-wide network with other universities. Furthermore, they often get tasks from governments and boards to provide data that can assist them in new legislation. The universities and Seges often work together, and Seges and advisory services has a close collaboration, since Seges develops decision support tools for the local advisers. While it would be safe to expect that most of the project's partners[5] would be well linked to national and international networks, one cannot assume if those are on demonstrations, as there are no relevant info provided. The Programme interviewee refers to his/her organisation's participation in several EU funded projects, without again detailing if those are on demos or other issues.

> Some of the projects only concern Denmark but for example Interreg and Horison-2020 projects they are international and here you meet other experts like yourself from other countries. This is where you make the networks. It is very difficult to make these networks yourself. (Programme interviewee)

Moreover, most of the demonstrators that participated at the event were also not part of a network. Only one referred to his/her role in a network, in which s/he holds elected or appointed role, in a committee as a special consultant. However, s/he did not specify the name of the network (Pre survey demonstrator). Strangely enough, though, at the post demonstrator survey, all demonstrators agreed that many of the participants were part of the same network as themselves (Post survey demonstrator). I guess the reason why they answered this is, that they are not involved in a more official network. However, they work on the same subject/projects and are a part of a network in this way. The researchers (who are the main respondents and attendees at the demo) are in more unofficial networks in the academic community. Thus, we believe the confusion about being part of a network or not origins in taking informal networks into account or not.

2. Funding arrangements

The demonstrations of Seges are funded by different sources both national and international. Seges also offers some kind of incentives to farmers to host demonstration activities, while in some cases Seges gives some kind of compensation upon host farmer's demand. The compensation is mainly for when Seges wants to use the farmer's land for research (for example when for the establishment of buffer strips).

[5] Aarhus University, Department of Bioscience, Aarhus University – Department of Agroecology Section: Agricultural Systems and Sustainability, Aarhus University, Department of Engineering, Department of Food and Resource Economics, University of Copenhagen (IFRO, KU), Department of Biology, University of Southern Denmark, The James Hutton Institute), extension services (The Farmers' Union of Southern Jutland (SLF), The Farmers' Union of Western Jutland) and private companies (SEGES, Orbicon A/S, Arwos) (Background info)

> They are financed through different funds both national and international. (Programme interviewee)
>
> I paid one person because he demanded payment. And I think that is quite fair. In the EU projects, we are not able to give gifts or money to the farmers and that is simply wrong. I always bring something for the farmers for their troubles. (Programme interviewee)

The specific project was funded by The Danish Innovation Fund. One of the deliverables of the project concerned the dissemination of the project results, as specified in the application for funding. It was in the context of these project's requirements, the specific demo event was organised, and consequently all relevant expenses were covered by the project (Background info).

3. Goal/ objectives

This specific demonstration was organised in the context of the dissemination of the scientific results that emerged from the project. Thus, the goals of this demonstration are identical to project's goals, which fall around the optimisation of the ecosystem services of buffer zones (nature, environment and production).

The objectives of the demonstration event were to discuss the effects of buffer zones on retention and removal of N and P and their importance for biodiversity and ecological benefits in watercourses. Another important objective was to prepare the Danish farmers for the new regulations. In that vein, getting farmers interested in environmental initiatives and the reinforcement of the discussion between scientists and farmers were some additional objectives (Poster).

The Programme interviewee works as an environmental consultant at Seges and her/his main goal is to promote work on environmental projects concerning wetland quality and nutrients reduction.

> Q: What are the overall goals/objectives of the demo farm? How are these decided? R: I have mainly worked with big wetland projects and smaller environmental projects. We have mainly worked with is establishment of environmental initiatives at the end of the drain pipeline. All my work is concerning the environment and the reduction of nutrients. (Programme interviewee)

T2: Farm level (event) level

1. Event farm location and layout

The demonstration event (Debate meeting, Buffertech) was held on the 18th of July 2018 at a local extension service of Jutland's region. As stated earlier, the first part of the day was held at the local extension service where scientific presentations were given. Afterwards participants visited different pilot areas (wetland projects) which were part of the project. Some of these intelligent buffer zones were on municipality owned land while others were on land owned by local farmers. (Background info)

The Programme interviewee stated that in general, demos organised by their organisation fall in-between single focus and whole farm approach. On the specific event, the observation tool notes that no notion of whole farm approach was demonstrated but only isolated practices, with one demonstrator confirming this statement. Another demonstrator claimed that s/he aimed to apply a 'whole farm approach' during the demonstration.

Furthermore, demonstrations organised by Seges, are a mixture of exemplary and experimental approaches (Programme interviewee). The Programme interviewee believes that these mixed approaches are also more preferable. On the other hand, the event's demonstrators have been classified the specific demo event in a totally different way: one as experimental, a second as a mixture of

approaches and finally a third as exemplary. It seems that there were differences in approaches in different pilots, or that those demo's situations are difficult to be classified in that way.

At the specific demonstration event, a tour at three different intelligent buffer zones in the local area (Western Jutland) has been organised. Comparisons between the different buffer zones have been made (Observation tool). There are no available data if those comparisons in multiple fields were following scientific protocols for cross-comparisons of the same practice under different multifactor situations, or if it was a typical proof of a concept i.e. simply displaying and discussion on different examples of the same practice under different situation.

2. Topic and group size

The topic was intelligent buffer zones. According to the observation tool, approximately 20 participants were present at the demonstration event. The participants were scientists, advisers, politicians. No farmers attended the event (Observation tool+poster).

3. Farms infrastructures, arrangements and size

The case study points out the importance of specific arrangements and options when organising a demonstration farm. It is important to select an impressive farm, from the very beginning. According to the Programme interviewee big impressive farms are more effective in attracting participants than the small ones.

> Q: What do you think motivates participants to attend demos? R: A combination of impressive farms (mansions, estates) and environmental initiatives is what get people to participate. People rather wants to see estates than small farms. (Programme interviewee)

Moreover, catering and similar arrangements are often well received by participants. In this case study, the organisers offered food, refreshments and transportation facilities in order to move between different demonstration sites.

Started out by a light lunch and conversation at the tables. At one of the locations, we had coffee and cake and people had some time socialising (Poster + Observation tool).

Hereafter participants went by bus to see three different wetland projects in the local area (Poster).

4. Accessibility and Fees for participation

The travel time of participants to reach the demo farm, ranged from 0 to 140 minutes, with an average time close to 56 minutes (Pre demonstration survey participant). Six out of ten participants rated their travel effort to participate as no effort or very little effort. Only one participant (10%) rated his travel effort to participate as great effort.

Again, we cannot draw any clear conclusion in relation to the organisation of the specific event and the farm location. Some participants who travelled for 120 or 90 minutes, rated their travel effort to participate as no effort or very little effort and some participants who travelled for 30 minutes rated their travel effort to participate as quite some effort (Pre demonstration survey participant). So, the effort rate is maybe related to other factors i.e. participants motivations, free time etc., except travel distance. It is important to note that most of participants were colleagues and maybe project partners, so their attendance could be easily understood.

At the specific demonstration event, there were no fees for participation (Poster+ Post participant's survey). Moreover, participants did not receive any financial compensation for their attendance. Only one participant had her/his travel expenses covered. (Post participant's survey).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

According to the Programme interviewee demonstrations were 'financed through different funds – both national and international'. In terms of the incentives offered to hosts, there was no clear arrangement in place. One of the Programme Interviewees recalled how he did end up paying one farmer, because they had demanded a payment. He expressed concern over the lack of incentives (monetary or otherwise) available to hosts.

> I paid one person because he demanded payment. And I think that is quite fair. In the EU projects we are not able to give gifts or money to the farmers and that is simply wrong. (Programme interviewee)

2. Motivations for host farmers

In terms of the motivations for host farmers, the Programme interviewee recognised these could vary significantly. Despite this, they suggested that a desire to 'do something for the environment' was consistent amongst hosts, as well as a desire for recognition.

> People are different and the motivations are different. But many farmers want to do something for the environment and they gladly want to show it. The agricultural community wants to be praised by the surrounding community and get some recognition. (Programme interviewee)

3. Motivations for participants

It was evident in the pre-survey that participants were motivated by a range of factors, including:

- information about the state of the project
- learn about some of the projects in the district + agricultural society
- I work with the subject
- Political interest
- I work as a surrounding area adviser
- I was asked
- Hear about the environmental initiatives
- I had to present

The motivations for participants also varied, but the desire to improve the environment emerged again. However, the Programme interviewee noted how new machinery was always more appealing than anything environment related. By recognising the attractiveness of machinery and technology, there is scope to use them to 'hook' farmers to events that tackle pressing environmental issues.

> A combination of impressive farms (mansions, estates) and environmental initiatives is what get people to participate. People rather want to see estates than small farms. Curiosity. Environmental initiatives don't attract people as much as for example a new tractor. The environmental initiatives are more things that the farmers need to do. (Programme interviewee)

4. Target audience

The target audience was farmers, as well as advisors and other interested stakeholders. But as the Programme interviewee suggested, in the end, it is the farmers that should make these environmental initiatives.

5. Advertising and recruitment

The Programme interviewee was unsure of whether participants were targeted, but described a range of methods of recruiting participants.

> The most effective way is to give them a call. The average age of farmers is relatively high. I think it is between 56 and 58. And they are a generation like myself that prefers talks. They don't always read their emails. But it is difficult and time consuming to call everyone so that is not how it really gets done. The local extension services advertise on their homepage, their newsletters or in the local newspaper. (Programme interviewee)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Programme interviewee described the nature of interaction as 'Mostly top down'. He cited numerous reasons for this, including the role of the advisor and the source of the topics (Seges).

> You cannot come as an advisor without having an opinion. We want the things we work with here at Seges to be implemented. So, it has to be top-down. But the farmers must be involved. (Programme interviewee)

It was clear that hosts were chosen to align with the aims and objectives of Seges projects.

> You need to choose hosts that aren't negative of our projects. If we want to go in one direction we cannot choose a host that is against this. So, if Seges wants to go in a specific direction we need to find farmers that will go in the same direction. (Programme interviewee)

Despite this more 'top down' approach to demonstrations and demonstration topics, the Programme interviewee appreciated the need for farmers to have some ownership over the topic/project/content and to share it amongst their peers.

> We use these farmers to tell other farmers what they have done. This is the pinnacle when it comes to agricultural extension that you let the farmers do the talking. (Programme interviewee)

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

The opportunity for farmers to be involved in demonstrations varied. Host farmers had good opportunity to be involved in individual demonstrations, and a select few had the opportunity to be involved in the design of the overall programme by joining the 'sector board'.

> The sector board at Seges consists only of farmers so indirectly they decide which projects we apply for and thereby indirectly which demonstrations that are held. But if the host farmer isn't a part of the board, he is not involved. (Programme interviewee)

Beyond the 'sector board' there was no formal opportunity for host farmers and participating farmers to have input into the demonstration programme design.

3. Focus and Design

The Programme interviewee described the network as 'in between' a 'Whole farm' and 'Single focus' approach and felt it was 'A mixture' of 'Exemplary' and 'Experimental' in nature. They expressed a preference this middle ground approach.

4. Ideal group size

The Programme interviewee recommended small groups, claiming that a group size of around 10-15 allowed for conversation and dialogue.

> Small groups are more effective. I prefer to work with small groups. In bigger groups people aren't present. You can work with 10-15 people. Then you can have a conversation. It is even better if it is only 5-10. But these big impressive events they are more of a show. I believe more in smaller groups where you can have a direct dialog at the scene. (Programme interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The Programme interviewee put a strong emphasis on seeing things and doing things.

> The best way is when you go out and see the things with your own eyes and talk about. It is better than using PowerPoints. When you meet you can give a small presentation of what we are going to see. I prefer when you go out and see it. (Programme interviewee)

The Programme interviewee suggested that scope for 'Participants to ask questions and talk openly' was the most important characteristic of farm demonstration.

> Here you have the dialog. People learn better when they are involved than if an expert comes and tell you exactly what to do. Maybe that worked back in the 50's but it does work anymore. The younger generation must be involved and come up with their own solutions. My theory is that your own ideas are more durable. (Programme interviewee)

2. Taking into account variation in learning

The Programme interviewee claimed that the programme was sensitive to variation in learning.

> It is intuition. You need to meet the farmer at his level. When you talk with them you get the feeling of where they are. (Programme interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

The Programme interviewees claimed that there was no attempt at continuing to engage participants after the event. They attributed this to being 'very time consuming and expensive'.

No follow up materials are provided to participants from the Programme level.

2. Assessing impact

The Programme interviewee claimed that the Programme Level assessed whether participants had engaged with or acted on things they had learnt in the demonstration, however, this was quite informal in nature. The Programme interviewee recognised how it typically took a number of years – sometimes a decade – to see the impact, therefore it is hard to quantify during the lifespan of the programme. Once again, more informal methods, e.g. seeing what local farmers are doing on their land, is the best indication.

> I always reflect on it, but there is a timespan that makes it difficult. The best indicator is when you have started an initiative at one farmer and you see that the surrounding farmers do the same. Sometimes it takes ten years before you see the effect. (Programme interviewee)

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of 20 participants, of which 10 filled in the pre survey and the post survey.

	n° surveys	Fish farming + Restoration of waterways	(Environment) advisor	Politician + teacher	Production planner	Research assistant	senior lecturer	Unknown
occupations	*10*	1	3	1	1	1	1	2
working area	*10*							
local area	7	1	3	1	1			1
not local area	3					1	1	1
gender	*10*							
male	7	1	1	1		1	1	2
female	3		2		1			
age	*10*							
18-30	1	1						
31-40								
41-50	3		1		1	1		
51-60	3		2					1
60+	3			1			1	1

T1: Learning processes

1. Communication initiation by participants

When in the whole group or in smaller groups, between more than 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. Since almost all knew each other and knew the project in question, there was a lively debate and talk. Only a few of the participants did not share. There was a lot of time for questions, about 10% of the time, and a lot of questions were asked. There were a lot of participants formulating their points of view regarding the topic.

2. Interactive knowledge creation

Hands-on opportunities and other multi-sensorial experiences

There was no demonstration of any hands-on activity nor could participants try one out. Participants could not really have any multi-sensorial experiences.

Discussion opportunities and negotiating conflicting points of view

A woman, working part time at the extension service and part time at the municipality, coordinated the day. She coordinated the different presentations, the questions and the tour to the different sites, and kept track of time. One of the intelligent buffer zones was located on a farmer's property. But he, the host farmer, did not participate and he was not involved in the event at all.

Open discussions are stimulated and given a lot of time. Most participants are involved. Shared critical points of view were clarified/rephrased so more people could understand. Critical points of view mostly concerning politics were shared. It was a discussion between colleagues which made it a bit difficult to follow if you were not a part of the project.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	1/9	5/9	3/9	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	0	3/5	2/5	0	0

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	0	1/3	2/3	0
If participants **didn't agree with each other during discussions**, somebody (me or somebody else) **tried to reach consensus** between them.	0	2/3	1/3	0	0

3. Engagement during the event

Participants act like a group of friends who know each other really well. The majority of the participants knew each other well and has worked together on this and similar projects. They also knew the demonstrator who acted like friends with the participants.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I **felt actively involved** during the whole demonstration process.	0	0	7/9	2/9	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	0	0	0	0	6/6
I could **relate well to other participants** (because they have an agricultural background similar to mine).	0	0	2/7	0	5/7
A lot of the **other participants** are **part of the same farmer network** as me.	0	1/7	1/7	0	5/7
I felt like I could **trust the knowledge of (most of) the other participants**.	0	0	3/8	3/8	2/8
The demonstration **felt like an informal activity** to me.	0	0	5/8	3/8	0
I thought **the host farm was comparable enough to my own farm**.	0	0	0	0	6/6
I had the feeling the **demonstrator was like one of us.**	0	1/8	4/8	0	3/8
I had the feeling **I could trust the demonstrators knowledge**.	0	0	7/9	0	2/9
I **got along very well with the demonstrator.**	0	0	6/9	1/9	2/9

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were **participants** (farmers, advisers, researchers etc.) **involved in the overall development of this demonstration**?	yes, through contributions in advance and active participation				
Most of the **participants were well known to me**.	0	1/3	1/3	1/3	0
A lot of the participants **are part of the same network as me**.	0	0	3/3	0	0
The demonstration felt like **an informal activity** to me.	0	1/3	1/3	1/3	0
I think the **host farm** was **well suited** for this demo.	0	0	1/3	2/3	0
I **got along well** with the participants.	0	0	2/3	1/3	0

T2: Learning outcomes

Knowledge was explained so that the majority of the participants (the scientists and advisers who work with watershed management) understood it clearly. However, I am not sure that the few politicians that participated understood the presentations clearly. If farmers had participated, as was the plan, the knowledge would not have been explained sufficiently. At the tour to the three buffer zones, some practicalities on how to conduct the buffer zones were mentioned and explained sufficiently.

The event solely looked at environmental initiatives and not farming methods, so common methods or ways of thinking on farming or thinking on learning were not questioned.

	participant answers				
What would you **ideally like to learn** today?	Updates and further explanation; Get some insight in the projects; Learn about environmental initiatives; The balance between agriculture and the environment/water courses; Basic knowledge of the subject; How the projects work: the effects and potential; Collaboration between nature and agriculture.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	0	7/9	2/9	0
The **demonstration exceeded my expectations.**	1/9	4/9	3/9	1/9	0
I felt surprised at some point(s) during the demonstration.	2/9	3/9	4/9	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	2/9	4/9	3/9	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	1/9	6/9	2/9	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	2/7	0	5/7
I **reflected on my own point of view** at some point during the demonstration.	0	0	5/9	2/9	2/9
I learnt about **the principles underlying a practice**.	1/8	0	6/8	1/8	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	1/7	2/7	3/7	0	1/7
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	1/7	2/7	2/7	0	2/7

	demonstrator answers				
what do you **intend for the particpants to learn** today?	New thoughts; More knowledge about environmental initiatives; How we use marginal zones in the future in Denmark; To start a dialogue. Understanding of the cycle of nutrients.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	3/3	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	1/3	2/3	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	3/3	0	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	3/3	0	0
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	0	3/3	0	0
I **reflected on my own point of view** myself at some point during the demo.	0	0	2/3	1/3	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	2/3	1/3	0	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	2/2	0	0	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	0	2/2	0	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	0	2/2	0	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,8 on 5, participants rated the event overall as effective. 1 participants out of 8 answers would not recommend the demonstration.

As main effective characteristics of the demo participants mentioned: good introduction to the issues and pros and cons of the proposed solutions were explained. They also thought the mix between theoretical and practical was very good.

As a main improvement one participant mentioned missing more participating farmers.

Demonstrators:

As main effective characteristics of the demo, demonstrators mentioned: A tight control of the time, getting some background knowledge mixed with visiting the sites and getting the scientific results; getting a dialogue between researcher and adviser; local context.

No suggestions for improvement were made by the demonstrators.

Observed main strong points of the event:

The main strong aspect was that the topic was presented with perspectives from both science and more practical agriculture. It worked very well that all participants went together by bus and saw the buffer zones.

Observed main possible improvements of the event:

The objective of having a debate with the ones who have to implement the initiatives, the farmers, did not succeed. Most of these initiatives are imposed to the farmers and it does not improve their farm production. Maybe this is why no farmers came to the event.

6. Annex: Case study poster July 2018

FarmDemo

CASE STUDY "Denmark": Case 2, Økotræf at Højmark

Frank Oudshoorn, Seges

Højmark is a private farm focused on organic crop production for human consumption (i.e. wheat, oat and barley). In addition, the farmer grows grass and clover for seed companies. The host farmer works as a local adviser and the last two years he has hosted farm demonstrations concerning organic plant production. A number of experiments is placed at the farm for show-view

Objectives

- Promote LMO (the extension service)
- Develop organic plant production
- Demonstrate field trials

Motivations

- LMO: get new costumers
- Host farmer: show what is possible to do in organic farming

Topic selection

- Determined by the extension service
- Dependent on the field trials
- Exhibition (what the companies find interesting)

Audience & participation

- Farmers and advisers
- No participation fee
- 100-130 participants (including demonstrators and organisers)

Demonstration set-up

- Exhibition of farm machines
- Presentations of experiments
- Demonstrations of machinery
- Field walks for farm view
- Common area where people could socialize

Evaluation peer-to-peer learning environment (13-06-2018, Økotræf)

- A good mixture of field walks, presentations, demonstrations and time for socializing. For the field walks people divided themselves into smaller groups with a guide
- Most of the presentations required a high level of prior knowledge
- No hands-on activity was carried out by participants
- All the test plots/presentations showed experiments with new plus innovative ways for organic plant production

- Very well-structured demo
- The presentations and demonstrations all concerned innovative
- The set-up gave good opportunities for talks, discussions, networking and innovative ideas
- Difficult to get enough participants because of high competition from competing extension services (a similiar demo was held the same day by another extension service)
- Coordination of feed-back from participants was difficult.
- Should the event be shorter or was the time satisfactory

PLAID

AGRIDEMO

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LANDBRUG FØDEVARER SEGES

France Case Study 1

1. Background

Programme

Innov'Action is a French national demo program which began in Britany (West of France). Each regional chamber has the possibility to carry out, or not, the operation. The main aims of this program is to identify relevant innovations to propose and present to farmers and facilitate farmer to farmer knowledge exchanges. Every year more than 250 farms host demo activities in France. In 2018 in Britany 32 farms host demo activities: size, innovations topics, farm types, agricultural sector and regional distribution are balanced.

Funding and Governance

Elected members of the Chambers of agriculture define the main objectives and annual topics at the regional level. For instance they want the program to be homogenous in the implementation of the operation, but also to be diversified from multiple farms to the scale of territories. At county level a steering committee composed of elected persons and advisers organise the practical side of the demo activities.

The program is funded by the Chamber of Agriculture. The budget is a mix and public funding: taxes, research program communication, local authority funding…

Actors and networks

The main actors are the host farmers and the different chamber of Agriculture employees (regional coordinator, local coordinator, advisers) and elected members. For instance in 2018, for 32 on farms demo activity 110 person took part of the program for a total of 550 working days.

There are also local partners which are involved in the demo activity: other advisers, book-keepers, cooperatives, machinery sellers…

Sometimes researchers or project managers of French institutes could present research project results.

How it works

The host farmers decide the innovation to present. The local partners are involved. During the event the host farmer presents his farm and guide the groups of visitors.

The elected members of the Chamber of agriculture decide the main aims and objectives and deal with political issues. During the event they welcome participants and speak about the Chamber of agriculture local actions.

The local coordinator organises the demo activity and connects the farmers, the demonstrator (most of the time they are advisers), the partners and the regional coordinator. During the event he leads the practical "to do's".

The adviser (most of the time employed by Chamber of agriculture) provide technical solutions and explain the different innovations. There are 4 to 5 innovations in each demo farm so 4 to 5 demonstrators. They also explain the advices and training that the Chamber of agriculture could provide to farmers.

The regional coordinator manages the program and is the facilitator of the regional group, composed by a local coordinator and an elected member.

On the farm, the local association organises a lunch for all the participants.

Event Farm and location

For the Agridemo case study we chose a Dairy Farm in the North of Britany. The innovations presented by the farmers and advisers were:

- cows feed: technical choices to have high dairy production yield
- new barn: choices made by the farmer, labor organisation and cost
- milking robot: how to maintain a significant part of grazing with a milking robot

Event Field Lab group

150 people visited the farm on the 21st of June from 10am to 5pm. Groups of about 10 participants were formed and guided around the farm by the host farmer.

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 is reported in Sections 3 and 4. There is 1 Farm level interviewee and one Programme interviewee. 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. This data is sourced from 11 pre and post demonstration surveys for participants, 2 pre and post surveys for the demonstrators, a post host farmer interview 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.

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 and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the French case studies took place on the 9th of November, 2018.

3. Structural characteristics

T1: Programme/network level

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

The Innov'Action programme

Innov'Action is a French national demo program that organises events mainly on commercial farms. However in the frame of Innov'Action some demo events (open houses) are also organised on the chamber of agriculture's research stations (Programme Interviewee). More specifically, the chamber of agriculture owns some pilot/ experimental farms as well as training centres for farmers, in which different trials are set up and implemented. They also organise symposiums and many demo activities on local farmers' fields. Innov'Action has begun in Britany (West of France). Innov'Action organises many activities at all levels (national-regional-local) through its interacted structures. Every year more than 250 farms host demo activities in France. Indicatively in 2018 in Britany some 30 farm hosted demo activities. The size, the innovations topics, the farm types, the agricultural sector and the regional distribution are balanced. In 2018, for instance 32 on farms' demo activities, 110 people took part of the program for a total of 550 working days (Background info). The Innov'Action's open houses, are carried out by the chambers of agriculture, which have a multi-level structure with different departments and actors working in them.

Innov'Action is a well-known initiative through French farming community which has identify its work with the innovation (Farm Interviewee). The topics selected are always related with some kind of innovation in the farming sector. They aim towards a global and systemic approach of operating systems integrating innovation. The chambers rely a lot on their own accumulated work and knowledge from the field. They intent to implement all sorts of topics and innovation and not to restrict themselves to specific topics in order to meet the contemporary needs (Programme Interviewee).

> How are demonstration topics selected? Yes at first, as I was saying, we were on topics, you see, but the topics are difficult to identify from one year to another, no, I think that with the… all the previous work of the chambers of agriculture, agriculture has numerous applications, we are in global approaches, Innov'Action is only every year, it's not every two months, so we can't allow ourselves to implement, to accompany agricultural development, to implicate ourselves in specific topics today, you see, I think that there we need to be more focused on global approaches, on innovations of all sorts. (Programme Interviewee)

> The identification of themes in the first year, that is to say, 11 years ago, we had organised thematic days with 4 targeted thematic areas. At the time, the focus was on milking, improving milking working conditions, organic farming, no-till farming, and energy. And over the years, we realised that we had to go a little further, I think, you will contradict me if you do not agree, towards the global approach, the global approach of operating systems integrating innovation. (Programme Interviewee)

> Practices, we have experience nonetheless in… we can talk about it anyway. On several occasions we have tried to communicate about our experimental farms as part of Innov'Action, or even about our training centres, (…) well… we did one year about alfalfa, we had done a lot of communication on the alfalfa culture by setting up different trials and all that, well, this requires a lot more anticipation than that, the implementation and giving new value to trials. (Programme Interviewee)

> Innov'Action is a step but throughout the year we offer them a lot of things, eh, and with different levels, whether it's at our open houses at our station or at our local demos on very, very, technical subjects. It's also the symposiums that we realise for farmers and prescribers. (Programme Interviewee)
>
> As I was saying… it's the roots of this project, you see, the roots of Innov'Action is our motto since the start, it's "farmers speak to farmers", but also speak to us… I think also that this innovation can enrich us, in the end the field innovation can enrich us in our research for innovation, in our research stations, in our studies, you see. (Programme Interviewee)

The chamber of Agriculture

The chambers of agriculture carry out the operation of Innov'Action. The main actors involved at the Innov'Action's open houses are the host farmers and the different chamber of Agriculture employees (regional coordinator, local coordinator, advisers) and the elected members (Background info). The chambers of agriculture have a national operational range.

> Okay, the connection. Already it is a national operation of the chambers of agriculture of France today, I emphasise that it's the chambers of agriculture and not APCA. So, each chamber has the possibility to carry out, or not, the operation Innov'Action. (Programme Interviewee)

The regional level of coordination of the chamber of Agriculture

Regional chamber of Agriculture

The activities of the chamber of agriculture in Brittany are managed mainly regionally. The chamber of agriculture has 4 departments. Each department takes over a number of farms and all departments are intended to be captured on the field. The objectives are defined regionally and they are diversified by territory or within the different collaborating farms. At the same time the programme is implemented in the manner across the different farms or territories (Programme interviewee). The regional coordinator manages the program and acts as the facilitator of the regional group composed by local coordinator and the elected members. The elected members of the Chambers define the main objectives and annual topics at the regional level. During the event they welcome participants and speak about the Chamber's local actions (Background info). This adaption from regional to territorial/local level on the department level is achieved through the steering committee made up of elected members and advisers (Programme Interviewee).

At the regional level there is the coordination of the technical aspects of the operations, the communication part and the departmental level of coordination. The departmental coordinator's role is to identify collaborating host farmers for the open houses of Innov'Action. S/he makes use of different networks as well as advisers and researchers to reach farmers to host a demo within a territory. Innovative farms are prioritized for some kind of collaboration. There is also a technical / supporting team with the coordinator of territorial animation of the sector, which ensures that the specifications of setting up the open houses are respected. This technical / supporting team comprises of advisers of the chamber i.e. research engineers, development advisers, technicians. The Chamber's staff, technicians and engineers, manages the open houses and supports the collaborating host farmers technically (Farm Interviewee), and they are also involved at the topic's content for a demonstration. More specifically they reinforce the topic's content with scientific data. Finally, the advisers and engineers of the chambers of agriculture prepare the open houses with the farmer (Programme Interviewee).

The advisers, mostly employed by the Chamber of agriculture, are usually the demonstrators at the events. They provide technical solutions, explain and present the different innovations (Programme Interviewee). There are 4 to 5 innovations in each demo farm so usually there are 4 to 5 demonstrators. They also present and explain the advices and training that the Chamber of agriculture could provide to farmers (Background info)

> It was really sharing the field innovation, benefiting from the support of our research engineers and development advisers to highlight it during the open house. (Programme Interviewee)
>
> Who are the main people involved in the demonstration activities and what are their roles? No one imposed anything on me, I was told "here you are calling your partners", so we are the ones who said, well, for example milk control, we still have it, we asked the milk control staff to come in, chamber of agriculture, since the building ... the building plan is made by the chamber of agriculture so we asked, similar, that the chamber of agriculture comes, robot and grazing the robot technician and grazing technician from the chamber of agriculture must come also, uh, even if they have the same theme, that our COP technician for me it is important that the technicians of the chambers are present. (Farmer)
>
> How is the programme/network managed? Nowadays it's managed regionally, management is ensured by 3P, so the objective is to… it's still an operation that starts on the field, we have 4 departments. We have, yes it's true, professional objectives defined at the regional level, with an organisation system that aims to be homogenous in the implementation of the operation, but also to be diversified… from multiple farms to the scale of territories, even if the territorial decision on the department level is carried out within a steering committee made up of elected persons and advisers, on the regional scale one tries to have a coherence in our choices. What is also our strength today, (is that….) at the national level today Innov'Action has become a flagship operation that everyone expects. (Programme Interviewee)
>
> So, at the regional level, we have a regional pilot who coordinates operations technically, I who is complementary in my work on communication at the regional level; and at the level of each department, we have a departmental coordinator in charge of identifying the open houses of Innov'Action. And behind this person, there is a technical team, so a team with a coordinator of territorial animation of the sector which today ensures that the specifications of setting up the open houses is respected with the advisers and engineers of the chambers of agriculture who prepare the open houses with the farmer. (Programme Interviewee)
>
> Q: How do you target farmers to host demonstrations? A: So, if we commence at the departmental level, we use our networks, whether it's our networks of advisers in development or of researchers. From that point we check out farms by territory, farms that seem innovative to us, and during a steering committee comprised of elected persons and advisers, we identify by priority the farms that we will engage while paying attention to repartition on the scale of the entire territory, with different types of production in the department. (Programme Interviewee)
>
> Well… the best of the best is the farmer who takes groups in charge in order to visit his farm and present his innovation. In this case, there really is a better result, even if otherwise it is… his presentation of the farm and his project is completed by the intervention of our engineers, the ideal terms of development are still this. (Programme Interviewee)
>
> Innov'Action is clearly identified as an activity led by the chambers of agriculture and I think that people are aware now. (Programme Interviewee)

Local/county level of coordination of the chamber of Agriculture

The local coordinator

Each host farmer is supported by advisers and a local coordinator of the Chamber of Agriculture who present during the entire day the host farmer's farm management, choices, livestock and crop technics and equipment (Background info). The local coordinator organises the demo activity and make the link between the farmers, the demonstrators, the partners and the regional coordinator. During the event he leads the practical "to do's" (Background info). On the farm local association organises a lunch for all the participants.

The Steering committee

The steering committee is comprised of elected persons and advisers. At the county level, the steering committee is practically organising the demo activities. The steering committee adapts the departmental regional decisions/options to the territorial/local level. The regional departmental coordinators identify innovative host farmers for the open houses of Innov'Action. Thereafter, the steering committee identifies by priority the farms that they will finally engage on a territory. This process takes into account the different types of production in the entire territory (Programme interviewee).

> We have, yes it's true, professional objectives defined at the regional level, with an organisation system that aims to be homogenous in the implementation of the operation, but also to be diversified… from multiple farms to the scale of territories, even if the territorial decision on the department level is carried out within a steering committee made up of elected persons and advisers, on the regional scale one tries to have a coherence in our choices. (Programme Interviewee)

> Q: How do you target farmers to host demonstrations? A: So, if we commence at the departmental level, we use our networks, whether it's our networks of advisers in development or of researchers. From that point we check out farms by territory, farms that seem innovative to us, and during a steering committee comprise of elected persons and advisers, we identify by priority the farms that we will engage while paying attention to repartition on the scale of the entire territory, with different types of production in the department. (Programme Interviewee)

Further Actors/organisations out of the Chambers

There are also local partners who are involved in the demo activity: additional advisers, book-keepers, cooperatives, machinery sellers etc. Sometimes researchers or project managers of French institutes could present their research/project results (Background info). Each chamber works with different networks and/or farmers networks and institutes. With regard to the identification of relevant topics the chamber's employees, make use of the external partner's feedback during the events, on innovation and/or new topics for future activities (Programme Interviewee).

> Well here in the framework of Innov'Action it will be a little similar, we have requested again the various partners … the different partners that we had during the construction of our building, plus some that we have … that the we asked to come, who came to support us at the technical level, for example since the launch of the robot. I take the case of feed since we take our feed

with TRISCALIA, we asked that the TRISCALIA robot technician come and follow us a little... to adjust the best milk production with feed and the different components of the diet since, so be aware that they have corn in silage, a little pasture since they have only 10 acres per cow, but hey it's still time to be supported. (Programme Interviewee)

We also potentially work with farmers' networks, because on some farms, in fact, it's a group of farmers who take charge of the open houses. (Programme Interviewee)

How do you identify/select relevant topics that will interest farmers? Then, the third level anyway, since the open house of Innov'Action, the external partners who are also present, like cooperatives or others, they can also bring innovation to us, profit from the open houses to help us go further. (Programme Interviewee)

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

Host farmer

The host farmers are always involved in the development of the individual demonstration activities. First of all the farmers are involved at the topic selection processes, and they are a source of proposals during the meeting with the organisers. The farmers' proposals are further adapted and refined through the multilevel structures of the chambers of agriculture and their collaborating partners (chamber's engineers, external partners, etc.). Moreover any innovation implemented on a farmer's farm may trigger a collaboration in the frame of the open houses (Programme Interviewee). So the host farmers and the organisers jointly decide which innovation to present. They also decide together which of the local partners they are going to involve in the whole process. During the event the host farmers present their farms and guide the groups of visitors (Background info). However, according to both Farm and Programme Interviewees, the host farmers are never involved in the development of the overall demonstration programme or at least not directly. There is always collaboration and common work through several meetings but it seems that there is nothing more than this. Finally, there does not seem to be a structured evaluation process of demo events. In this case study's event, the host farmer reported that he requests a feedback on the event's day from participants in a totally informal and intuitive way, i.e. just asking. In the same manner he assesses the possible engagement of participants in relation to the lessons of the demonstration.

How do you identify/select relevant topics that will interest farmers? Well, we are ... there are three levels. The farmer in general tells us, the farmer is a source of proposal, in general when I meet him for the first time, and he tells me about all the innovations, or all the peculiarities that there can be on the farm. (Programme Interviewee)

Q: The host farmers are always involved in the development of the individual demonstration activities? A Always. They're farmers, you know. They are… we do not decide to have an open house because the equipment provider needs the farmer to have an open house, it's above all an open house of a farmer. (Programme Interviewee)

Q: Are host farmers involved in the development of the overall demonstration programme? A Never. No, not directly, currently. I think that we would possibly have some work to do with regard to meetings, check-ups, capitalization, in order to give a direction to the upcoming years. (Programme Interviewee)

Q: Are you involved in the overall development of demos at the programme / network level? R: No. Hmm, for the moment I do not participate in the network yet, but I think that I will certainly start. (Farm Interviewee)

Q: Do you request feedback on the event day from participants? A Yes, I like to know, hmm... how they perceived things, whether, well... whether they have some unanswered questions or

whether... well, are disappointed somehow, because of what they've seen and they didn't think they would see that, well, we would ask them in this case "what do you think you'd see?", anyway for me, it's important to have the feedback in order to be able to improve it for the next time. (Farm Interviewee)

Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations? A: Yes. Yes, yeah, but we are able to feel this, anyway ehh... when they leave this place, I know more or less whether they're going to take the GEA [brand of milking robots] or not. And then, also from the way they ask questions about... about investing themselves in the project, you see, or whether these people are passive, you know, they just watch how stuff works, and eh... . (Farm Interviewee)

Audience / type of participants

During the open houses the audience is any entity interested in on farm innovation. Even though the farmers are always the intended audience of the events, a great variety of different stakeholders and actors attend such as students, agricultural schools, advisers from institutions, cooperatives, management centres, banks, insurance agencies, general public, i.e. families with children etc. In Brittany in 2018, 32 farms hosted a total of 6 000 visitors, mainly farmers (50%) and advisers (25%) (Poster).

The target audience, as I mentioned before, are the farmers in priority. Secondly, it's the prescribers and for 4-5 years now, we think it interesting to engage students, agricultural schools, considering that innovation is interesting for all. So, we realised that the open houses were eagerly awaited by the advisers from institutions, cooperatives, management centres, including other structures that accompany farmers like banks, insurance agencies, to identify what is done in innovation... it's also interesting. (Programme Interviewee)

No, it's very extensive, eh, it is true that the general communication is very very extensive, on the other hand it is true that at the scale of the farm we can be brought, for example if it is a pig farm, to try to target pork producers who will be interested, you see… So, then, it's true that we can have general public, but it's not at all our target. But then it's true that the farmers appreciate presenting their profession at this occasion, and the evolution of the farming profession, that's what's important. (Programme Interviewee)

Well, they are ... the farmers but they are also members of the public completely from the external world... the agricultural world, it's open ... it's open to everyone whether it's young or old public because even the oldest, it may interest them to see, you know, what it is… So we target everyone, young, not so young, and any profession, you know. (Farm Interviewee)

The open door that I had last year, we had people from all over... farmers, uh employees, finally we had a multitude of people, although ... the thing I would say it is like last year it was ... While Innov'Action, the fact that we mark on our little flyers 'open to all', I think that there will be people who are not in the middle, who will date to cross this door, because I still had a case this morning, I was asked if it was going to be open to all, and well I told him "yes it's open to all", and he told me "but we will have the right ... while we are there, will we see the robots?" I tell him "yes we'll see the robots". (Farm Interviewee)

3. Feedback and evaluation processes[6]

In the frame of the programme a feedback is requested by the host farmers. This feedback is complemented by technical and scientific contributions of chambers employees who are present at the events. Furthermore, the overall demonstration activities are evaluated. As far as the assessment of the participant's engagement in relation to the demonstrations a totally informal way of evaluation is referred based on participants general satisfaction.

> Yes. Yes, I think so. Well, there is the testimony that is easily accessible, the testimony of the farmer. It is then completed by the technical and scientific contributions of our colleagues which still allows to have a different level of appropriation and then it is true that some farmers are visual. A farmer is visual, he likes to see, see to believe, so it's also a learning technique. (Programme Interviewee)

> Q: Do you evaluate the demonstration activities overall? R: YesYes, yes, yes, yes, anyway, we make an assessment of… in the early years, I remember that when we were at our small departmental scale, one year, we had communicated on development, for example, of photovoltaics. For several years, it had been the department that developed the most following the open house where there had been 300-400 people. So, it's true that sometimes it's very measurable, the evolution, when it's concrete like that. Overall, the effectiveness of the operation is still there. (Programme Interviewee)

> Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations? R:Yes.Yes, around the satisfaction, since they are asked if they are satisfied or not about what they saw at the open house. (Programme Interviewee)

4. Resources, finances and incentives

The program is funded by the Chamber of Agriculture. The budget of the Chamber of agriculture is divided between several domains, one for example is "communication". It pays all the leaflets, the flags, t-shirts used for Innov'Action. The communication budget comes from Agricultural Taxes. The working time of the coordinators and advisers is another other budget: agricultural taxes, research programs, local funding… (Programme Interviewee). The programme does not offer any incentives to farmers to host demonstration activities.

> Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? AFinancing, in terms of financing, I think that at the level of … there is a tax on activities of this type anyway, so without the tax we would have difficulties to run the activity globally. Then it is often included … this activity, or topics discussed, are often included in agreements with departmental councils. And then, depending on … still themes I think, we have European funding that passes through the region. It is true that we are trying to have counselling time covered by whichever source of funding. (Programme Interviewee)

According to Farm Interviewee, funding for further arrangements on host farms is not always available. It depends on partners, and it seems that it is mainly the responsibility of farmers to invite partners to cover any additional arrangement, such as catering for instance.

> So uh, it's true that I do not know, because to the best of my knowledge, at the level of Innov'Action open door, there is no partnership requested with our different partners, uh, it's up to us, operators, to solicit them if we want them to intervene, and then I give for example the evening of our Innov'Action open door, all the volunteers, we invite them to eat with us to

[6] There is not sufficient data to describe who is in charge of these processes, and how exactly they are implemented

> thank them for what they did. So we will ask one of our partners to... finally, finance, I do not know if we can say that like that, but finally, if they can give us something to finance the evening meal. In fact, compared to ... compared to our open door last year, finally I allow myself to make the comparison, last year GEA had requested a participation from all our partners, precisely for, eh, finance the meals, all that. But this year it is a little different since the chamber of agriculture does not solicit the partners, it is us farmers who must ... who must ... solicit them. (Farm Interviewee)

5. Human Resources

One of the two demonstrators indicated that he has never received any training in order to become demonstrator (Pre survey demonstrator). However, he agreed that he could benefit from some extra training as a demonstrator (Post survey demonstrator). The second one did not reply to the relevant questions.

6. Goal/ objectives

An overall aim of Innov'Action is to identify relevant innovations to propose and present to farmers. The objectives are to reinforce the information sharing and feedback between innovative farmers and their colleagues. Innov'Action is a multilevel structure, which can put innovation in the field, offer technical support and reinforce knowledge sharing. (Programme Interviewee)

> The aim is to identify relevant innovations to propose and present to farmers, so the target group of Innov'Action are the farmers, and then the prescribers (advisers, banks, cooperatives). So, the objectives are to benefit from the experience of farmers who have innovated in domains such as technology, practices or transversal approaches, and to make them share information with their colleagues about these innovative choices and their feedback. (Programme Interviewee)
>
> ... We circulated around innovation ... chased innovation rather and innovation was also put in place in the field. It was really sharing the field innovation, benefiting from the support of our research engineers and development advisers to highlight it during the open house. (Programme Interviewee).

T2: Farm (event) level

1. The farm, the topic and the practices demonstrated

The Innov'Action farm in Brittany is a large sized commercial dairy farm. The demonstration events organised on the farm include a barn visit with focus on several topics such as feed, robot use, welfare etc. (Post host farmer interview). The following different topics were demonstrated, i.e., cow's feed, stable building (a new barn), robot and grazing (Observation tool).

Both programme and farm interviewees stated that the demonstrations organised by their organisation or on the specific farm respectively are exemplary. However, their views concerning the most preferable demo approach are different. The farm interviewee believes that a mixture of experimental and exemplary approaches are better. The Programme interviewee argues that experimental approaches have been tried in the frame of Innov'Action, but they did not work so well.

Q: Which approach do you prefer? R: Exemplary/Practices, we have experience nonetheless in… we can talk about it anyway. On several occasions we have tried to communicate about our experimental farms as part of Innov'Action, or even about our training centres, I think in Quintenic which is where we have done beautiful things, and we see that farmers aren't there for that, it usually didn't work, and this year we had one, you will see what it gives. (Programme Interviewee)

Q: Which approach do you prefer? R: Mixture. No between the two because no experimental and not really example either. (Farm Interviewee)

2. Group size and characteristics

The total audience during the event was 150 participants (120 farmers, 20 advisers and 10 others). The 150 participants were split up over groups of 10-15 people. The event was open, so it was possible for everyone who wanted to participate to take part in the demonstration (Pre survey demonstrator). Eleven out of fifteen participants of one of the groups were interviewed so in this case we can have an indicative general overview of the participants' profile. The age of the of attendees varies between 17 to 57 years old, with an average value close to 38 years old (Pre survey participant). Moreover approximately 45% were women and 55 % men. 55% of participants worked at the same area where the event occurred. Two out of three participants (64%) were dairy farmers with the rest being mainly students and teachers (Pre survey participant)

3. Event Farm design and layout

There were no field's comparisons in the field. The two interviewed demonstrators classified the specific event as a showcasing of existing practices on farm (Post survey demonstrator).

4. Actor's role

Three different topics were demonstrated (cows feed, stable building, robot and grazing). The host farmer presented and explained what he does on farm and the advisers presented technical and economic aspects of the practices. A lot of questions and exchanges occurred between the participants and the farmers as well as between the participants and the adviser on technical requests.

The host's farmer role during the specific event was to welcome the participants, to present his farm and some technical aspects of production. Moreover he explained to the participants the milking robot management with grazing (Observation tool + Poster).

At the specific event two demonstrators were interviewed: a project manager and an adviser who presented technical and economic results and best practices for each topic. Both demonstrators do not hold any elected or appointed roles on farming networks/boards, but they mentioned that many of the participants were part of the same network as them (Post survey demonstrator). There was enough time for free discussion between demonstrators and participants during the event. Finally, there was not a facilitator to guide questions and/or discussions (Observation tool).

It seems that participants were not involved at all in the overall development of the specific demonstration. They were only asked to express their ideas on the topics demonstrated (Post survey demonstrator). Finally most of the participants (9 out of 11) agree that they were actively involved during the whole demonstration process (Post participant's survey).

5. Frequency

The farmer of the specific event hosts around 5-6 demonstration events per year (Post host farmer interview).

6. Duration

The specific event was an all-day event in order to achieve a good presentation and knowledge exchange for all the topics to all the small/split out groups of visitors (Poster).

7. Farm's infrastructures / arrangements

During the demonstration event some arrangements were made for the participants like beer, sausages, coffee and some biscuits (Post host farmer interview).

8. Accessibility

According to the Programme Interviewee, the radius of the visitors attending demos in the frame of Innov'Action is approximately 25-30km around the host farm.

> … even if our priority is the agricultural public, we realise that farmers after all… the radius of our visitors, it's a radius of 25-30km, so all communication networks are good, whether it's written, press, whatever the level of the press (Programme Interviewee).

The travel time of participants to reach the demo farm, ranged from 15 to 90 minutes, with an average time close to 42 minutes (Pre demonstration survey participant). Seven out of ten participants rated their travel effort to participate as little or very little effort, with the remaining rating it as quite some effort (Pre demonstration survey participant).

9. Fees for participation

The event was free of charge, so the 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

1. Incentives

Host farmers were offered no financial incentives for taking part. The Programme Interviewee did mention EU funding and a particular tax that helped fund the programme, although did not elaborate on the details of these.

> Financing, in terms of financing, I think that at the level of ... there is mit tax on activities of this type anyway, so without the tax we would have difficulties to run the activity globally [...] Depending on ... still themes I think, we have European funding that passes through the region. (Programme Interviewee)

> No financial incentives were offered to participants. (Farm Interviewee)

2. Motivations for host farmers

There appeared to be two distinct motivations for host farmers. The first was a practical benefit of developing networks within the industry. The second, as described by the Farmer, was a desire to share personal experience of being a farmer and express their pride for the job and way of life.

> ...the chamber of agriculture does not solicit the partners, it is us farmers who must ... who must ... solicit them. (Farm Interviewee)

> So what motivates me, it's really to show what a farm is, how we live, how we work, and that our farm is a company that allows us to live, it is a profession that has all its honour, one may tell me other jobs too, and I really want to ... help other people experience what we experience in our profession [...] I love my job, and here I really want to make people discover what we do, indeed, there is manure, there are a lot of things ... there are a lot of things, but, there are ways to communicate positively, you know, yes, of course there is always manure, things like that, but one must be aware. (Farm Interviewee)

> It is a certain recognition of his peers, and networks of agricultural development. (Programme Interviewee)

3. Motivations for participants

Participants were motivated primarily by the opportunity to learn about new innovations in farming. The Programme Interviewee observed that participants are also motivated by the chance to get feedback from the host farmer, as the host farmers had a certain amount of credibility due to their association with Innov'Action and the Chambers of Agriculture.

> The desire to discover, really discover uh ... the job, the farm. (Farm Interviewee)

> Innovation, that's one. Second, feedback from a farmer. The farmer feedback is given credibility thanks to our support, we, chamber of agriculture in the presentation of innovation. And three, today the tendency of chambers of agriculture, Innov'Action is clearly identified as an activity led by the chambers of agriculture and I think that people are aware now. (Programme Interviewee)

> Well, just as Innov'Action is something innovative, it must be some sort of extraordinary, I would say, to attract ... to attract people. (Farm Interviewee)

Participant's main reasons to attend the demonstration were: innovation, grazing with a milking robot; barn construction project in my farm; robot and grazing; see the new barn.

4. Target audience

The primary audience was the farmers although the programme welcomed many other people, such as students and members of the public. Open house events also attracted advisers from institutions, cooperatives and management centres, such as banks and insurance agencies.

> Well, they are ... the farmers but they are also members of the public completely from the external world... the agricultural world, its open.... (Farm Interviewee)

> The target audience, as I mentioned before, are the farmers in priority. Secondly, it's the prescribers and for 4-5 years now, we think it interesting to engage students, agricultural schools, considering that innovation is interesting for all. [What do you mean by "prescribers"?] So, we realised that the open houses were eagerly awaited by the advisers from institutions, cooperatives, management centres, including other structures that accompany farmers like banks, insurance agencies, to identify what is done in innovation... it's also interesting. (Programme Interviewee)

5. Advertising and recruitment

The Programme Interviewee considered the most effective form of recruitment to be a combination of providing innovative content on the day, and advertising for the event through all channels (i.e. press, web, radio). All means of promotion were utilised, although the Programme Interview admitted that they could put more energy into social networks.

> One, to have something to show, innovation. Two, one needs to use their means to reach all publics, you see, whether it be... even if our priority is the agricultural public, we realise that farmers after all... the radius of our visitors, it's a radius of 25-30km, so all communication networks are good, whether it's written, press, whatever the level of the press. Social networks, on which, it's true, we should work a little more. And the web, radio as well. We use all the means to promote this operation. (Programme Interviewee)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Farmer described the nature of interaction as 'mostly bottom-up', highlighting the importance of the exchange between farmers and the network. The Programme Interviewee agreed that interactions were 'mostly bottom-up'; this approach was born of an understanding that research and researchers could be enriched by farmer knowledge.

> The roots of Innov'Action is our motto since the start, it's "farmers speak to farmers", but also speak to us... I think also that this innovation can enrich us, in the end the field

> innovation can enrich us in our research for innovation, in our research stations, in our studies, and you see (Programme interviewee)

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

Although the farmers are not directly involved in the network programme, the Programme Interviewee felt there could be space for farmers to be involved with meetings about the future direction and improvements for the programme. He also adds that initial meeting between farmer and programme interviewee consists of the farmer detailing 'all the innovations, or all the peculiarities' already occurring on his/her farm.

> No, not directly, currently. I think that we would possibly have some work to do with regard to meetings, check-ups, capitalization, in order to give a direction to the upcoming years. It's true that this job… well, the organisation is being implemented as well, but I think that there, we have important work to do. It's already done but it could be better, you see. (Programme Interviewee)

> The farmer in general tells us, the farmer is a source of proposal, in general when I meet him for the first time, and he tells me about all the innovations, or all the peculiarities that there can be on the farm. (Programme Interviewee)

The host farmers are directly involved in individual demonstrations; the Farmer felt this was central to event as the point of them was to show how the farmers were living and running their farm.

> They're farmers, you know. They are… we do not decide to have an open house because the equipment provider needs the farmer to have an open house, it's above all an open house of a farmer. (Farm Interviewee)

Participating farmers were involved in the network programme but not in individual demonstrations. No further information was given as to the nature of this involvement.

3. Focus

The Farm Interviewee described the network as 'in between' whole farm and single focused, whereas the Programme Interviewee described it as 'whole farm'.

4. Design

Both the Farm Interviewee and the Programme Interviewee described the network as displaying 'exemplary' practices. The Farm Interviewee expressed a preference for 'a mixture' between exemplary and experimental, because at present there was no examples of experimental practices. The Programme Interviewee, on the other hand, expressed a preference for exemplary practices, because with exemplary practices farmers are able to speak from experiences, and added that they had tried to communicate experimental practices in the past with less success.

5. Ideal group size

The Farm Interviewee considered the optimal group size to be 10 adults, as with any more and people started to form smaller group discussions, which results in having to repeat explanations several times.

The Programme Interviewee considered a similar size of 15 to be optimal. This was enough people to allow for effective exchange of ideas, but not so many that the open houses got overwhelmed.

> If they have questions to ask, they will... be able to ask them, whereas when a group is too big, what happens is that there are multiple smaller groups that form themselves. (Farm Interviewee)

> This is ideal, both for the open house to be structured and there can be an exchange. (Programme Interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The structure of the day varied depending of the activity, but generally the Farm Interviewee employed a combination of theory, followed by a practical example or demonstration of the subject in question. The Programme Interviewee added that the most constructive structure for a presentation was the combining of visualisation with technical information.

> Well, then, it depends on the theme that we emphasise, that's the first thing. Indeed, if we talk about crops for example, well, it's true that it's good to, if we talk about weeding for example, well I think it's good to have an aspect, I would say, theoretical, but then again, we need to talk about practical, about how it's done. For animals, it's more or less the same, I give an example where we talk about dehorning, well I don't know if we have a group that says "well, we'd like to come and see, for example, how you dehorn your animals", well, it's good to talk a little bit to what we should pay attention, why we do things this way and not another, and then it passes on to action, anyway, me, there are always those two phases, you see. But here... really, the... the practice, yeah, the practical side needs to be present. (Farm Interviewee)

> It is actually the visit with the technical information, during the visit. It is not "I present what I do and then after we will see". No, no, it's ... the visit and the visualization of what is done there is constructive. (Programme Interviewee)

In terms of particular materials to aid demonstrations, the farmer cited the occasional use of a video to stimulate questions and discussion amongst participants.

> Well, it's true that ... sometimes a little video like that ... it's about people, and it also allows then to have a ... a dialogue, they'll see something, they'll say "that's how you do it, why?" Well then, yeah, it's…. (Farm Interviewee)

The Farmer cited 'good quality expert advice' as the most important element of a demonstration because there is always more to learn and continuous training is important for farmers throughout their career. Conversely, the Programme Interviewee cited 'Participants ask questions and talk openly' as the most important because the point of the day is to have a discussion about the farmer's practices, not to have a monologue.

> Well, the principle is that it's the testimony of the farmer so it's not a monologue, it's really, as I said earlier, defending his project, defend his choices. And discuss the practices. (Programme Interviewee)

2. Taking into account variation in learning

The Farm and Programme Interviewee expressed an attempt to accommodate different levels of prior knowledge in the presentations. The Programme Interviewee added a more nuanced understanding of different learning styles, acknowledging that farmers are generally visual learners.

> Hmmm, we are obliged, eh, since anyway, eh... if we speak in the same way to a farmer, for example, as to a... an official for example, the understanding won't be the same, the farmer already knowing a certain number of things will immediately understand, while... an average person, eh... will probably ask themselves questions about relatively simple terms. (Farm Interviewee)

> Yes, I think so. Well, there is the testimony that is easily accessible, the testimony of the farmer. It is then completed by the technical and scientific contributions of our colleagues which still allows to have a different level of appropriation and then it is true that some farmers are visual. A farmer is visual, he likes to see, see to believe, so it's also a learning technique. (Programme Interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

The Farmer considered there to be continued engagement between participants after events; this was drawing on personal experience. The Programme Interviewee, however, did not think there was enough engagement between the network and participants after the event.

> Well yeah, not so long ago I participated in a training on aromatherapy and we were a group where... I knew the participants but I knew the topic only a bit and since we participated in this training, well, it happens that we exchange emails saying "oh you know, I tried this, it worked not bad, and you, how do you do it?" (Farm Interviewee)

> No, not enough in my opinion. It would be necessary to create a group (Programme Interviewee)

The Programme Interviewee made mention to a book in which all the testimonials are compiled, as well as a new tool, “data press”, for people to have a record of what’s been covered in demonstrations.

> Yes, well, we were doing ... well, we are already making our book which can be a support for grouping all the testimonials. Well then, it's true that this year with the tool "data press" it will be easier to extract all that has been said and capitalize on Innov'Action. (Programme Interviewee)

2. Assessing impact

There was no official protocol for assessing the impact of events amongst participants, although the Farm Interviewee felt it was generally easy to deduce from participants behaviour on the day how they would be influenced by the event. There was also no attempt to assess the impact of the events on the wider community.

> ...but we are able to feel this...from the way they ask questions about... about investing themselves in the project, you see, or whether these people are passive. (Farm Interviewee)

To evaluate is not obvious but to give them the information, yes. We give them the information, however, evaluate the impact I do not know. (Programme Interviewee)

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of about 15 participants and 11 of them filled in the pre and post survey.

	n° survey participants	dairy farmer	teacher	student
occupations	*11*	7	1	3
working area	*11*			
local area	5	4	1	
not local area	6	3		3
gender	*11*			
male	6	5		1
female	5	2	1	2
age	*11*			
18-30	3			3
31-40	2	2		
41-50	4	3	1	
51-60	2	2		
60+				

T1: Learning processes

1. Communication initiation by participants

There was no 'whole group' that participants could share knowledge with. When in small groups participants were rather closed and didn't share their knowledge and/or experiences related to the topic willingly. There was an open discussion after the demonstrator speech. There was a lot of time for questions. In between two different groups, demonstrators were available to discuss and answer questions of participants. This took up about 30% of the time. More than 50% of participants asked questions or discussed directly with the demonstrators. More than 50% of participants shared their own point of view.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	0	8/11	3/11	0
I asked at least one question during the demonstration .	9/11 yes				
I shared my own point of view at least once during the demonstration.	8/9 yes				
I **felt encouraged to ask questions** during the demonstration.	0	0	6/9	3/9	0
When there were any discussions, **I felt comfortable sharing my opinion**.	0	0	7/11	4/11	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	1/2	1/2	0	0
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	0	2/2	0	0
I **encouraged the participants to formulate questions** during the demonstration.	0	0	1/2	1/2	0

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

A hands-on activity was demonstrated, but only very shortly and participants could take part in a hands-on activity, but didn't get any feedback on their doing. More specifically, participants could use the milking robot computer, and they could touch the robot computer briefly.

Discussion opportunities and negotiating conflicting points of view

There was no facilitator available. Open discussions are stimulated and given a lot of time. Most participants are involved. This was mainly with the demonstrator or participants had a drink and open discussions after the farm tour. Shared critical points of view were clarified/rephrased so more people could understand. This was mostly on the financial investments regarding the economic trend in dairy.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	0	8/11	3/11	**0**
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	0	0	3/3	0	**0**

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

3. Engagement during the event

Participants act more distant then open. In the group followed by the AgriDemo researcher, farmers came from different places and didn't know each other before the demo. The demonstrator acts more distant then open. He (demonstrator/adviser) saw the participants for the first time but the host farmer knew some of them and acted more friendly.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I **felt actively involved** during the whole demonstration process.	0	2/10	6/10	2/10	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	0	4/4	0	0	0
I could **relate well to other participants** (because they have an agricultural background similar to mine).	0	3/10	2/10	5/10	0
A lot of the **other participants** are **part of the same farmer network** as me.	0	3/7	4/7	0	0
I felt like I could **trust the knowledge of (most of) the other participants.**	0	0	5/8	3/8	0
The demonstration **felt like an informal activity** to me.	0	0	3/5	2/5	0
I thought **the host farm was comparable enough to my own farm.**	0	3/7	2/7	2/7	0
I had the feeling the **demonstrator was like one of us.**	0	0	4/7	3/7	0
I had the feeling **I could trust the demonstrators knowledge.**	0	0	3/10	7/10	0
I **got along very well with the demonstrator.**	0	0	4/7	3/7	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**?	yes, they were asked to express their idea on the topic				
Most of the **participants were well known to me.**	1/2	1/2	0	0	0
A lot of the participants **are part of the same network as me.**	0	0	2/2	0	0
The demonstration felt like **an informal activity** to me.	0	0	1/2	1/2	0
I think the **host farm** was **well suited** for this demo.	0	1/2	1/2	0	0
I **got along well** with the participants.	2/2	0	0	0	0

T2: Learning outcomes

Explained knowledge was sufficiently understandable. The event didn't have the aim to develop participants' skills.

	participant answers				
What would you **ideally like to learn** today?	Grazing; New barn and robot cost; manage grazing with a robot				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	0	2/11	9/11	0
The **demonstration exceeded my expectations.**	3/3	0	0	0	0
I felt surprised at some point(s) during the demonstration.	0	4/8	2/8	2/8	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	2/11	6/11	3/11	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	0	4/9	5/9	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	5/8	3/8	0
I **reflected on my own point of view** at some point during the demonstration.	0	0	3/8	5/8	0
I learnt about **the principles underlying a practice**.	0	3/5	1/5	1/5	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	0	2/4	1/4	1/4	0
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	2/3	0	1/3	0

	demonstrator answers				
what do you **intend for the particpants to learn** today?	Show that it's possible to maintain grazing with a milking robot, provide answers to the participants questions				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	2/2	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	1/2	1/2	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	1/2	1/2	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	2/2	0	0
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	0	2/2	0	0
I **reflected on my own point of view** myself at some point during the demo.	0	1/2	1/2	0	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	0	2/2	0	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	0	2/2	0	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	0	1/2	1/2	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	0	1/2	1/2	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,8 on 5, participants rated the event overall as effective. 11 on 11 of the participants who answered the questions would recommend the demonstration.

Participants didn't mention any specific effective characteristics of the demo or suggestion on how to improve the demo.

Demonstrators:

Demonstrators mentioned as effective characteristics of the demo: several topics, concrete example with new barn robot and grazing, good affluence of participant and right group size to have discussion.

They didn't mention any suggestion for improvement.

6. Annex: Case study poster July 2018

FarmDemo

French CASE STUDY : Innov'Action in Britany

Mathieu MERLHE, AC3A

Innov'Action is a French program of demo event in commercial farms. The case study which is analyze was one of this farm in Britany (west of France): dairy farm with milking robot, new stable and grazing. In this region, in 2018, 30 farms hosted a total of 6 000 visitors, mainly farmers (50%) and advisers (25%). Each host farmer support by advisers and local coordinator of the Chamber of Agriculture present during a entire day his farm management, choices, livestock and crop technics, equipment… All the presentation and exchanges are focused on innovation.

Objectives

- Show and develop innovation in agriculture: work organization, equipment, new technology, different ways in crop and livestock management…
- Encourage farmer to farmer knowledge exchanges

Farmer Motivations

- Explain the global project with a new young farmer in the farm
- The good balance between maize and grazing with a milking robot
- Exchanges with farmers

Topic selection

- For the case study: grazing with a milking robot, reduce investment in a new stable, dairy cows feeding.
- Determined by the farmers and the Chamber of agriculture local coordinator

Audience & participation

- Audience for the case study farms: 150 participants, 120 farmers, 20 advisers and 10 others.
- No participation fee.

Demonstration set-up

- Small groups of 10 to 15 farmers to have a good exchanges between them
- Global presentation of the farm system by one of the farm associate
- 3 different topics (cows feed, stable building, robot and grazing) presented by the farmer to explain what he does and by an adviser to present technical, economic results and best practices
- Question and exchanges with the groups
- In addition to the presentations: Video, milking demo, equipment demo…

Evaluation peer-to-peer learning environment : Innov'Action 06/21/2018

- 150 participants split up over groups of 10-15 people
- Question and exchanges between the participants and the farmers: building project, milking robot and grazing management
- Technical request from the participant to the adviser

- Host farmer: open to present his farm and technical way of produce and to exchange with other farmer
- This case study is a good example of a Innov'Action event: a farmer who host the demo and present his farm, 3 or 4 topics with an adviser per to present technical and economic results and best practices for each topic
- An event on a all day in order to: do small groups (10-15 visitors) to present all the topics and enhance exchanges between them, between the host farmer and the participants and between the participants and the advisors.

PLAID AGRIDEMO

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France Case Study 2

1. Background

Programme
The vegetable experimental farm organises every year an open demo activity for vegetable grower. The first aim is to deliver to the producers the results of trials implemented: organic farming, new equipment and robot tests, technic to reduce pesticides. The second objective is to federate independent producers in Brittany who are isolate. This demo is a good moment to discuss, to share knowledge and create connection between the producers. The target participants are the market gardeners who sell mostly through short circuits and direct sale.

Funding and Governance
A steering committee composed by the experimental farm manager, other employees of the regional Chamber of agriculture and about 12 vegetable producers decide to implement research projects on main stakes: working time and painfulness, pesticides decrease, organic farming development, new equipment and robot. They meet two times per year, at the beginning of the season to agree on directions of development for the year, the objectives of the year, and at the end of the season to analyse the results. During the demo and moreover during all the year partners, advisers, elected members who are also producers try to feel the farmers' needs and problems. The board rank the priority and turn farmers' question into research projects to find solutions. For each topic the manager of the experimental farm write a project, find private and public partners and look for financial resources. The funding mainly come from local and national authority. The Chamber of agriculture also finances the experimental farm on its own budget which come from agricultural taxes. Based on this governance and funding this demo, which is the main event in the year for the experimental farm, is the best way to present the results and exchanges with the farmers. It's also a goof moment to have their view on the research projects results and find new ideas for new projects.

Actors and networks
The main actors for the demo activity is the farm manager and Chamber of agriculture advisers. They organise the demo activity, choose the topics and results to focus on and the partners to associate with. They also manage the budget: document and leaflet to write and print, coffee, lunch…

Private partners are associated with to organise the demo activity. The experimental farm tests some equipment and presents the results of these tests. During the demo event several equipment and materials were shown and presented by private companies: movable greenhouse, weather forecast station, organic and natural material (mulch, strings…), new vegetable variety (tomatoes, pepper, zucchini…).

The experimental farm is also involved in regional and national networks with other institutes or research stations: ITAB [Technical Institute of Organic Farming], GRAB in Avignon [Group Research on Organic Agriculture], IBB and CERAFEL (Britain producer association), the CTIFL (French vegetable institute).

How it works
Participants are invited at three moments to visit the farm: 9.30 am, 10.30 am and 2.30 pm. A group of visitors (between 20 to 40 participants) is leading by the experimental farm manager or an adviser. All the experimental projects are presented during a succession of short workshops: the adviser presents the main results, the visitors could see the experimentation, touch the vegetable and the different equipment, and could ask questions. After the 2 hours tour the participants had a lunch and/or coffee and exchanges between them, partners, advisers… Then they could visit again the farm in a free time.

Event Farm and location
The event took place on the 18th of September in Kerplouz Auray.

http://www.bretagne.synagri.com/synagri/eve-18-septembre-2018---innovons-en-maraichage---auray

The innovations presented were:

- Tomatoes and beans mix cropping to avoid aphids and mites damage
- Organic fertilisation by alfalfa
- Movable greenhouse
- New varieties: tomatoes, pepper, zucchini
- Connected weather station Sencrop
- Experimentation to reduce pesticides
- Organic material: string, mulching…
- Equipment demo Toutilo: https://www.wedogood.co/toutilo/?lang=fr_FR
- Robot demo:
    - Oz: https://www.youtube.com/watch?v=EPxDZYhQSds
    - Dino : https://www.youtube.com/watch?v=0-w9SkBw8zc

Event Field Lab group

The group followed was composed by around 40 people: mix of farmers, students, advisers and equipment seller.

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 for this case study report is sourced from one interview with a Programme interviewee in May 2018. 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. This data is sourced from 6 pre and post demonstration surveys for participants, 2 pre and post surveys for the 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.

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 and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the French case studies took place on the 9th of November, 2018.

3. Structural characteristics

T1: Programme/network level

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

The experimental farm is involved in regional and national networks with other institutes or research stations: ITAB [Technical Institute of Organic Farming], GRAB in Avignon [Group Research on Organic Agriculture], IBB and CERAFEL (Britain producer association), the CTIFL (French vegetable institute).

> So we are rather involved in other organic networks, so with other organic research stations and via ITAB [Technical Institute of Organic Farming], so here we will say that it's better coordinated, I think, at the national level. So with other organic stations, the GRAB in Avignon [Group Research on Organic Agriculture], stations like this... Then, on the level of the region of Brittany, we have our networks, so IBB and CERAFEL, so we are members of two networks, so with Breton stations. And at the national level, we also have another network whose aim is to coordinate us, where we are very involved, the CTIFL, so... but they coordinate less and less... they work by theme, type of crops, so it's very precise, so there [are working groups, for example on the tomato, eggplant, any type of crops, when we are in market gardening, by definition, we work mostly on these crops, so it's difficult to find our place there. And on the European level we work very little with other stations... a little with FIBEL in Switzerland. (Programme interviewee)

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

> That would be me with the support from the communications department, in the end I do not know how precise I should be, but this is more or less it. So then, the themes on which I want to elaborate... it's me as well who will showcase certain themes. And who speaks, so it's me who speaks and my colleague JC, and since the regionalisation, we involve also our colleague SP from Saint-Paul de Léon who is also an adviser on market gardening. So that would be it for the chamber of agriculture. Then, there's a bunch of private partners with whom we work, whom I convince... I invite them to be present during this day, on such days it's comprised in the service delivery. This service comprises a test, a trial, and in the end, their presence at open doors. (Programme interviewee)
>
> Q: When you say presence is that they present the results of the test? R: No, no, it's me who does it, they present their products. (Programme interviewee)

Host farmer

The case study refers to demonstration activities organised on an experimental farm/station. No host farmers are engaged in/related to this farm's activities.

Audience / type of participants

The programme addresses itself to the vegetable growers in Brittany. The interviewee shared the programme's potential, and ambition, to attract participants from neighbouring areas too. While, he noted that participants are targeted, no further criteria were shared except those referring to the scope of the activity (vegetable growers) and the regional focus.

> Q: Who is your intended audience? R: So, market gardener, short circuit, diverse market gardeners from Brittany, or even the Big West [informal name for the western regions of

France], we spread a little in the Big West. So the market gardeners who sell exclusively through short circuits, direct sale, so we are less focused on... on long circuits, but we still work for long circuit producers anyway, on certain topics… (And) Convert to organic, as well. (Programme interviewee)

Q: Are participants targeted in demo recruitment? R: Yes, they're always targeted. All market gardeners whom we can reach, so all market gardeners of the Big West. (Programme interviewee)

The programme relies mainly on electronic means to invite participants. Neutrality and direct contact with potential attendees seems to be important parameters of the programme's communication.

Q: And how are they invited? R: There's plenty of stuff. So we have: the email, letter, text. And then there's press so it's vaster, but individually it's going to be that and what's the most efficient in our opinion is texting. (Programme interviewee)

Q: Do you rely on private partners or networks, do you rely on them to communicate around the events you organise? R: No, very little, I only do it very little. I prefer to keep it neutral and independent from the communication. (Programme interviewee)

3. Resources, finances and incentives

Q: What are the funding arrangements for your demo activities? R: Well, historically it was about the functioning of the station, so since a little while, the... we budget it as project development now. So it's rather recent, since 2 or 3 projects where the communication is a separate activity in itself, so we foresee in this case budget lines for communications. (Programme interviewee)

Q: And so these projects are funded how? R: There's a [monetary] envelope of the Regional Council who was our principal financer. There's also an envelope from FranceAgriMer [department of the French Ministry of Agriculture]. There's also an envelope of the Ecophyto programme [programme of the French Ministry of Agriculture aiming at reducing the use of phytosanitary products], so it comes from the APCA, through the APCA. And there's also CASDAR [French financing programme].....And some private funds also?? Some private funds, yeah. (Programme interviewee)

4. Goal/ objectives

Q: What are the overall goals/objectives of the demo farm? How are these decided?

R: So the objectives are to deliver to the producers the results of trials implemented to study the situation during the current year. The second objective is to federate the producers for whom we work, so who are independent producers in Brittany, so their independence, well, ultimately, isolates them a little from each other, so it's kind of a good moment to discuss and to share, when they meet at our farm. Next, it's to involve private partners, in order to showcase as well and also to face producers, so this is another of our objectives. And then, during such events, it's also about selling our know-how and also to showcase our new projects, you know. (Programme interviewee)

Q: How are these goals decided? By whom and how? The employees and you from the station who decide...? How does it work? R: that would be me, I consider that the trials that we

> implement at our station are only interesting if at some point they also happen on the farm and if tomorrow they benefit the producers, so this is my principal objective and so all the events that we can organise at the station are connected, you see. (Programme interviewee)

The interviewee describes that demo events focus on a whole farm approach, with an experimental character. He would prefer though a mixture of experimental and exemplary approaches, in order to meet better the objectives of the demo events.

> R: I fulfil my profession, it means that I implement experiments and it's thanks to these open doors that on the day when I give out the test results. the market gardeners will tell me that it doesn't necessarily fulfil their expectations. We can take an example of a crop variety that will give the best tomato yield, they will taste it during this open door, and they will tell me that no, the taste is not sufficiently good to keep it, so I change my orientations towards a variety that will be less good in terms of yield, but tastier and I will know how to prevent such things from happening, so yeah... (Programme interviewee)

Overall the Programme interviewee describes the process followed as mainly top down. Nevertheless, he refers to practices and attempts to take into consideration the farmers' view in selecting topics and in organising demonstration activities. At the end, of the day, however, which experiments/trials will be selected, is a decision taken mainly by the farm manager.

> Q: As an organisation, how would you describe your general approach to providing demonstration activities? R: Yeah, so, it's rather top down, we are supposed to have some advantage over them, so the things that we show here, we didn't necessarily... get feedback from them….so yeah, there's still dialogue, but yeah, it's rather top down. (Programme interviewee)
>
> Q: Are host farmers involved in the development of the individual demonstration activities? R: Indirectly, yeah… I'm influenced a lot by their choices, I'm not alone in my…
>
> Q: Are host farmers involved in the development of the overall demonstration programme? R: Yes, yes, yes. In which way, well... We choose priority topics, so yeah... the producers tell us about their priority trial topics, eh. Then, the means of living up to their request, we are completely free, but the priority topics and priority problems, it's them and we follow them on this. (Programme interviewee)
>
> Q: How are demonstration topics selected? R: Well, I choose themes that... novelties that will... that will make more people come... more market gardeners, and when they're here, I transfer the message that we have to transfer. But I choose themes that... yeah, that will attract market gardeners. (Programme interviewee)
>
> Q: How do you identify/select relevant topics that will interest farmers? (Prompt: do you involve hosts and/or participants in the selection?) R: I... indirectly yeah, but I invite them non directly, the market gardeners, but I know that, for example, right now, they come back to the themes, or questions, that we often have producers, everything that concerns novelties about biodegradable materials. So we've got questions about this, quite often, once per week we have a producer from Britany who calls us to ask whether there are any novelties. So knowing that I've been testing novelties for 2-3 years now, to see which are most adapted to our sector, our market, and here I chose is as a theme… and I try... try to pinpoint themes that... that they will like, in order for them to come. (Programme interviewee)

5. Follow-up material and assessment processes

The programme shares follow-up material as a means to keep engaging with local/regional farmers.

> Q: Are follow-up materials made available to participants after demos? R: YES, I only distribute the four pages that transformed in 8 pages this year, so it's just... so it's 8 pages where we find themes of the ongoing year, synthetic results from the previous year... it's a summary of what we do orally. But we invite them, this open door is means to see them and make them want to call us afterwards or come back to see us, so the objective is this, really, so in the dialogue, since we know that they're diversified, there are no two same market gardeners, they're all different in their practices, their commercialization circuits, and so I could never adapt my discourse to market gardeners, they're all different and so we invite them all the time to this open door, to come back to us, that's the message we try to get across. (Programme interviewee)

The Programme interviewee noted that there is not a structured procedure in place to request feedback from participants on the demonstration activities; however, he intends to start assessing demos in the near future. In the same line, there seems to be an indirect evaluation of the overall demo programme, as well as if participants have taken any action on the lessons of the demonstrations. Again, the interviewee underlines the need to have a more structured approach in assessing those dimensions of the demo events. Finally, he seems to see out of the scope of the activities, and/or perhaps beyond his power to assess the influence these demo had on non-participants. Nevertheless, he tries to assess this issue through recurrent attendees and informal exchange/discussion with them.

> Q: Do you request feedback from demo participants? R: No, I didn't do it before, but I'll do it this year. Quick satisfaction, you see. (Programme interviewee)

> Q: Do you evaluate the demonstration activities overall? R: Yes, If my objective is for the station to be regional, then I evaluate the success of my open door with the participation of market gardeners from other departments than 56, and so last year we had more producers from 35 and 29 than from 56 so I estimate that my regional reach... somehow when we travel for 2,5h... it means that we knew how to sell it, and if people additionally come back the year after... yeah, it's like this that I evaluate. (Programme interviewee)

> Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations? R: With some yes, for two reasons: some people come for the meal and dialogue, they're also happy to have seen... but in fact they mostly come to talk with others. Others have come for a precise topic and to have results, and we know this, they don't leave before they have minutes of a given trial. And then there are others who express themselves less... so we consider that... it's for this reason that we want to implement a system of assessment. (Programme interviewee)

> Q: Do you try to assess the extent of influence (diffusion) from your demonstration programme(s) to non-participants (those who have not attended demo events)? R: The only feedback I had was from people who did not come, but I think that we can't get more than that, it's the disappointment because they couldn't be there, so clearly, we have an elected member for example, in the domain of vegs, Jean-Luc Moulin, who'd come with a group last year, of market gardeners from Saint Malo, he has come with 4 or 5 market gardeners, and then afterwards he told me "I am disappointed, the 4 people who have come, talked about it to loads of people" and he told me "I should've brought more people with me, it would be interesting to many people" so this year normally he comes back with a bigger group.... but those who don't come because they don't feel like it, I imagine that they don't tell me that, I don't see those people. (Programme interviewee)

T2: Farm (event) level

1. The farm, the topic and the practices demonstrated

The demonstration event took place on the 18th of September in Kerplouz Auray. It is reminded that the event was on an experimental farm/station, so no host farmer was related to the event.

Topics: The following topics were presented during the event (background info):

- Tomatoes and beans mix cropping to avoid aphids and mites damage
- Organic fertilisation by alfalfa
- Movable greenhouse
- New varieties: tomatoes, pepper, zucchini
- Connected weather station Sencrop
- Experimentation to reduce pesticides
- Organic material: string, mulching…
- Equipment demo Toutilo
- Robot demo

2. Group size and characteristics

Overall some 100 participants participated in the event. Participants were ranging from 20-40 in different groups and time slots. The observer followed a group of 36 people composed by mainly farmers but also students, advisers and equipment sellers. Six of them filled a questionnaire before and after the event (observation tool + pre and post event participants).

Interviewed participants did not pay any attendance fee and were not compensated for their participation (post event participants).

Two out of three interviewed participants, felt that the group size was not the ideal one (post event participants). While participants were well known to demonstrators they did not seem to know very well each other. Thus, lunch time, as a more informal set-up, apparently offered opportunities for free discussion and exchanges among participants.

Travel time to reach the demo farm ranged between 60 and 90 minutes, with an average travel time of 75 minutes. Participants assessed that it took them an average effort to attend the event.

3. Size and design

There were three different time slots predefined in which participants would by guided through a tour on the experimental vegetable farm. Different stops were planned in that guided tour, on the abovementioned topics, not strongly linked to each other but ranging from organic agriculture to the use of robots. The group was guided by an adviser and the farm manager who was acting also as a facilitator.

More specifically, during the farm tour demonstrators were presenting the results of single trials (with no comparative layout). Each topic and experimentation was linked with environmental sustainability (pesticides reduction, fertiliser spreading, etc.).

Furthermore, there were demonstrators focusing on equipment, machines and infrastructure that could be of interest to vegetable growers. Participants could see, touch and discuss on these new tools/equipment but could not use or test them (there were no hands-on activities scheduled).

For each topic presented, the demonstrator asked if participants knew the technics followed or equipment showcased. Moreover, the economics of every experimentation, were analysed and presented to the farmers-participants. Each presentation stop/topic was followed by a formal Q&A session. Interviewed participants felt that there were opportunities offered to get actively involved in the

event mainly by sharing their own knowledge (i.e. their own farm situation) and less by sharing their own point of view. Still, all of them noted that the demonstrators encouraged participants to ask questions and engage into discussions (post event participants). A less formal discussion was held among participants in smaller groups during lunch.

The farm manager felt that there was a whole farm approach throughout the event (post event demonstrator1) and while, as noted earlier, the observer did not trace any strong links between topics, he also indicated a clear connection of all topics to sustainable agriculture practices and management. A mixed feeling on that was also shared by interviewed participants.

Demonstrators commented that the demo farm was appropriate and well suited for the event (post event demonstrators) a view equally shared by all interviewed participants (post event participants). The structure of the event gave participants opportunities to get involved in the process, mainly though through asking questions as well with presenting their own on farm situation and point of view (post event demonstrators).

Finally, dissemination material was shared with participants (no details on which topics/equipment, who was responsible for preparing these, etc.). No reference was made to follow-up activities, which is probably connected to the fact that this is a yearly planned event (still follow-up activities could be of interest in such cases).

> But we invite them, this open door is means to see them and make them want to call us afterwards or come back to see us, so the objective is this, really, so in the dialogue, since we know that they're diversified, there are no two same market gardeners, they're all different in their practices, their commercialization circuits, and so I could never adapt my discourse to market gardeners, they're all different and so we invite them all the time to this open door, to come back to us, that's the message we try to get across (Programme interviewee)

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

Funding came from a mixture of sources; the principle funder was the Regional Council, with additional funding from the French Ministry of Agriculture and other national financing programmes (Ecophyto, CASDAR). There were also some private benefactors. Host farmers were not paid.

> [And so these projects are funded how?] There's a [monetary] envelope of the Regional Council who was our principal financer. There's also an envelope from FranceAgriMer [department of the French Ministry of Agriculture]. There's also an envelope of the Ecophyto programme [programme of the French Ministry of Agriculture aiming at reducing the use of phytosanitary products], so it comes from the APCA, through the APCA. And there's also CASDAR [French financing programme]. [And some private funds also…] Some private funds, yeah… (Programme interviewee)

2. Motivations for host farmers

According to the Programme interviewee, the main motivator for host farmers was the opportunity to be involved with innovations in agriculture, such as robotics.

> Here we can take a concrete example of robotics, […] so the objective of our open doors is to have robotics demos... we measure the temperature, see how they imagine the future with innovations like this, with new equipment (Programme interviewee)

> It is a certain recognition of his peers, and networks of agricultural development (Programme interviewee)

3. Motivations for participants

Similarly, participating farmers were motivated by the opportunity to see demos of new equipment. The Programme interviewee also commented on the social aspect of the day; by sharing lunch, a feeling of conviviality is created amongst participants.

> Hmm, the demos of equipment […] And another thing also, I suppose... so we offer a meal on that day for example... with vegs grown at the station and so varieties that are being tested by the station, and this meal brings about the feeling of conviviality, and I think that people come back for this too (Programme interviewee)

Participants' main reasons to attend the demonstration were: to improve my work; learn new technics; results of experiments.

4. Target audience

The programme mainly targeted market gardeners from Brittany who sell through short supply chains. However they did extend their audience to farms further across the western region of France, and to long supply chain producers on certain occasions.

> So, market gardener, short circuit, diverse market gardeners from Brittany, or even the Big West [informal name for the western regions of France], we spread a little in the Big West. So the market gardeners who sell exclusively through short circuits, direct sale, so we are less focused on... on long circuits, but we still work for long circuit producers anyway, on certain topics. [Convert the organic?] Convert the organic farmers, both (Programme interviewee)

5. Advertising and recruitment

The programme sends invitations via letter, text or email to all the market gardeners that they have contact details for. They also put adverts in the press to reach a wider audience. The Programme interviewee considered texting to be the most efficient form of communication.

> Yes, they're always targeted. All market gardeners whom we can reach, so all market gardeners of the Big West. [And how are they invited?] There's plenty of stuff. So we have: the email, letter, text. And then there's press so it's vaster, but individually it's going to be that and what's the most efficient in our opinion is texting (Programme interviewee)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Programme interviewee described the nature of interaction as Mostly top-down. The programme leaders had a decisive role and did not necessarily receive feedback on the demos from the farmers.

> Yeah, so, it's rather top down, we are supposed to have some advantage over them, so the things that we show here, we didn't necessarily... get feedback from them. (Programme interviewee)

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

Host farmers made suggestions to the programme regarding their priority topics, but the programme decided in what way they will cover these topics in the demos.

> Yes, yes, yes. In which way, well... We choose priority topics, so yeah... the producers tell us about their priority trial topics, eh. Then, the means of living up to their request, we are completely free, but the priority topics and priority problems, it's them and we follow them on this. (Programme interviewee)

There was no official process for involving host farmers in individual demonstrations, however they were indirectly involved as their behaviour and choices influenced the Programme interviewee.

> Indirectly, yeah… I'm influenced a lot by their choices. (Programme interviewee)

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> Yes, yes, yes. In which way, well... We choose priority topics, so yeah... the producers tell us about their priority trial topics, eh. Then, the means of living up to their request, we are completely free, but the priority topics and priority problems, it's them and we follow them on this. (Programme interviewee)

There was no official process for involving host farmers in individual demonstrations, however they were indirectly involved as their behaviour and choices influenced the Programme interviewee.

> Indirectly, yeah… I'm influenced a lot by their choices. (Programme interviewee)

4. Focus

The Programme interviewee described the network as 'whole farm', as opposed to 'single focus' in its approach.

5. Design

The Programme interviewee described the network as 'experimental', but expressed a preference for 'a mixture' between experimental and exemplary because with experimental there is a risk of showing something that is not relevant to the producers, or will not fulfil their expectations.

> Well me… I suppose… I fulfil my profession, it means that I implement experiments and it's thanks to these open door that on the day when I give out the test results… the market gardeners will tell me that… that it doesn't necessarily fulfil their expectations (Programme interviewee)

6. Ideal group size

The Programme interviewee considered 20-30 people to be the optimum group size, flagging up several issues with larger group sizes, such as a struggle to be heard or to appropriately adapt to the audience.

> That's a good question, because last year we had around 100 participants… so the first group I took was 80ppl and it was really hard with 80, one doesn't express oneself that much as compared to when we're not many people, because I had to speak louder because of the hubbub so I think that some… there were annex groups that have formed, it was more complicated, I think that it should be 20-30 per group. So for the next open door, we multiply the number of departures [for a visit], we are equipped in megaphones also that we didn't… didn't necessarily have… we didn't need it before. And so 20 to 30 in order to leave space for dialogue. And then see who we have in front of us also. So last year I couldn't adapt to my audience for this reason as well. (Programme interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The Programme interviewee felt it was preferable to be outside for the entire day, although in the colder months they make use of indoor spaces as well.

> Well, for me they come to the station not to be in a room, but to be outside, so I assume that we should be 100% outside. Sessions already took place, but later in the season, in October-November, where we can be in a room. (Programme interviewee)

The Programme interviewee cited Participants ask questions & talk openly as the most important tool for engaging people on the day, and seemed to suggest that while experts are important, it is important that farmers are able to talk about what they are seeing.

2. Taking into account variation in learning

The Programme interviewee felt there was an effort to take into account variations in learning, by presenting in an accessible manner and encouraging dialogue with the participants. When students of farm management came to the farm, a higher level of prior knowledge was assumed and demos were adapted accordingly. There was no mention of specific learning styles being considered.

> I always try to pronounce myself in an accessible manner, so I always start at the problematic, so there's dialogue anyway, the producers can ask questions if ever... but my principle is that I've got market gardeners in front of me... And then, the second profile that we still have, we didn't talk about it yet, it's the BPREA [studies to become a person in charge of an agricultural farm], so we have around 40 interns trained each year, who come to the station, so they're present at open doors, so I don't adapt myself to them, because I know that they've had a year of training and we go further when we visit the station. (Programme interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

The programme followed up participants within the scope of the 4-5 year projects.

> Yes, since we're on long-term projects each time, 4-5yrs, there's obviously follow-up. (Programme interviewee)

In terms of follow-up material, the programme produced a printed summary of the year, both results from experiments and the content of demo days.

> The four pages that transformed in 8pg this year, so it's just... so it's 8pg where we find themes of the ongoing year, synthetic results from the previous year... it's a summary of what we do orally. (Programme interviewee)

2. Assessing impact

The Programme interviewee expressed a desire to implement a system of assessing impact of the demonstrations days, as there were clearly a variety of responses amongst participants.

> With some yes, for two reasons: some people come for the meal and dialogue, they're also happy to have seen... but in fact they mostly come to talk with others. Others have come for a precise topic and to have results, and we know this, they don't leave before they have minutes of a given trial. And then there are others who express themselves less... so we consider that... it's for this reason that we want to implement a system of assessment. (Programme interviewee)

The programme had no formal procedure for assessing the impact amongst the wider farming community, although the Programme interviewee felt there was space for this.

> The only feedback I had had was from people who did not come, but I think that we can't get more than that, [...] And then I've got market gardeners who excuse themselves for not being

there, so it always goes in this direction, the disappointment because one couldn't be there or an excuse, because of too much work etc... But those who don't come because they don't feel like it, I imagine that they don't tell me that, I don't see those people. (Programme interviewee)

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of about 36 participants and 6 of them filled in the pre and post survey.

	n° survey participants	Vegetable farmer	Organic vegetable farmer
occupations	*6*	4	2
working area	*6*		
local area	4	2	2
not local area	2	2	
gender	*6*		
male	5	3	2
female	1	1	
age	*6*		
18-30			
31-40	3	1	2
41-50	1	1	
51-60	2	2	
60+			

T1: Learning processes

1. Communication initiation by participants

In the whole group almost 30% of the farmers explained what they did on their own farms. The participants were never put into smaller groups on purpose. There was some time for questions after each topic there was a moment to ask questions. After each topic, there were about 5 to 10 questions. There were a few participants trying to formulate their own points of view regarding the topic.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that **I could share my own knowledge as relevant information**.	0	0	6/6	0	0
I asked at least one question during the demonstration .	6/6 yes				
I shared my own point of view at least once during the demonstration.	6/6 yes				
I **felt encouraged to ask questions** during the demonstration.	0	2/6	4/6	0	0
When there were any discussions, **I felt comfortable sharing my opinion**.	0	0	6/6	0	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	1/2	1/2	0
I **encouraged the participants to formulate their own point of view** during the demonstration.	0	1/2	0	1/2	0
I **encouraged the participants to formulate questions** during the demonstration.	0	0	1/2	1/2	0

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

There was not really a planned multisensory experience initiated for participants, nor was there a planned hands-on experience. Participants couldn't test the new equipment but they could touch it.

Discussion opportunities and negotiating conflicting points of view

The demonstrator was also the facilitator. Open discussions between a few participants were stimulated, mostly during lunch.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, **there were interesting discussions** during the demonstration.	0	0	4/6	2/6	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) **tried to reach a consensus** between them.	0	0	2/2	0	0

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

3. Engagement during the event

Participants act more distant then open. They didn't know each other, some of them came in a small group but during lunch, there were unstructured discussions and exchanges.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I **felt actively involved** during the whole demonstration process.	0	0	4/6	2/6	0
I felt like **the demonstration increased my ability to rely on myself** as a farmer.	0	0	4/4	0	0
I could **relate well to other participants** (because they have an agricultural background similar to mine).	0	0	2/4	2/4	0
A lot of the **other participants** are **part of the same farmer network** as me.	0	2/4	0	2/4	0
I felt like I could **trust the knowledge of (most of) the other participants**.	0	2/6	0	4/6	0
The demonstration **felt like an informal activity** to me.	0	0	2/2	0	0
I thought **the host farm was comparable enough to my own farm**.	2/6	4/6	0	0	0
I had the feeling the **demonstrator was like one of us.**	2/6	4/6	0	0	0
I had the feeling **I could trust the demonstrators knowledge**.	0	2/6	2/6	2/6	0
I **got along very well with the demonstrator.**	0	0	2/6	4/6	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**?	only for questions				
Most of the **participants were well known to me**.	0	0	2/2	0	0
A lot of the participants **are part of the same network as me**.	0	1/2	1/2	0	0
The demonstration felt like **an informal activity** to me.	0	0	1/1	0	0
I think the **host farm** was **well suited** for this demo.	0	0	0	2/2	0
I **got along well** with the participants.	0	0	1/2	1/2	0

T2: Learning outcomes

Explained knowledge was sufficiently understandable but it was not a training session. It had the aim to present results of projects.

	participant answers				
What would you **ideally like to learn** today?	robots, new greenhouse and new equipment; learn new technics; exchanges of knowledge				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	0	6/6	0	0
The **demonstration exceeded my expectations.**	0	4/4	0	0	0
I felt surprised at some point(s) during the demonstration.	0	2/6	4/6	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	2/6	4/6	0	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	0	6/6	0	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	4/6	2/6	0
I **reflected on my own point of view** at some point during the demonstration.	0	0	2/6	4/6	0
I learnt about **the principles underlying a practice**.	0	0	4/4	0	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	0	0	2/2	0	0
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	0	2/2	0	0

	demonstrator answers				
what do you **intend for the particpants to learn** today?	Sustainable technics and best practices; equipment utility and interest.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	2/2	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	0	2/2	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	1/2	1/2	0	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	2/2	0	0
I have the feeling **I learned something new** during this demo (from participants, discussion...).	0	1/2	1/2	0	0
I **reflected on my own point of view** myself at some point during the demo.	0	0	1/2	1/2	0
I encouraged participants **to reflect on their own point of view** during this demo.	0	0	1/2	1/2	0
I encouraged participants **to reflect on their own situation** sometime during this demo.	0	0	0	2/2	0
I encouraged participants to reflect **on how we learn something new** on demonstrations.	1/2	0	1/2	0	0
I encouraged participants **to reflect on why we are trying to learn** about the topic of this demonstration	1/2	0	1/2	0	0

T3: Overall comments on the effectiveness of the event

Participants:

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

Participants didn't mention any specific effective characteristics of the demo or suggestion on how to improve the demo.

Demonstrators:

Demonstrators mentioned as effective characteristics of the demo: the quality of demonstration and the scientific protocol.

As suggestions for improvement they mentioned: 'solution to capture farmers needs' and 'improve interactive communication.'

6. Annex: Case study poster July 2018

FarmDemo

French CASE STUDY : Vegetable experimental farm

Mathieu MERLHE, AC3A

The vegetable experimental farm organises every year an open demo activity for vegetable grower. The first aim is to deliver to the producers the results of trials implemented: organic farming, new equipment and robot tests, technic to reduce pesticides... The second objective is to federate independent producers in Brittany who are isolate. This demo is a good moment to discuss, to share knowledge and create connection between the producers. The target participants are the market gardeners who sell mostly through short circuits and direct sale.

Objectives

- Deliver to the producers the results of all the trials implemented on the experimental farm
- Federate independent producers in Brittany who are isolate
- Share knowledge and create connection between the producers

Farmer Motivations

- Participate to a showcase equipment demos, novelties and innovation
- Have the experimental projects main results
- Exchange between them, with the adviser, partners and private companies and express their needs

Topic selection

- A steering committee composed by the experimental farm manager, other employees of the regional Chamber of agriculture and about 12 vegetable producers decide to implement research projects on main stakes

Audience & participation

- More than 200 participants to the event.
- The main target visitors: market gardeners who sell mostly through short circuits and direct sale
- Student, advisers, private companies, local authority are also invited

Demonstration set-up

- Participants are invited to 3 moments to visit the farm
- A group of visitors (between 40 to 60 participants) is leading by the experimental farm manager or an adviser
- All the experimental projects are presented during a succession of short workshops with several demonstrators
- A lunch is offer to participants

Evaluation peer-to-peer learning environment:

- After each presentation the participants can ask questions and
- During the lunch they exchange between them and with the advisers, farm manager...
- The evaluation if more informal

- The main moment to exchange during the year on vegetable between farmers, adviser, project managers
- A lot of topics and experimentation result to present: tomatoes and beans mix cropping, movable greenhouse, new varieties test, connected weather station, experimentation to reduce pesticides, organic material, equipment and robot demo

PLAID

AGRIDEMO

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France Case Study 3

1. Background

Programme

This group of to 12 dairy farmers localized in the north east of Britany close to Fougères meet regularly in an Agroecological group coordinates by the Regional Chamber of Agriculture. The principal objective is to work on autonomy in proteins with an objective to improve the revenue without losing on the quality of life, meaning working time and painfulness. This group exchanges on technical solutions to turn their conventional dairy farming system into a grassland and/or organic dairy system. They meet 6-7 times per year in different event most of the time on a farm of the group: exchanges of the farm system, training session on technical topics, visit of experimental farm and travel in other region or country. In Britany they are nearly 50 "Agroecological" groups financed by regional and national program with the same organisation but on different topics: pesticide, veterinary med, fuel…

Funding and Governance

At the beginning the Chamber of agriculture organised a meeting on soils with the farmers in the local area. Finally there were two topics on which they wanted to work, it was either soil or self-sufficiency in proteins. The group began with this meeting. Then they subscribe to the national program and were labelled as an agroecological group with the project to improve their dairy farms self-sufficiency in protein. The group and the Chamber of agriculture had 75 000 € for 3 years to reach their goal. The dairy farmers suggest the ideas, orientate the works to do on their farm and with the group. So their role is to give directions, make decisions and experiment technical solutions on their farms. Farmers also suggest the form of the meeting, the content, and then organise the agenda… Moreover, they communicate a lot on the results of their projects: they host students, groups of breeders, journalists…

The facilitator of the Chamber of agriculture advices the farmers and follow the experiments they try to improve the self-sufficiency in proteins. She also organises the meeting, finds the resources according to the questions the farmers are being asked. She also facilitates the meeting with technical experts and organises the communication: demonstration, leaflet, article… She also manages the project budget.

Actors and networks

The main actors for the group the demo activity are the dairy farmers and the facilitator. They work with other dairy groups in Britany, ask to experts to coma and train them to improve their knowledge and find solutions on several topics: economic, grazing, feed, vetenary…

How it works

During summer the farmers decide of an annual program of 5-6 meeting. They find the topics, choose the expert and the farm to visit. Sometimes there is no expert but only results exchanges and discussion between them. The coordinator help them to choose the most pertinent subject, organise the meeting, find the experts and manage the program. The coordinator collect data, analyses and present the farmer's results.

Event Farm and location

The farm which support this case study is a conventional dairy farms: 1 young farmer, 50ha (32 ha grassland, 11 ha maize, 7ha barley), 390 000 l of milk with 55 cows and 25 heifers. He tries to produce milk with the maximum of grazing. The farm is located at Landéan.
https://www.google.fr/maps?q=land%C3%A9an&um=1&ie=UTF-8&sa=X&ved=0ahUKEwjs46yq7-fdAhURVhoKHeIpCB8Q_AUICigB

The demo was on the 14th of June, due to weather conditions only 5 farmers attend to the meeting. The meeting set up on a farm of the group. During the coffee break farmers exchanged on the grazing management during spring. Each farmer present what he did, his problem and his solution to deal with

heifer parasitism. Then the expert present parasitism cycle, solution to manage it without treatment. During the visit the farmer present his heifer raising.

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 interviews with 1 Programme/Network member and one Farm level interviewee. 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. This data is sourced from 4 pre and post demonstration surveys for participants, 1 pre and post survey for the demonstrator 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.

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 and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the French case studies took place on the 9th of November, 2018.

3. Structural characteristics

T1: Programme/network level

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

Agriculture ecologiquement performante" (AEP) programme / project / network

In Brittany they are nearly 50 “Agroecological” groups coordinated by the Regional Chamber of Agriculture on several different topics such as pesticide, veterinary med, fuel (Poster). This case study has to do with one of those groups, which consists of 12 dairy farmers, in the north east of Brittany close to Fougères. The farmers’ group meets regularly (6-7 times per year) in different events, most of the times on a farm of the group. There is an intense knowledge exchange on the farm system, some training sessions on technical topics, visits of experimental farm and travel in other region or country. The programme is coordinated by a facilitator of the Chamber of Agriculture. More specifically the programme "Agriculture ecologiquement performante" (AEP) is run by the Regional Council of the Chamber of agriculture. It is an entirely bottom-up project as all crucial decisions are made at the thematic meetings of the farmers’ group itself. The farmers’ group works also with other dairy groups in Brittany. The AEP network/programme is connected to other networks, projects and/or organisation, while there are efforts of the group to connect with other farmers’ groups or networks in the region such as other chamber of agriculture groups/programmes or employees, the ERN group at Vitre, a breeder from CEDAPA network, AgriPass etc. So there are some visits and exchanges of the group on/with other farms/groups, networks or institutions mainly in Brittany but also abroad. The group is open to new entries; any interested farmer can participate or attend for a little time or freely exit. Some people may attend as far as they interested for a specific topic. The facilitator or the breeder themselves invite relative persons to join. Some of the farmers in the group belong or have contacts with other networks.

> Yes so there's the AEP network, (…) so there's a group at St Aubin that isn't too far from here that we could solicit, it's true that we didn't do it much yet/ Then there are groups of the Chambers of Agri, colleagues that we know well, we went to visit an ERN group of FG at Vitre for example, and then we are connected to other networks, for example we went to see... a breeder from CEDAPA recently, in the department 22. And then we went to see Pierre-Antoine Leroux... [indistinct] in Finistere, so Chamber of Agri too. And then in the very beginning on meslin, they were... in relation with the network [indistinct] where we went to see... then we've organised events on the topic, same with experimental farms, all the Chamber of Agri... [indistinct]... we went to see [indistinct], so they were also farms... in Normandy we also were. So there's this, then there are breeders who... they participate also sometimes in other programs, individually... like Jean-Philippe Guy, networks of Sophie Tira (…). So it's true that it's mostly in Britany, and then there's the trip in Ireland as well, so I don't know if. (…) One of the objectives of this project is also to connect institutions and so on. But you see…we have contacts to breeders for the next time. (Programme interviewee)

> Yes so they got an AEP project, so it was a project of the Regional Council, they got founding for three years, so it's for training of groups like the dairy group, classic groups but also experimental, for individual domains, and for other forms, for example here we will travel... for example other forms of openness, in order to progress. So there's this project that is coming to an end, three years ago it was possible to get an extension for the programme, we had two prolongations. (Programme interviewee)

> It’s true that in projects "Agriculture ecologiquement performante" (AEP) there's a committee and it's true that practically there's no... There’s no really... there's no committee that meets apart from thematic meetings where we... it's a group of breeders who decides, there's no external person who... participates with their suggestions. It's really only breeders. Yes and so

there's no person in charge of the group either, there's a... we can say... there are breeders who are leaders a little, but there's a few of them as well.... there are core people in the group on whom we can rely, in the end me in any case I can rely on them in order to schedule dates and stuff like this. (Programme interviewee)

The group began with this meeting. Then they subscribe to the national program and were labelled as an agroecological group with the project to improve their dairy farms self-sufficiency in protein. The group and the Chamber of agriculture had 75 000 € for three years to reach their goal (Background info)

Yes we try... within the framework of Bassin Versant we are somewhat obliged to do it, we look at mobilisation on the territory and... So it's true, I think that there was a... there were farmers who mobilised themselves who wished to... former groups, the youth too, who's seen the group function and felt like joining one, and that's what they did. So the group wasn't created just for this, but it contributed to it, because there were questions about it at the beginning so it favoured the creation of another group and then individual changes. (Programme interviewee)

I didn't say... we invite... sometime we invite more too... we try to expand because... because sometimes there are people who leave the group, people who arrive and they are... they are breeders sometimes in the group that like to transmit. So we try to open to other breeders as well, particularly via flash techniques when we do... at the Bassin Versant for example so we try to open… it will be breeders who ask themselves questions about their farming system, production system, who want to evolve, who search to be accompanied, search for ideas. So it's either me who invited them or breeders who invite them, it's the best when it's them anyhow. (Programme interviewee)

It's a lot when it's themselves, when they manage to invite someone that they know, through their networks. Because, in this way, we have two in a group... Yeah, it works better like this, but then I also invite, but it works not so well. (Programme interviewee)

Yeah, that is to say that the visits... when it's visits... of the farm... visits... of other farms on a different sector yeah. It's easy to implement [indistinct]. There are certain who don't necessarily want to be a part of the group on the long term. (Programme interviewee)

CETA

The specific farm where the event occurred is connected to other demo farms and/or other knowledge exchange organisations like CETA of Louvigné region, independently from the AEP programme. Many different kind of training initiatives occur in the frame of CETA such as self-sufficiency in proteins, revenue improvement, genetics, CAP, trimming, essential oils, forage crops, grasslands, grazing, everything that concerns a farm. Some training visits are included under these initiatives, which are not connected to the AEP's groups meeting. Some meetings occurs each year in the frame of the CETA departmental network. The farm's performance, accountings and average numbers are extensively discussed on the scale of the department (Farmer).

Yes, with the CETA. Q: And CETA, how many farms are in this group?
R: Hmmm, I'm in the CETA of Louvigné, we are 8 or 9. Q: OK and how does a CETA work? R: It's the same, but CETA is independent. And also it's both VIVEA and farmers that pay for training. Q: Which training did you do with CETA? R: I'm with CETA since the very beginning, I've done trainings such as: become self-sufficient in proteins, how to improve my revenue, genetics, CAP - how it works, trimming, essential oils, forage crops, grasslands, grazing, everything that concerns a farm, the work, penalties. (Farmer).

> Q: Do you discuss about it sometimes? I don't know, for example follow-up on costs of milk production? R: Yeah, I even see at CETA, we really... the first meetings in a year we take the figures, accounting and we put it on the table, and then thanks to the CETA departmental network we can see average numbers on the scale of the department. So then we can compare ourselves with others, it's then that we see... or what's good or not. (Farmer)

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

The main actors engaged in this group's demo activities are the dairy farmers and the facilitator. They work with other dairy groups in Britany, invite experts to come and train them to improve their knowledge and find solutions on several topics: economic, grazing, feed, veterinary etc.

The Initiators

The initiator was an employee of the Chamber of the agriculture, some years ago. After a first meeting at the watershed of Haut Couesnon, the Chamber of agriculture organised a new meeting with the farmers in the local area in order to select a topic to work on as a group. The farmers concluded to two different topics on which they wanted to work, (soil or self-sufficiency in proteins). The group began with this meeting, and thereafter they subscribed to the national program and were labelled as an agroecological group with the project to improve their dairy farms self-sufficiency in protein.

> The objectives were decided at the very beginning, the very beginning, so it wasn't me, it was my colleague who initiated this, I think after the first meeting... at the watershed of Haut Couesnon, she's in charge of mobilisation so she'd invited them. A meeting on soils took place at the beginning, and then finally there were two topics on which they wanted to work, it was either soil or self-sufficiency in proteins, and they ended up voting, they chose the latter, because there are many breeders in this area. So this is how it started… Q: It was decided by the breeders? R: It was decided by the breeders, yeah. And then every time it's discussed, the topics, every time the breeders... let's say at least once a year (Programme interviewee).

Facilitator

As already mentioned the whole process is coordinated/ managed by a facilitator of the Chamber of Agriculture. The facilitator advises farmers and follow the experiments they implement on their farms. The facilitator also organises the group's meetings and finds the resources according to the farmer's needs. S/he also facilitates the meetings with technical experts and organises the communication part such as demonstrations, leaflets, articles etc. The coordinator also collects data, analyse and present the farmer's results. Finally she is in charge of the project's budget management.

The breeders of the group are the initiators and the leaders in relation to the topics/themes selected as well as the content and the form of the demos. They also choose the possible experts they need at their meetings and the farm that they are going to visit etc. The facilitator after consultation with colleagues from the chamber of agriculture sometime mediates to the group by proposing some suitable/reference farms out of the group concerning a topic the group have decided. All crucial decisions are taken by the dairy farmers who belong to the group through their meetings. The coordinator also helps the farmers to choose the most pertinent subject or makes some propositions on emerged topics/issues. They usually plan and organise the agenda of the group's actions. The facilitator simply facilitates and schedules the dates/time of these meetings and coordinate the processes and the activities, based on farmers' decisions. Finally the facilitator during the demo meetings keeps some kind of discipline, to the whole processes and offers a minimum framework of "formality" to ensure a successful event. Feedback and evaluation processes are totally informal in the framework of the meetings. The facilitator asks

some feedback through open/informal discussions but only on the content of the meeting and not on the form of it. They do not evaluate the meeting formally i.e. through surveys.

> It's really only breeders. Yes and so there's no person in charge of the group either, there's a... we can say... there are breeders who are leaders a little, but there's a few of them as well.... there are core people in the group on whom we can rely, in the end me in any case I can rely on them in order to schedule dates and stuff like this. (Programme interviewee + Background info)
>
> Oftentimes, as I said, we refer to the yearly planning, the facilitators let us know about upcoming meetings on that day at this hour, either by email or post. There's a sort of an invitation containing the theme, subjects that will be talked about, the place and the time. Then you answer: participating or not, and this is how it's done. (Farmer)
>
> ...In the group management? It's them who will suggest... who will initiate, suggest, who will... the ideas... who will orientate a little the works of the group, so their role is to give directions, make decisions. And organise too, because sometimes they will suggest the form, the content, and then organise the agenda... very practical issues, in order to book the site, things like this...And your role in the organisation of the talks, visits, topics, the group life?
> My role is to facilitate... there's facilitation, organisation of the day... trials, it's finding the resources according to the questions that are being asked. Organise as well everything with regard to communication. All the communications as well because we have open doors, things like this, demonstrations. So I accompany them daily, about all sort of things, it can also be an individual person sometimes. But then oftentimes they're rather... highly competent, often I find experts on specific topics too. (Programme interviewee)
>
> Oftentimes we start with half an hour of talking about agriculture, we discuss about everything and nothing, during when people still arrive at the meeting, and then we take a coffee. Then the facilitator tries to bring a bit of an order because otherwise it becomes the... So then we often start with the news, what's happening more or less, around us, we always come back to the question of milk price or topics that irritate us, like the CAP, we don't know why... Then we come back to the topic, and then everyone has time to speak out, to know what's happening on their farm. So this is the morning, it's in a room, and the afternoon is often a site visit on a farm that hosts us. (Farmer)
>
> Q: So to keep some discipline, what's the best in your opinion? R: Often it's the facilitator who puts everyone on track a little. Q: And it's necessary? R: Well yeah, because if there was no facilitator... let's assume that there was no facilitator but... it serves no purpose to do training on a topic, it's better to organise a meal, a meal in a style that we talk a bit about everything and nothing. (Farmer)
>
> During summer the farmers decide of an annual program of 5-6 meeting. They find the topics, choose the expert and the farm to visit. Sometimes there is no expert but only results exchanges and discussion between them. The coordinator help them to choose the most pertinent subject, organise the meeting, find the experts and manage the program. The coordinator collect data, analyses and present the farmer's results. (Background info)

The host farmers – members of the dairy group

As already mentioned all crucial decisions are taken by the dairy farmers who belong to the group during their meetings. So, the host farmers are always involved in the development of the individual demonstration activities as members of the groups. More specifically, the dairy farmers suggest the ideas/ directions and orientate the work to do both on their farm and with the group.

The breeders of the group are the leaders in relation to the topics/themes selection, the content and the form of the demos. However it is important to mention that these topics are selected from a predefined-general frame of the training organisation, led by the Chamber of Agriculture. They also choose the possible experts they need at their meetings and the farms that they are going to visit etc. There is a yearly planning meeting of the group, usually in summer, where farmers decide on the annual program. In those meetings they plan and organise together the agenda of the group's training actions. The farmers usually decide on 5-7 "demo-meetings" per year in the group's farms, during which they have extensive discussions and knowledge exchange, along with an on farm walk/site visit. Finally the group's farmers are experimenting on several technical solutions on their farms and they communicate the results of their projects. For those farmers who are experimenting with some trials, the farmers-attendees have the chance to walk around, watch and discuss. Each host farmer is always the presenter/demonstrator of this farm. The host farmers sometimes are involved in the development of the overall demonstration programme through the evaluation surveys and feedback to the programme level. The host farmers always make some preparation for a meeting (the figures in relation to the farm operations, a room for everyone, a video-projector etc.). However it is intended not to over-organise the meetings as the free /spontaneous expression and discussion is a priority. The host farmers sometime assess the extent of influence (diffusion) from their demonstrations in a totally informal way through direct discussions with region's participants (but not among non-participants).

> Q: How is the programme/network managed? R: In theory perhaps it should be... there's no... No but it's true that in projects "Agriculture ecologiquement performante" (AEP) there's a committee and it's true that practically there's no... There's no really... there's no committee that meets apart from thematic meetings where we... it's a group of breeders who decides, there's no external person who... participates with their suggestions. It's really only breeders. Yes and so there's no person in charge of the group either, there's a... we can say... there are breeders who are leaders a little, but there's a few of them as well.... there are core people in the group on whom we can rely, in the end me in any case I can rely on them in order to schedule dates and stuff like this (Programme interviewee).

> Q: Who are the main people involved in the demonstration activities and what are their roles? R: Yes so here it's really dairy farmers, their role in the group in the end? Yeah. In the group management? It's them who will suggest... who will initiate, suggest, who will... the ideas... who will orientate a little the works of the group, so their role is to give directions, make decisions. And organise too, because sometimes they will suggest the form, the content, and then organise the agenda... very practical issues, in order to book the site, things like this. They can also participate. And then communicate as well, they communicate a lot, it's their role too. (Programme interviewee)

> Q: Are host farmers involved in the development of the individual demonstration activities? T: Always. Always, yeah, we have already explained, through the programme development, training, introduction... With regard to... Communication as well, after they call me... Yeah it happens, for example, we've organised open door in January, it's them who've been contacted by the outside and who were saying "yeah I'd like that we talk... that we talk..." they were choosing with whom they wanted to present, that we present, that the group presents, and on which topic. So even if sometimes they're solicited by the outside... yeah (Programme interviewee)

> Q: Are host farmers involved in the development of the overall demonstration programme? R: Sometimes. Yeah there were... so I don't know, there were meetings, evaluations, so they were engaged to give feedback. Then the surveys, like two sociological surveys that the group has participated in, so certain breeders were interviewed individually, there's an intern who's also come to the training. (Programme interviewee)

> Oh it comes like it is. No, but, it's… when we prepare… there's always some preparation, get all the figures, all that, because we don't remember everything by heart, but, I want to say, otherwise it comes like this because the problem is that if we prepare a lot, often the problem is that it can be… if we off topic too much… yeah. So the best is to speak and answer like it comes. Then for preparation there needs to be a room to host everyone, have a video projector, there are little things like this but apart from this… yeah. (Farmer)
>
> Q: How are demonstration topics selected? R: Yeah it comes from the farmers rather, but then me when I know that there are some that talked to be about one subject or if I have the impression that there's an emerging topic, I can also suggest… on the same day. (Programme interviewee)
>
> Q: So it comes entirely from farmers? R: Yeah, yeah. Yeah, because there are only farmers who have experience in… because in the end we discuss about the topics but talk a lot about experience of everyone. This is what… me for example, let's assume a technique or… this will make me say "yes I do it or I don't do it" is the experience of others. Because I know that they did it, that they tried. But then I think, in the group… What's good about these groups is that people try. If it fails, it fails, if it works, even better… personally, what I feel that people from the groups try, they do trials! Then they see what happens, then they talk about it, they say "here, I tried this, this works, this doesn't work" and we say "this could be interesting" or sometimes we tell them "it would be better if you tried again but rather like this or like this". But it's mainly trials, I see that we do it a lot here. So there you go, it's an example of a trial. When the meeting is on a farm of a person who does trials, we walk around, we watch, we discuss. Or when I tried essential oils, I saw it functioned well, I continued… yeah (Farmer)
>
> It's not easy, but then we can be sure sometimes, via discussions, that… yeah, I think there's influence more or less happens more in an informal way. If it happens sometimes, I talk again about essential oils, one time he told me, a guy who… who had a problem… Q: A guy from the group? R: Yeah, a guy from the group, let's assume that the guy didn't ask himself the question during the meeting because he didn't have this problem and now… let's say there's a meeting two months later after the essential oil meeting, he tells me "hey, do you put essential oil for the calves, I don't know anymore, could you give me the product because I'd like to try" and voila, this is how this happens. (Farmer)

The Farmer (the host farmer) does not belong to the AEP group, although he has attended some group's meetings in the past. He is actively involved in the overall development of demos at the programme/network level at CETA. He does not hold any elected or appointed roles in any farm organisations or networks (Post host farmer interview).

> I'm more rather of a free electron, I don't belong to the group in itself, I've gone to meetings once or twice, that's all. Q: OK, so the planning of the group is done by the group as a whole or is there like a small bureau like in an association? R: It functions via email. I think that the group, each farmer of the group has to think about topics, because there are 7 or 8 meetings in a year with 7 different topics, farmers think about the topics that they want to talk about I think. And then they discuss during a meeting and then they plan like this. Q: Do you know how many farmers are in the group? R: Around 10, I believe. Q: And only dairy farmers? R: Yes, yes (Farmer)
>
> Q: Are you involved in the overall development of demos at the prog./network level? R: Yes. Yes, in the CETA, because as I said, it's a little like AEP groups, it's us who prepare the training agendas. (Farmer)

Audience / type of participants

The farmers of the group communicate actively to other entities what is really going on, on their farms. The intended audience is regional dairy farmers, groups of breeders. They also hosts students out of the frame of the group meetings. Attendance is in most cases from the existing group but sometimes other interested farmers also attend. Generally the group intends to host farmers who are open-minded and have a strong willingness to evolve and to speak in a transparent way. It is mentioned also that there are many competitive structures/organisations for local development such as CETA, AgroBio, Adage etc. This may influence the group meetings' attendance.

> Q: Who is your intended audience? R: So it's dairy farmers, in the area of Fougeres, they're more on the watershed of Haut Couesnon because it originates from a watershed action. It's spread since then, and so it's rather breeders, do you want me to talk about profile of the breeders or not..? Yeah, if you wish, yeah. There are profiles of innovative breeders who want to progress, who are curious so rather this profile in this group, who are rather dynamic, we can say the majority has this profile. And so the initial system was a classical system we will say, conventional, with a corn part, some who were on grass, two out of ten of breeders, who had... who had an important part of grass. (Programme interviewee)
>
> we try to expand because... because sometimes there are people who leave the group, people who arrive and they are... they are breeders sometimes in the group that like to transmit. So we try to open to other breeders as well, particularly via flash techniques when we do... at the Bassin Versant for example so we try to open... (Programme interviewee)
>
> It's true that there are people that we tried to for example... I speak of those that we tried to engage about a group of young people who had come, for example because there were programs MAE as well so we have targeted those people ,because they were evolving and we said to ourselves "it could be interesting that they come join this group". Then there are people, it's very complicated, it's groups in general, there is a strong competition in the sector with the... Already many organisations for development like dairy. So we still talk about it with the breeders, we have the CETA, we have many structures, like AgroBio, Adage. There is lots of competition so the Farmers at some point, maybe they are... (Programme interviewee)
>
> Q: Who is your intended audience? R: its dairy farmers from the region of Fougère (Farmer).
>
> The transparency... nothing else than transparency and that you come here without any prejudice... or you come here, it's not to criticise, I think that people feel it, it's done like this. I think that nothing else than transparency and... Let's say... having no opinion, having an open spirit, yeah. I think who comes here with definite ideas, we can't... we can't change their practices or anything at all, they don't put themselves in question "me I do it like this, it's been 20 years", I think that such people have nothing to do here. Yeah, I think it's the transparency and having an open mind are two elements that... so that the group can be... can have free and open discussions. (Farmer)
>
> Q: Who typically attends your demonstrations activities? [So we already talked about this, its dairy farmers… do you ever host other people or is it really limited to group members?]R: It's limited to the group but… sometimes it happens that there are farmers who are interested to join… often… it's normal that we invite them. Then there are external speakers, for example vets or other people. (Farmer)

3. Experts and advisers

As already mentioned the chamber of agriculture sometime facilitates the meeting with a specific technical expert for each occasion. This is usually decided upon group farmers' request. In addition,

external expert speakers such as vets or advisers are invited at the meetings for the needs of a specific issue.

> I said it in the beginning, it allows to see something else than one's own farm… one needs to see something else to improve, it allows to have experiences of other farmers, good or not so good. It's about having multiple feedbacks from external experts like vets or people who do multiple innovations. What is good is that we meet different people, different systems… different ways of doing things, that's what's rich. Sometimes we do things that we realise could be done more easily because someone else has done it with a different method and we realise that it is simpler so… so we implement the same method on our farm. (Farmer)

4. Resources, finances and incentives

The "Agriculture ecologiquement performante" (AEP) is founded by a project of the Regional Council for 3 years, for the training of groups such as dairy group, classic or experimental groups etc. The specific group and the Chamber of agriculture had 75 000 € for 3 years to reach their goal (background info). If the financial needs exceeds the total budget, then it is supplementary auto-financed from the budget of the Chamber of Agriculture. The project does not seem to offer any incentives to farmers to host demonstration activities, as it seems that in the context of the programme there are not any direct payments to farmers. However the farmers are benefited by trainings, analyses, small equipment, seeds for trials, trips etc. (Programme interviewee and Farmer)

In addition there are activities organised in the host farmer's farm under the group facilitated by CETA. Activities within this group's works are financed by VIVEA and to a lesser extent Bassin Versant (BEVI). VIVEA is a French organisation that finances training activities in agriculture. Bassin Versant (BEVI) seems to finance activities that aren't eligible for VIVEA (Farmer). Both VIVEA and farmers pay for these trainings but it seems that this is not the case for AEP's groups' trainings.

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? R: Difficult question. I know there's VIVEA, it's for sure, but I don't know more. Q: So can you explain what VIVEA is? R: It's an organisation that finances training activities in agriculture. It's on a European level… [It's French] Ah it's French? I believed it was European. [No, it's French… It's true that events like this are mostly financed by VIVEA, but VIVEA will not finance the entire time that Anne spends on it so…] Ah then I don't know. I believe there's also Bassin Versant to some extent. [Then you're also a group that is financed by the region of Britany, they finance farmer groups like this notably working on environment, economic deficiency, herb production] OK. [That must finance the time that Anne spends on this project, if there's a whole in the financing, it must be auto-financing that comes from the budget of the Chamber of Agriculture]. (Farmer)

Yes so they got an AEP project, so it was a project of the Regional Council, they got founding for three years, so it's for training of groups like the dairy group, classic groups but also experimental, for individual domains, and for other forms, for example here we will travel. For example other forms of openness, in order to progress. So there's this project that is coming to an end, three years ago it was possible to get an extension for the programme, we had two prolongations. And then we also have the Watershed who's financed the submission of the AEP project, because time is needed to develop this project, and then also first meetings for breeders to agree on the topic, what they wanted to do etc. And now that it's coming to an end we will submit another AEP project, it's ambitious because they'll finance another group rather, in this

case I think it'll be VIVEA or Bassin Versant (BEVI) financing for activities that aren't eligible for VIVEA. For example we have stuff like... [indistinct], things like this, which are financed by BEVI. (Programme interviewee)

Q: Do you offer any incentives to farmers to host demonstration activities? R: No. With this AEP programme, they had... they really had advantages, because everything was paid for by the region, for the trainings, analyses, for example hay, they did it a lot, for small equipment, or for seeds for trials. Within the framework of open doors we don't necessarily have...So it's rather because they belong to AEP...

Yeah there were no advantages. Now we have the trip too, that is paid for. (Programme interviewee)

5. Human Resources

The demonstrator of the case study has received training in order to become demonstrator (Pre survey demonstrator). However he agreed that he could benefit from some extra training as a demonstrator (Post survey demonstrator).

6. The decision-making process in organising demonstrations

The Chamber of the agriculture has initiated a meeting on soils, with the farmers in the local area in order to select a topic to work on as a group, some years before. During this meeting the farmers concluded to two different topics on which they wanted to work, (soil or self-sufficiency in proteins). After this the famers voted and chose the self-sufficiency in proteins topic to work on. So from that first meeting it seems that the decision making processes are quite inclusive.

Thereafter all crucial decisions are taken by the dairy farmers who belong to the group through their meetings. There is a yearly planning meeting of the group where farmers decide on the annual program. At those meetings they plan and organise together the agenda of the group's training actions. The farmers votes in order to conclude to several decisions. It seems also that the facilitator of the group is also voting. The processes are almost entirely bottom-up and farmers jointly make their own decisions. The breeders of the group are the leaders in relation to the topics/themes selection, the content and the form of the demos. However it is important to mention that these topics are selected from a predefined- general frame of the training organisation. Furthermore, the coordinator helps farmers to select the most pertinent subject. It seems also that some farmers of the group could be more active at the whole process and some kind of leaders, but it seems that there is no hierarchy at the whole concept. It is only peers who intend to work better through their involvement at the group.

So the principal objective is a group working on autonomy in proteins, in any case, this is how it started, with an objective to improve the revenue and then... without losing on the quality of life, meaning working time and painfulness. So being self-sufficient in proteins... seemed like the way to go for them in order to increase their revenue, it started in this context... I think that we had a little of prices... prices of milk, high input prices and then milk prices that were a little low, so... so the objectives were decided at the very beginning, very beginning, so it wasn't me, it was my colleague (...) who's initiated this, I think after the first meeting... at the watershed of Haut Couesnon, she's in charge of mobilization so she'd invited them. A meeting on soils took place at the beginning, and then finally there were two topics on which they wanted to work, it was either soil or self-sufficiency in proteins, and they ended up voting, they chose the latter, because there are many breeders in this area. So this is how it started...It was decided by the

breeders? It was decided by the breeders, yeah. And then every time it's discussed, the topics, every time the breeders... let's say at least once a year. (Programme interviewee)

How is the programme/network managed? In theory perhaps it should be... there's no... No but it's true that in projects "Agriculture ecologiquement performante" (AEP) there's a committee and it's true that practically there's no... There's no really... there's no committee that meets apart from thematic meetings where we... it's a group of breeders who decides, there's no external person who... participates with their suggestions. It's really only breeders. Yes and so there's no person in charge of the group either, there's a... we can say... there are breeders who are leaders a little, but there's a few of them as well.... there are core people in the group on whom we can rely, in the end me in any case I can rely on them in order to schedule dates and stuff like this. (Programme interviewee)

Q: OK. And how is it decided that you go to one farmer and not the other and which subject you talk about? R: It's A who chose, she called me one day and said "would there be a possibility to... to have a meeting on your farm about parasitism" and I said "yeah, no problem" and you see, that's how it's done. Q: Do you know... on the subject of parasitism, did she decide it with the bureau or farmers? R: No, they must've done a planning or a training agenda with the group, and so each... there's a day devoted to each topic. There was already a day planned in advance for the whole year, and everyone hosts on a topic of their choice in order to be a reference farm. (Farmer)

So there is one day devoted to programme design, here we vote if we want, but in the end with this group, sometimes I was not doing it in the beginning, and it's true that it wasn't bad, contrary to VIVEA, where sometimes we could allow ourselves because sometimes when they move it goes very fast and sometimes we readjust, so VIVEA or dairy groups, we foresee a year in advance, and then sometimes there are needs that appear on the way, so we readjust often questions that are asked. Or I readjust. (Programme interviewee)

Q: How are demonstration topics selected? R: Yeah it comes from the farmers rather, but then me when I know that there are some that talked to be about one subject or if I have the impression that there's an emerging topic, I can also suggest... on the same day. (Programme interviewee)

7. Goal/ objectives

At group's meetings extensive discussion and knowledge exchange occurs accompanied with a visit on the farm's site. During these meetings on a farmer's farm, participants discuss extensively about the topics but also express their own experiences to others. They intend to improve their situation and the profitability of their businesses.

The objective is to discuss with other farmers, not to stay closed up at our place. And then to learn too… about different techniques or methods that can be improved the profitability of a farm. (Farmer)

I said it in the beginning, it allows to see something else than one's own farm… one needs to see something else to improve, it allows to have experiences of other farmers, good or not so good. It's about having multiple feedbacks from external experts like vets or people who do multiple innovations. Sometimes we do things that we realise could be done more easily because someone else has done it with a different method and we realise that it is simpler so... so we implement the same method on our farm. (Farmer)

T2: Farm (event) level

1. The farm, the topic and the practices demonstrated

The demonstration event took place on a commercial farm in Landéan. It is a conventional average sized dairy farm of 50 ha (32 ha grassland, 11 ha maize, 7ha barley). The farmer owns 55 cows and 25 heifers producing 390 000 L. of milk. He tries to produce milk based on grassland and the maximum possible grazing (Post host farmer interview). There were no comparative layouts in the field (Observation tool). The host farmer is participating at the local agroecological group of dairy farmer network / programme, the last few years (Post host farmer interview). Most of the demonstration events organised on the specific farm are often a balance between room and field session. The main objectives of the meeting was heifers' parasitism management (Poster). The topic was quite technical and farmers wanted to improve their economic results by improving the heifer growth (Observation tool).

Both programme and Farmers stated that the demonstrations organised by their organisation/or on the specific farm respectively are a mixture of exemplary and experimental approaches. Their views concerning the most preferable demo approach are not identical. The Farmer believes that a mixture of experimental and exemplary approaches is better. The Programme interviewee believes that exemplary approaches are more preferable. The specific event was also classified as a mixture of experimental and exemplary approaches (Post survey demonstrator).

Topic: Parasitism on heifer (Observation tool).

2. Group size and characteristics

The meeting on the 14th of June has been organised for the existing farmers' group. Due to weather conditions 6 farmers attended the meeting (Observation tool). All participants interviewed were dairy farmers worked in the local area and were part of the same network (Post participant's survey + Pre demonstration survey participant). This group exists since 4 years and meet 4-5 times a year, so they knew well each other (Observation tool). The group has a long term project and will keep on working on this topic (Observation tool +Pre survey demonstrator).

3. Actor's role

Participants/ Group's farmers

As already mentioned the meeting was set up on a farm of the group. During the meeting the farmers exchanged information and experiences in relation to the grazing management during spring. Each participant explained to the group which solutions he had tried on his farm to deal with heifer parasitism. They presented the problems they face and how they work on them and possible solutions (Observation tool). On the one hand all participants felt actively or very actively involved during the whole demonstration process (Post participant's survey). On the other hand, the demonstrator stated that participants (farmers, advisers, researchers etc.) were not involved in the overall development of this demonstration. According to him, the farm was simply a farmer's of the group example, offering an occasion for individual talk (Post survey demonstrator). However if farmers participants are the groups farmers they are always involved in the development of the individual demonstration activities as members of the groups (Programme interviewee).

As already mentioned possibly the two different groups the farmer participates to, result to some conflicting statements and info in some of the info provided.

Expert

An expert on the specific issue/topic was present at the meeting. The expert gave some global knowledge and tools to deal with parasitism. More specifically he presented parasitism's cycle and some solutions to manage the parasite without treatment (Poster).

Host farmer

During the visit the host farmer presented his farm, his heifer raising and the technics he follows. The host farmer led the farm visit (Observation tool)

Facilitator/ group's coordinator

At the meeting there was a facilitator who managed/guided the questions and the open discussion that followed. The facilitator stimulated discussions but also tried to maintain the focus on the topic. The facilitator is a dairy adviser and knew very well each farmer (Observation tool).

Demonstrator

The demonstrator interviewed was a project manager worked at the local area (Pre survey demonstrator). The demonstrator explained the main protocol to avoid parasitism through some different ways (theory, practices, examples etc.). More specifically he provided some methods, tools and knowledge to the farmers. The demonstrator also stimulated the question and tried to maintain focus on the topic as the facilitator does (Observation tool).

4. Duration

According to available data the meeting's duration was half a day. The demonstrator felt that a full-day meeting would have been more appropriate (Post survey demonstrator).

5. Frequency and timing

The group meets 6-7 times per year in different events, most of the time on a farm of a farmer's group (Poster). These demonstrations occur at the specific farm ones per year (Post host farmer interview). According to the demonstrator the specific meeting was successful because it was a second meeting on this topic and the topic was held on the right time for the farmer's needs (Post survey demonstrator).

6. Farm's infrastructures or arrangements

The host farmer had made some arrangements for hosting the specific event. He has prepared a room and coffee for the meeting (Post host farmer interview).

7. Accessibility

The travel time of participants to reach the demo farm, was identical for all of the participants, 15 minutes. Two out of four participants rated their travel effort to participate as little effort, and the rest did not answer the relative question (Pre demonstration survey participant).

8. Fees for participation

All of the 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).

9. Time as a constraint factor

Lack of time has been pointed out as a restrictive factor for new entries to the existing farmers group. It is also restrictive for organising some important functions at the programme level as for example the continuous engagement of participants after each demonstration.

> So we need to think how to make people come to the group... We feel like... There is a lack of time either because there are already other groups or because they don't have time because... The youth are in structures that are more complex. (Programme interviewee)

> Q: Do you - at the programme level - continue to engage participants after the demonstrations?
> R: Yes, but not enough in my opinion, sometimes there's some lack of... time for follow-up, I don't always have enough time to sacrifice for an individual person, but this could be not too bad. So I do it, perhaps it's not good enough, I do it quite often, not other colleagues who intervene... [Indistinct]. (Programme interviewee)

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

The Farmer was unclear about the details of the project funding. There was some funding from VIVEA, a French organisation that finances training activities in agriculture. The project was not solely funded by VIVEA, however the farmer named no other funders. Host farmers were not paid.

> Difficult question. I know there's VIVEA, it's for sure, but I don't know more. [So can you explain what VIVEA is?] It's an organisation that finances training activities in agriculture. It's on a European level… [It's French] Ah it's French? I believed it was European. [No, it's French… It's true that events like this are mostly financed by VIVEA, but VIVEA will not finance the entire time that A spends on it so…]. (Farmer)
>
> Host farmers are not paid. (Farmer)

2. Motivations for host farmers

Both the Farmer and the Programme Interviewee emphasised the importance of group discussions and interactions with other farmers, indicating that the moral support and new ideas that came from these discussions was a strong motivator for the host farmer.

> The objective is to discuss with other farmers, not to stay closed up at our place. And then to learn too… about different techniques or methods that can be improved the profitability of a farm. (Farmer)
>
> At moments when things were going a little worse sometimes, they talked in a group, they were saying "luckily we were in a group, luckily we were doing innovation, change, because… we feel like getting up in the morning and going to work, otherwise it's difficult" there's lots of this. Then in order to progress I think that they learn a lot from the exchange among them and from the group and then from the others, the visits, they are always rather curious, even if they don't always learn from this… because sometimes there are things that they've already seen but… I think that always they go home with some ideas in their heads still. (Programme Interviewee)

3. Motivations for participants

The host farmer felt that participants were also motivated by the opportunity to discuss and learn from other farmers.

Participants' main reasons to attend the demonstration were: 'exchanges with other farmers and demonstrators' and 'learning'.

4. Target audience

The demos were specifically targeted at dairy farmers in the Fougère region.

5. Advertising and recruitment

Invitations with an RSVP were sent out to dairy farmers who belong to the programme group. The invites contained details about the event and what subjects would be covered.

> Often it's for… [For dairy farmers who belong to the group] Yeah [So who is in charge of invitations and facilitating and how is everything coordinated?] Oftentimes, as I said, we refer to the yearly planning, the facilitators let us know about upcoming meetings on that day at this hour, either by email or post. There's a sort of an invitation containing the theme, subjects that will be talked about, the place and the time. Then you answer: participating or not, and this is how it's done. (Farmer)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

Both the Farmer and the Programme Interviewee describes the nature of interactions as 'entirely bottom-up'. Both felt it was important to construct the demos around farmers' experience and personal stories. The Programme Interviewee added that this seemed to be an effective way for farmers to learn.

> Yeah, because there are only farmers who have experience in… because in the end we discuss about the topics but talk a lot about experience of everyone. (Farmer)

> It's pedagogical... a pedagogical method that seems to me that it functions well so that... the idea is that farmers learn... all that is new practices to change their system. So it's mostly based upon exchange, stories, we always try to work on their cases, individual cases, their figures, even if it's very technical. (Programme Interviewee)

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

According to the Programme Interviewee, host farmers were always involved in individual demonstrations. It seems the host farmers play a very active role, from choosing the topic and with whom they want to present, to providing the introductions and training on the day.

> Always, yeah, we have already explained, through programme, training, introduction... With regard to... Communication as well, after they call me... Yeah it happens, for example, we've organised open door in January, it's them who've been contacted by the outside and who were saying "yeah I'd like that we talk... that we talk..." they were choosing with whom they wanted to present, that we present, that the group presents, and on which topic. (Programme Interviewee)

Host farmers were also involved to some extent at the programme level, through meetings and evaluation that allowed them to give feedback. There were also surveys and interviews for the breeders to enrich feedback.

> Yeah there were... so I don't know, there were meetings, evaluations, so they were engaged to give feedback. Then the surveys, like two sociological surveys that the group has participated in, so certain breeders were interviewed individually, there's an intern who's also come to the training. (Programme Interviewee)

The Programme Interviewee made no comment about the involvement of participating farmer in the network programme or in individual demonstrations.

3. Focus

Both the Farmer and the Programme Interviewee described the network as 'in between' whole farm and single focussed.

4. Design

Both the Farmer and the Programme Interviewee described the network as 'a mixture' between experimental and exemplary practices. The Farmer preferred this approach; however the Programme Interviewee expressed a preference for 'exemplary' practices, as these help to enrich the demonstration. The Programme Interviewee also pointed to the fact that exemplary practices often form the basis for the experimentation.

5. Ideal group size

The Farmer and Programme Interviewee suggested a similar optimum size for the demo days: between 10 and 15. This was considered large enough to have diversity within the group, but small enough that everyone can express themselves.

> You can't be too many, because everyone needs to be able to express themselves... And not too few either, because the diversity… enriches it too. 10-15 max I think. (Farmer)

> So the size, let's say 10 to 12 breeders, here we are fewer people. So why, because not everyone can always be there, so it's good that we are a minimum number... minimum always 8-10 during the event. So it's true that 10-12... And why is it more efficient? Because it's for everyone to be able to exchange, so that everyone can express themselves. (Programme Interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The structure of the days varied depending on the topic, although the Programme interviewee felt it was always important to make time for participants to contribute, even when there is an expert speaker present.

> Yeah, it depends a lot on the topic, this is why I, yeah... but then during a typical event really focused on one topic... let's say... where there's a speaker, even when there's an expert speaker we still try to have... some time to... ideal situation is not to only have contribution, but also time to practice, show examples, to work, in sub-groups or things like this. (Programme Interviewee)

Some printed information was provided for participants, but it was predominantly up to the farmers to take their own notes.

The Farmer cited 'participants ask questions and talk openly' as the most important technique for engaging participants, but gave no justification for this choice. The Programme Interviewee cited 'Problem solving - farmers feel they know how to solve a problem' as the most important, because it allowed farmers to really understand the topic and apply it to their own situation.

> It allows themselves to really comprehend the topic. And then, for example, and through exercise, they manage to extrapolate to their own case. (Programme Interviewee)

2. Taking into account variation in learning

The Farmer felt that different learning styles were accommodated for through the varied structure of the demonstration days.

> There's a (meeting) room, it can also be meetings outside, a visit… outside of the group, for example in the month of May with the CETA we went to visit a micro-AD site in the Manche (department) for example, so yeah, it's varied. But the most often we stay still in a meeting room and then we visit the farm but otherwise it can change too. (Farmer)

The Programme interviewee did not accommodate different learning styles; people were given individual support if they had a specific question, but variations in learning and different levels of knowledge were not taken into account in the structure of the demo. The Programme interviewee felt there should be more effort to account for variations in learning, adding that there were some participants who had stopped coming to the demos because they were struggling to engage.

T4: Effective follow-up activities

1. Follow-up activities and materials

There was an effort to engage with participants after the event. The Farmer seemed satisfied with the amount that was done in this respect; however the Programme Interviewee felt that more time could be made for this.

> Yes, but not enough in my opinion, sometimes there's some lack of… time for follow-up, I don't always have enough time to sacrifice for an individual person, but this could be not too bad. So I do it, perhaps it's not good enough, I do it quite often, not other colleagues who intervene… (Programme Interviewee)

2. Assessing impact

The Farmer mentioned a survey that was given to participants at the end of the demo day as a means of assessing impact, although the Programme Interviewee made no mention to this or any other form of assessing impact. There was no means of assessing the impact of the demos among the wider farming community.

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of about 6 participants and 4 of them filled in the pre and post survey. All of them were male, worked in the local area and were dairy farmers. They were between 38 and 52 years old.

T1: Learning processes

1. Communication initiation by participants

In their small group of 6, each farmer described his farm, his technic, his problem and what he planned to do. Then the farmer asked the opinion of the group on his problem. There was a lot of time for questions. The facilitator and the demonstrator stimulated questions but also tried to maintain the focus on the topic. There were a lot of questions, exchanges and discussions. Almost every participant formulated their own points of view regarding the topic.

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

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

There was no multisensorial or hands-on experience.

Discussion opportunities and negotiating conflicting points of view

There was a facilitator. Open discussions are stimulated and given a lot of time. Most participants are involved. The goal of this demo was based on this sort of open discussions. The facilitator managed the discussions and the demonstrator provided some method, tool and knowledge to the farmers.

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

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

3. Engagement during the event

Participants act like a group of friends who know each other really well. This group exists since 4 years, meets 4-5 times a year, prepared a trip in Ireland. The demonstrator came for the second time so she is quite distant, but the facilitator knows each farmer very well because she's a dairy adviser and she followed the group since its beginning.

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

Explained knowledge was very clearly understandable. The demonstrator explained lots in different ways: theory, practices, example… Skills were sufficiently addressed to foster maximum uptake by participants. Common methods or ways of thinking on farming were questioned and alternatives were extensively elaborated on in group. The demonstrator insisted that all the solutions he provided had to be modified by the farmers to match their own situations. There was a lot of exchange on that. Common methods or ways of thinking on learning were questioned, but there was no elaboration on alternatives.

	participant answers				
What would you **ideally like to learn** today?	New technics and improve my knowledge; Exchanges; Improve my technical and economical results and the heifer parasitism livestock management				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The **demonstration met my expectations** regarding what I wanted to learn.	0	0	1/4	3/4	0
The **demonstration exceeded my expectations.**	0	1/3	1/3	1/3	0
I felt surprised at some point(s) during the demonstration.	0	3/3	0	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	0	2/4	2/4	0
I have the feeling **I learned something new** (knowledge, skill, practice, etc.).	0	0	2/4	2/4	0
I **thought about how I could implement** some of the ideas and practices on my own farm.	0	0	2/4	2/4	0
I **reflected on my own point of view** at some point during the demonstration.	0	0	1/4	3/4	0
I learnt about **the principles underlying a practice**.	0	0	2/4	2/4	0
I thought about **how** we **learn something new** on demonstrations (e.g.: teaching methods).	0	0	2/4	2/4	0
I thought about **why** I want to learn about **the topic(s) of this demonstration.**	0	0	2/3	1/3	0

	demonstrator answers				
what do you **intend for the particpants to learn** today?	Manage parasitism				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think **participants have learnt what I intended them to learn**.	0	0	1	0	0
I tried to **surprise** participants with uncommon/new knowledge/new skill.	0	0	1	0	0
I felt surprised at some point(s) **myself** during the demonstration (e.g. by a question or discussion).	0	1	0	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	1	0	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 4,25 on 5, participants rated the event overall as very effective. 4 on 4 participants who answered the questions would recommend the demonstration.

One participants mentioned a specific effective characteristics of the demo: 'the right balance between a clear and comprehensive speech and time to exchange'. As a suggestion on how to improve the demo, he said: 1 day would be better than half a day.

Demonstrators:

The demonstrator mentioned as effective characteristics of the demo: it's the second meeting on this topic; the topic is timed very well for questions of the farmers, the speech and exchange could happen on a real farm

As suggestion for improvement he mentioned, just like the participant: 1 day would be better than half a day.

6. Annex: Case study poster July 2018

FarmDemo

French CASE STUDY : Group of Britain dairy farmers

Mathieu MERLHE, AC3A

12 dairy farmers localized in the north east of Britany close to Fougères meet regularly in an Agroecological group coordinated by the Regional Chamber of Agriculture. This group exchanges on technical solutions to turn their conventional dairy farming system into a grassland and/or organic dairy system. They meet 6-7 times per year in different events, most of the time on a farm of the group: exchanges of the farm system, training session on technical topics, visit of experimental farm, travel in other region or country… In Britany they are nearly 50 "Agroecological" groups financed by regional and national program with the same organization but on different topics: pesticide, veterinary med, fuel…

Objectives

- Due to the exchanges and comparison between them, the farmers try to improve their technical and economic results
- To turn their conventional dairy system in a grassland and/or organic system
- For the case study meeting: heifers parasitism management

Farmer Motivations

- Understand the organization and results of each farmer and try to catch up the best practices
- Increase their personal knowledge by visits and training session with several experts

Topic selection

- The farmers decide of an annual program
- The coordinator help them to choose the most pertinent subject, organize the meeting, find the experts and manage the program
- The coordinator collect data, analyze and present the farmer's results

Audience & participation

- Audience for the meeting on parasitism: 6 farmers. This is less than usual due to weather conditions at this period.
- An expert on heifer rand the group coordinator are also present

Demonstration set-up

- The meeting set up on a farm of the group
- During the coffee break farmers exchanged on the grazing management during spring.
- Each farmer present what he did, his problem and his solution to deal with heifer parasitism
- The expert present parasitism cycle, solution to manage it without treatment
- During the visit the farmer present his heifer raising

Evaluation peer-to-peer learning environment:

- A meeting based on farmer practices
- The expert give some global knowledge, solution and tool to deal with parasitism
- Each farmer tell to the group which solutions he will try on his farm and they adviced themselves

- A representative meeting of the group organization, with less participant than usual
- A right balance between exchanges on farmers practices, expert presentation
- Each technical solution is discuss and farmers choose which one they will try
- During the visit farmers understand the host farmer system and try to advice him and find solution together

PLAID

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