



Case study reports:

D3.2 Structural Characteristics

D4.2 Functional Characteristics

D5.3 Effectiveness

Part III: Spain, Sweden, The Netherlands, United Kingdom

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## Document Summary

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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).

## Spain Case Study 1

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# 1. Background

## Programme

Casa Grade de Xanceda is a family farm in Galicia. There they produce milk and dairy products with ecological certification and belongs to the Regulatory Board of Ecological Agriculture (CRAEGA).

EL CRAEGA is the body in charge of the control and certification of organic production in Galicia. It informs about the ecological production regulations, the current operators authorized for organic production and the establishments recommended to buy organic products.

Within this framework, it also visits other ecological and non-ecological livestock farmers to encourage, increase and promote the creation of alliances among farmers.

In 2002, the Casa Grande de Xanceda farm is officially certified as ecological. It was one of the first dairy farms to become organic, and today they are the second largest organic producers in Spain. A reference at the national level.

From that moment and in agreement with the CRAEGA the farm receives 20 professional visits of a size of 15-20 farmers per year.

## Funding and Governance

The farm receives 2 types of visits:

- Leisure visits - tourism: Objective is to publicize the farm and sell its products.
- Professional visits of farmers: The main objective is to promote and collaborate with other farms to increase the number of organic farmers.

They are going to focus on the logistics and organisation of the professional visits of farmers.

These visits are the majority of them organised from agrarian organisations such as (CRAEGA, Agricultural Professional Training Centers or Agricultural Cooperatives).

## Actors and networks

The actors in this case study are:

- Technicians of agricultural organisations: They are responsible for selecting the participating farmers and detect the demand to visit initiatives of organic production among farmers.
- Visiting coordinators: In this case, Jessica Rey is responsible for coordinating all technical / professional visits and leisure visits. It is the person in charge of the farm working in a commercial way and can receive visits at the same time.
- Demonstrators of the farm: Team consisting of 4 demonstration advisors who explain the farm, follow a methodology and receive specific demonstration training. This equipment is financed with leisure visits paid by schools / families / etc. ... but the professional technical visits of the farmers are free for farmers.

## How it works:

1. The technicians detect in the agrarian organisations a demand to see demonstrative farms in ecological production.

2. The visits are requested by the technicians of the agrarian organisations, these technicians look for alternatives for intensive exploitations normally.
3. The Granja Casa Grande de Xanceda has a team of demonstrators (1 coordinator 2 demonstrators for leisure visits and 2 demonstrators for professional visits) that coordinates the visits.
4. The coordinator of the visits establishes a date at least 1 month in advance with the technician of the agrarian organisation.
5. Coordinating meeting - agricultural technician to analyse the contents of the visit.
6. The coordinator informs the demonstrator of the farm about the subject of the visit
7. The demonstrator prepares the contents and methodology of the visit.
8. The demonstrator and the technician of the agrarian organisation are the ones who direct the visit the day of the event.

#### **Event Farm and location**

- Name: Casa Grande de Xanceda
- Country: Spain
- Website: [www.casagrandexanceda.com](http://www.casagrandexanceda.com)
- Event Date: 15/05/2018

## 2. Method

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

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of programme/networks (level 1) and farm level interviews with demonstrators/hosts (Level 1) to reveal how the functional and structural characteristics enable learning. Analysis of these interviews is reported in Sections 3 and 4. Data is sourced from 1 interview at the Programme Level. 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 20 pre and post-demonstration participant surveys, 1 pre-demonstration facilitator survey, 1 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 and to discuss on key characteristics related to effectiveness of demonstrations.

### 3. Structural Characteristics

#### T1: Programme/network level

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

###### *The Regulatory Body of Organic Agriculture in Galicia*

The Regulatory Body of organic agriculture is planning training and demonstration activities to support its farmers-members in their farming work. It works on a tentative plan/proposal of activities at the end of the year for next year's activities, which is approved by the Control Board Plenary, which consists of the registered organic farmers.

To start with, all activities carried out by the Regulatory Body are approved by a body called the Control Board Plenary, which is constituted by the producers registered with the Regulatory Body. And in principle, well, a budget for a range of activities is made in the last quarter of the previous year and the Control Board Plenary approves those activities which will be carried out in the following year. (Programme interviewee)

When the proposal is approved, the administrative staff of the regulatory body coordinates work among experts and technical staff in order to design training and demo programmes. In this line of work the organisation benefits also from the support of the local Department of Rural Development (Programme interviewee)

Well, the Control Board Plenary is the entity which approves the activities and those who take part in these activities are, well, on the one hand, the staff of Regulatory Body such as the Secretary for the Regulatory Body, technical professionals specialized in organic production, people in charge of carrying out the promotional theme; and on the other hand, there is mainly, in most cases, the Department of Rural Development in Galicia which acts through the Service for Agro-alimentary Quality represented by (...)the Head of the Promotion Service Department and who helps us to design those programmes (Programme interviewee)

Along with the work done internally to trace and assess the needs of organic farmers in Galicia, the organisation engages its member-farmers in identifying topics and reflects on their suggestions on potential farms/farmers that could host events. In the same vein, the Programme interviewee argued that farmers' are always involved mainly in the development and preparation of individual demo events, but also in the overall programme development.

How do you target farmers to host demonstrations? : Well, in different ways, through surveys or consultations which are made, by heeding suggestions received by the Regulatory Body, or at certain times, well, (dealing with) problems detected by us in the market or in this type of production (Programme interviewee)

How do you identify/select relevant topics that will interest farmers? (prompt: do you involve hosts and/or participants in the selection?): Yes, when we design a promotion action, well, we set a framework, an index about the discussion topics but we also let some freedom to the speakers in case they want to introduce some new issues, so, they can do it (Programme interviewee)

Are host farmers involved in the development of the individual demonstration activities? Always - Yes, always. When, as I have already said, we end all promotion actions with a practice test, well, we need the farmer to have prepared in advance [he defines it], he defines it... he must have already prepared the framework, where he is going to carry out the training, what tools we are going to use, he also must have developed a field where we are going to have the training and so on (Programme interviewee)



Are host farmers involved in the development of the overall demonstration programme?  
Always! And we try to get them involved. If we are going to do a demonstration in a ... [On the general approach of the programme, I mean... the farmers decide on the general approach of the programme, don't they?] ... Yes, in principle, yes (Programme interviewee)

However, surprisingly enough, the interviewee described the approach followed in organising the programme as mostly top down. Equally interesting is his indication of the character of the demo activities as single focused, despite the fact that their focus, work and interests relate to organic agriculture.

As an organisation, how would you describe your general approach to providing demonstration activities? Mostly top down (Programme interviewee)

How would you best describe demos in your programme? Single focus (Programme interviewee)

The top down approach seems to be related mainly to the decision on the structure of the training and/or demo event, which is rather informed by the organisation's learnings and experience by relevant work in the last years. This results to events that can be described as a mixture of exemplary and experimental work.

We always listen to the farmers but sometimes we don't do the training or other activities in the manner they ask for. We try to introduce some details which, in our opinion, make the programme more enjoyable and more complete. [Why do you take this approach?] Well, I have just explained, because we design it so... [Because it is the most effective approach...] We have organised the training courses for some years and believe this approach provides better outcome (Programme interviewee).

How would you best describe demonstrations in the programme? A mixture (experimental and exemplary) (Programme interviewee)

Finally, when designing the programme, and subsequently when applying for grants to fund trainings and events, the organisation tries to add elements that would allow for some compensation to be available for farmers that decide to host events in their farms.

Do you offer any incentives to farmers to host demonstration activities?: YES, As much as possible, if our budget allows it, well, I like to reward people who dedicate a part of their time to these training programmes (Programme interviewee).

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

### *Host farmer and other experts*

As indicated earlier the organisation selects host farmers among its members, on the basis of work done internally to identify topics that would be of interest to organic farmers, and then matching needs and topics to the appropriate farm. The host farmer does have some flexibility to introduce some additional issues in the programme.

Although there seem to be additional trainers and experts involved in the process, there are not sufficient info to detail their role and contribution in the implementation and delivery of demo events.

Yes, when we design a promotion action, well, we set a framework, an index about the discussion topics but we also let some freedom to the speakers in case they want to introduce some new issues, so, they can do it (Programme interviewee)

[...]and those who take part in these activities are, well, on the one hand, the staff of Regulatory Body such as the Secretary for the Regulatory Body, technical professionals specialized in

organic production, people in charge of carrying out the promotional theme; and on the other hand, there is mainly... (Programme interviewee)

It would be interesting to note, though, that the host farmer in case, has formed a dedicated team of demonstrators which are responsible for all events implemented in his farm. The farmer applied an internal evaluation for the selection of the demonstration staff (poster), and now there is a team of three demonstrators in place who deliver events (post host farmer interview).

#### *Audience/type of participants*

The intended audience of the demonstration events are current members of the regulatory body, as well as producers who qualify and could be interested in joining the organisation. The general public (consumers) that have an interest in organic agriculture may also join demo events.

...both the producers who are registered with the Regulatory Body, other producers who may have an interest in being registered with the Regulatory Body and even consumers who are aware of... or they like organic production (Programme interviewee)

### 3. Networks

The Regulatory Body holds some collaboration with similar organisations as well as with Universities in neighbour countries (Portugal) mainly under symposia and conferences on organic agriculture/organic stock farming. Through those activities, the organisation has also supported the active engagement of the Department of Rural Development in international dialogue.

The specific host farm does not seem to be connected to other demo farms or organisations.

Q: Is your demonstration farm part of a programme or wider network? We advertise our training programmes in social networks (...) we focus on the working farmers but we have never placed any obstacle, on the contrary, we have even encouraged, well, the farmers and consumers from other neighbouring regions of Spain to register and take our training courses.

[In some cases, there were several instances of cooperation with Portugal.]

Yes, in principle, well, we have some relationships with some Portuguese Bodies and universities and we have collaborated participating in some Symposiums, even in some conferences organised by the Department of Rural Development or by the personnel of the Regulatory Body. (Programme interviewee)

[The Department of Rural Development got some support from CRAEGA (Regulatory Body of Organic Agriculture in Galicia) to attend some international Symposiums on Organic Stock Farming which were held near to Lisbon.] (Explanatory note of Programme level interviewer)

### 4. Resources, finances and incentives

The organisation uses a mix of self-financing and external financing streams approach to fund training programmes and demo activities. External financing stems either from training grants by the Department of Rural development, or from other public bodies which support similar activities. No further details are offered, if there are additional private a/or philanthropic organisations that offer grants to support their activities.

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? The Regulatory Body is self-financing... well, finances these activities on the basis of quotas set in the written submissions and on the basis of some grant facilities for promotion or other grant facilities such as training grants, which we get mainly directly from the Department of Rural Development. In that case, when at the moment any funding is needed, the expenditures produced by the programmes are paid by bank transfers or other means of payment. And later, a corresponding subsidy is requested by presenting supporting documents to the competent body, which has awarded us with a grant (Programme interviewee)

[In the case of the Department of Rural Development, sometimes the personnel of Department are used, whose work is paid using government funds; and in other cases, other public funds can be also available; such as FEEDER funds which are available through the technological transfers.] (Programme interviewee)

## 5. Goal/ objectives

The overall goal of the demo events is to train farmers on organic agriculture, as well as on topics related to the promotion of farm production to the market. As stated earlier, these demo events and the overall training programme is open also to farmers which are not members of the regulatory body, but they would be interested and eligible to join the group.

Well, the objectives and overall goals are varied. On the one hand, we carry out formative programmes for producers which are registered with the Regulatory Body or for those producers who can be registered with the Regulatory Body; and on the other hand, we also implement programmes or activities related to commercialization of the products produced by our producers (Programme interviewee)

## 6. Follow up material and evaluation procedures

The Programme interviewee confirmed that dissemination material are shared with participants, either during the event or by email on a follow up step. Each event is usually followed by a structured survey through which the organiser requests the participants' feedback on the event they followed. However, the overall programme seems to be only informally assessed at

Are follow-up materials made available to participants after demos? YES, Almost always. If not always, we have all materials of presentations prepared by the speakers; a distribution of seeds in case of an agriculture programme is carried out. There is always additional material supporting training activities. [The material given is prepared as power point presentations...] There materials are sent by email or they are handed in a paper form (Programme interviewee)

Do you request feedback from demo participants? YES - Well, we usually make a survey asking for their opinion on the training activities they had (Programme interviewee).

Do you evaluate the demonstration activities overall? NO - [And... How do you evaluate the programme? What results do you get? Do you evaluate something? Do you look at the whole programme or are the activities evaluated in an informal way: were they carried out well or badly]: We make an informal evaluation. Let me see, if an activity wasn't performed as we expected, we usually do not repeat this activity (Programme interviewee).

Depending on the implemented programme, and if they see it relevant, the organisation tries to engage participants after the demo has taken place. This approach is also taken, but rather less formally, when they are trying to assess if participants have acted on the lessons of the demonstration, and even less so, in assessing the extent of influence to non-participants.

Do you - at the programme level - continue to engage participants after the demonstrations?:  
YES - Well, it depends on the type of the formative programme we do, but we have already done some programmes and after finishing them the farmers are sent some tasks to develop on their own farms; and after a while they are contacted and asked about their training, or if the seeds we supplied have sprouted, or .... (Programme interviewee)

Do you assess if participants have engaged with/acted on the lessons of the demonstrations?  
Sometimes - As I have already said, sometimes yes and sometimes not. It is a theoretical course, there isn't great practical work, we don't follow it up but we usually contact our participants after finishing the course (Programme interviewee).

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)? : YES - Sometimes there are comments, and even talking about the case of seeds, well there was a part of seeds they (participants) had collected during a course, so they made some test with these seeds, with other organic products from other regions, which came off better for those producers who didn't come than those who came and so on. Yes, we usually do this (Programme interviewee).

## T2: Farm (event) level

The demonstration event was held on Casa Grande de Xanceda, a dairy farm that has 400 cow in production and 170 hectares of land. The farm is dedicated to the production of milk and subsequent transformation in the own exploitation of milk to yoghurts, cheeses and other dairy products. (Observation tool)

The host farmer organises one-off events. No follow up activities are envisaged (observation tool). Feedback is not requested in a structured way (post-demo host farmer interview). At the end of the event though, the demonstrator held an informal discussion with participants, requesting their reaction on what they have seen during their visit (post-demo participants' survey).

### 1. Farm's layouts and practice/technology demonstrated

There were not typical comparative layouts on the farm. However the 20 participants of the demonstration had previously visited another intensive exploitation, which gave the demonstrator the opportunity to refer to their prior visit in order to highlight better the process followed in their demo farm (Observation tool).

The farm has monitors that tell the history of the farm and show/project a guided tour of the farm facilities. There were no additional material shared with participants. No external equipment was showcased either (observation tool).

### 2. Topic:

Organic dairy production and manufacturing processes (Observation tool).

### 3. Group size

20 participants (pre/post demo participants surveys & Observation tool)

### 4. Actors' roles

#### *Host farmer - demonstrator*

The host farmer has a dedicated team that is responsible for demo events. The responsible employee explained the philosophy and how they work in the farm; he gave notions of the operation of the farm as well as a brief history of its development (the farm's origins are traced back to the '60s). He guided the farm and to different processing/manufacturing units, guided and facilitated discussion (Observation tool).

#### *Participants*

The 20 attendees were mainly farmers, and a small number were advisers. All but three of them are active in the local area, which supports the view of three quarters of them that they belong in the same network (pre-demo participants' survey). Participants had the opportunity to see the entire manufacturing process of the farm's products. A dedicated Q&A session of about 45 minutes followed was planned at the end of the event. Finally at the end of the visit they were able to taste the farm's products (observation tool).

Three out of four interviewed participants agreed or strongly agreed that they have actively been involved during the whole demonstration process (Post participant's survey).

### 5. Frequency

The host farmer hosts some 5 demonstration events per year (post host farmer interview).

### 6. Duration

There is no reference to the duration of the event

### 7. Accessibility

According to the pre demonstration participant survey, the travel time of the vast majority of participants to reach the demo farm, was 60 minutes, with only 3 out of 20 indicating a longer trip (90 minutes). Except from five participants, mainly advisers, who indicated that they had to place substantial effort in order to attend, the majority indicated that it was rather easy for them to participate to the event.

### 8. Fees for participation

At the specific demonstration event, there were no attendance/participation fees charged (Post demonstration participants). Moreover, none of the participants was in any way compensated for attending the event (Post demonstration participants).

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

The Programme Interviewee did not discuss how the project is funded, but did mention that when the budget allows it host farmers are paid for their time.

As much as possible, if our budget allows it, well, I like to reward people who dedicate a part of their time to these training programmes (Programme Interview)

#### 2. Motivations for host farmers

It was thought that host farmers were motivated by a personal interest in the issue being covered by the programme.

Well, firstly they (farmers) should have an interest in the issue (Programme interviewee)

#### 3. Motivations for participants

Participating farmers showed more interest when the activities were entertaining, suggesting that farmers were motivated the fact that the training was enjoyable.

It is very important, let me see, it is truly important that the activities, which are carried out, are entertaining. I was told in many cases, that they (participants) do not like completely theoretical training. So, we always try to combine theoretical part with the practical one, so this way they (the participants) enjoy the training activities most (Programme Interviewee)

#### 4. Target audience

The target audience seemed to be anyone with an interest in organic production, whether that was producers currently registered with the regulatory body, other producers or consumers.

Our intended audience are both the producers who are registered with the Regulatory Body, other producers who may have an interest in being registered with the Regulatory Body and even consumers who are aware of... or they like organic production (Programme Interviewee)

#### 5. Advertising and recruitment

The Programme Interviewee's main means of advertising and recruitment was to promote other activities and events to participants during the first demonstration.

If I have already organised some activities over time, during the first one I explain to them (the participants) that there are going to be the following activities, at the same time informing them about the place and date. I usually like doing publicity for the activities I am doing or for activities which I am going to do the following year. [You mean, if among the participants in a demo activity you see one which you consider interesting for you and maybe he or she could be a host for the next demo activity...] Yes, it is... [... you use it (the opportunity)...] Yes. [Right] (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'.

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

Host farmers had a high level of involvement in the network programme, mainly in helping to decide on the general approach of the programme.

Always! And we try to get them involved. If we are going to do a demonstration in a ... [On the general approach of the programme, I mean... the farmers decide on the general approach of the programme, don't they?] ... Yes, in principle, yes (Programme interviewee)

Host farmers prepare the framework for the demonstrations, as well as the location, the tools required and whatever other preparation is needed.

Yes, always. When, as I have already said, we end all promotion actions with a practise test, well, we need the farmer to have prepared in advance [he defines it], he defines it... he must have already prepared the framework, where he is going to carry out the training, what tools we are going to use, he also must have developed a field where we are going to have the training and so on (Programme interviewee)

### 3. Focus

The Programme Interviewee described the network as 'single focussed', as opposed to 'whole farm'.

### 4. Design

The Programme Interviewee described the network as 'a mixture' between experimental and exemplary, and expressed a preference for this approach.

### 5. Group size

The Programme Interviewee gave no optimal group size, although did explain that demonstrations were held in medium sized livestock holdings, so presumably the group size would have to be appropriate to the event space.

When doing demonstration activities we always try to do it in a "model" livestock holding which is medium size, neither in a really small farm, nor in a very big one. Those aren't an example for the course attendants (Programme interviewee)

### T3: Enabling learning appropriate to purpose, audience, context

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

The general structure of the demonstration days consisted of a theoretical part followed by an activity in which this theory could be applied.

We are inclined to do a theoretical part of an activity and then a practical part giving (the participants) the possibility to apply, if not all, but at least a part of knowledge given during theoretical activities (Programme interviewee)

The Programme Interviewee cited 'Participants ask questions & talk openly' as the most important technique for engaging participants, because communication amongst participants, and between participants and speaker, make for a more enjoyable course.

There aren't a lot of people attending these courses and they are arranged a bit more enjoyable, and the communication between the speaker and the trained participants is also better (Programme interviewee)

#### 2. Taking into account variation in learning

The content of the courses were altered depending on the prior level of knowledge held by participant; from this it was decided if a basic training course was needed or if there could be a focus on more specific issues. Besides this, there was no mention of different learning styles being taken into account.

We always ask what level of knowledge on the topic the participants of a training course have, to provide basic training courses or focus on more specific issues (Programme interviewee)

### T4: Effective follow-up activities

#### 1. Follow-up activities and materials

There appeared to be a fairly comprehensive protocol for engaging with participants after the event. Farmers were sent tasks to develop on their own farms, and were later contacted about this and the training they attended.

Well, it depends on the type of the formative programme we do, but we have already done some programmes and after finishing them the farmers are sent some tasks to develop on their own farms ; and after a while they are contacted and asked about their training, or if the seeds we supplied have sprouted, or ... (Programme interviewee)

Generally participants are provided with a copy of the PowerPoint and other materials used in the presentation. These are either given in paper form on the day or distributed via email. If it is an agricultural demo, the programme will also distribute seeds for participants to trial themselves.

Almost always. If not always, we have all materials of presentations prepared by the speakers; a distribution of seeds in case of an agriculture programme is carried out. There is always additional material supporting training activities. [The material given is prepared as power point presentations...] There materials are sent by email or they are handed in a paper form (Programme interviewee)



## 2. Assessing impact

The programme sometimes assessed the impact of the events; generally assessment was only carried out when participants were given a task to carry out on their own farm, such as trialling a new seed.

As I have already said, sometimes yes and sometimes not. It is a theoretical course, there isn't great practical work, we don't follow it up but we usually contact our participants after finishing the course (Programme interviewee)

The Programme Interviewee mentioned that they assess the impact of the days among the wider farming community, although it seemed this was done in a more informal way through conversing with farmers.

Sometimes there are comments, and even talking about the case of seeds, well there was a part of seeds they (participants) had collected during a course, so they made some test with these seeds, with other organic products from other regions, which came off better for those producers who didn't come than those who came and so on. Yes, we usually do this (Programme interviewee)

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 20 participants and all of them filled in the pre and post survey.

	<b>n° survey participants</b>	<b>advisor</b>	<b>farmer</b>	<b>forest farmer</b>	<b>unknown</b>
<i>occupations</i>	20	6	9	2	3
<i>working area</i>	18				
local area	15	6	7	1	1
not local area	3		2		1
<i>gender</i>	19				
male	15	4	7	2	2
female	4	1	2		1
<i>age</i>	19				
18-30	19	6	9	1	3
31-40					
41-50					
51-60					
60+					

### T1: Learning processes

#### 1. Communication initiation by participants

100% of the participants had no problem sharing their knowledge and experiences related to the topic, no matter if they were in smaller or bigger groups. There was a lot of time for questions, about 45 min, and a lot of questions were asked. 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	1/20	8/20	11/20	0
I asked at least one question during the demonstration .	17/19 yes				
I shared my own point of view at least once during the demonstration.	17/19 yes				
I felt encouraged to ask questions during the demonstration.	0	1/19	8/19	10/19	0
When there were any discussions, I felt comfortable sharing my opinion.	0	2/20	12/20	6/20	0

## 2. Interactive knowledge creation

### *Hands-on opportunities and other multi-sensorial experiences*

More than one hands-on activity was demonstrated very clearly but no hands-on activity was carried out by participants. All the facilities were visited. In the workshop we saw the manufacturing process of the company's products. At the end of the visit, visitors were able to taste the company's products.

### *Discussion opportunities and negotiating conflicting points of view*

The farm has guides who tell the history of the farm and facilitate tours around the farm facilities. The one for this tour was a young woman with knowledge in agriculture.

Open discussions are stimulated and given a lot of time (15%). Most participants are involved. It was made sure that everybody understood the shared critical points of view.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	0	2/20	11/20	7/20	0
<b>If participants didn't agree</b> with each other during discussions, somebody (demonstrator/other participant) <b>tried to reach a consensus</b> between them.	0	2/20	10/20	8/20	0

### 3. Engagement during the event

Participants all seem to know each other well, but are not close friends. The demonstrator acts 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	5/20	6/20	9/20	0
I felt like <b>the demonstration increased my ability to rely on myself</b> as a farmer.	0	3/20	10/20	7/20	0
I could <b>relate well to other participants</b> (because they have an agricultural background similar to mine).	0	0	11/20	9/20	0
A lot of the <b>other participants</b> are <b>part of the same farmer network</b> as me.	0	5/20	9/20	6/20	0
I felt like I could <b>trust the knowledge of (most of) the other participants</b> .	0	3/20	12/20	5/20	0
The demonstration <b>felt like an informal activity</b> to me.	0	4/20	7/20	9/20	0
I thought <b>the host farm was comparable enough to my own farm</b> .	0	2/20	12/20	6/20	0
I had the feeling the <b>demonstrator was like one of us</b> .	0	3/20	14/20	3/20	0
I had the feeling I could <b>trust the demonstrators knowledge</b> .	0	3/20	10/20	7/20	0
I <b>got along very well with the demonstrator</b> .	0	1/20	11/20	8/20	0

## T2: Learning outcomes

Explained knowledge was very clearly understandable. Skills were addressed carefully and effectively to foster maximum uptake by participants. Common methods or ways of thinking on farming and on learning were questioned and alternatives were extensively elaborated on in group.

	participant answers				
What would you <b>ideally like to learn</b> today?	How I can produce ecological cheese; Ecological grazing; Management of rearing and pastures; The ways of working ecological; Learn to manage an ecological farm; Learn about a futuristic system (in this case ecological); See milk production and packaging processes; All I can.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	4/20	8/20	8/20	0
The <b>demonstration exceeded my expectations.</b>	0	2/20	12/20	6/20	0
<b>I felt surprised</b> at some point(s) during the demonstration.	0	1/20	8/20	11/20	0
<b>I obtained a clearer understanding</b> of the topic(s) demonstrated.	0	1/20	12/20	7/20	0
<b>I have the feeling I learned something new</b> (knowledge, skill, practice, etc.).	0	1/20	11/20	8/20	0
<b>I thought about how I could implement</b> some of the ideas and practices on my own farm.	0	1/20	6/20	13/20	0
<b>I reflected on my own point of view</b> at some point during the demonstration.	0	0	14/20	6/20	0
<b>I learnt about the principles underlying a practice.</b>	0	1/20	9/20	10/20	0
<b>I thought about how we learn something new</b> on demonstrations (e.g.: teaching methods).	0	0	11/20	9/20	0
<b>I thought about why I want to learn about the topic(s) of this demonstration.</b>	0	1/20	14/20	5/20	0

### T3: Overall comments on the effectiveness of the event

With an average of 4 on 5, participants rated the event overall as effective. 1 on 19 participants who answered the questions would not recommend the demonstration.

As main effective characteristics of the demo participants mentioned: Training in ecological production; Because the host farm was very clear; I learned about Ecological Agriculture; The clarity and conciseness of the demonstration; The structure of demonstration; The topic was interesting to me; I learned technical things; The added value of ecological milk.

3 participants made a suggestion on how to improve the demonstration: Use the technical terms; more data on techniques; more panels.

## 6. Annex: Case study poster July 2018



FarmDemo

### CASE STUDY Spain: Casa Grande de Xanceda

José Manuel Campos – Alberto Fernández Federación EFA Galicia

Casa Grande de Xanceda is a company dedicated to the production of high quality dairy products that also has the corresponding official ecological certification. The origin of Casa Grande de Xanceda dates back to the 1960s. From the beginning it has been concerned about the welfare of the livestock and the strictest quality requirements. The 30 hectares of pastures and 20 initial cows were converted over the years into more than 170 hectares and more than 400 head of cattle. The company is one of the largest producers of organic milk in Spain and since 2005 it also produces high quality organic yoghurts.



#### Objectives

- collaborate as a private company in the training process of new farmers
- Long- term objectives: products promotion, creation of a local network in organic production

#### Motivations

- Finding partners interested in organic production– building local network
- Building relationships with other organic farms to promote a new image of sustainable agriculture
- Stand out in the local farming community: social recognition

#### Topic selection

- Organic production
- Processing of high value-added dairy products

#### Audience & participation

- Audience: farmers, students, families
- No participation fee.

#### Demonstration set-up

- Initially top-down, but facilitating interaction with the audience
- The farm has a professional team dedicated exclusively to demonstration tasks. The demonstration activity is designed by this team and the host farmer
- The topics are presented adapting to the profile and interests of the audience (separately or as a whole): ability to adapt to the demands of the audience (according to their training, skills, ...)
- There is no evaluation of the demonstration. There is an internal evaluation for the selection of the demonstration staff

#### Evaluation peer-to-peer learning environment ( 15th May 2018 )

- 15 participants : one group
- Presentation based on technical data provided for interaction with the audience
- Prior knowledge = essential for discussion and in-depth exploration
- Host farmer also receives information on sector situation and market demand (from participants)
- Further learning outcome: many times the audience makes a report with the feedback of the visit

- Farm manager collaborates regularly with training centers
- Different groups are received on the same day: professionalization of the demonstration, there is a protocol to register through the farm's website [www.casagrandexanceda.com](http://www.casagrandexanceda.com)
- Many participants discover the ecological practice as an alternative to their production, information shared in their environment with other farmers. They discover in this model of farm a real possibility of sustainability and profitability
- It is a living formula for promoting organic farming and consolidating collaboration networks
- It represents a demonstration farm model for different audiences: farmers, families, schools,...
- Key areas to explore: professionalization of the demonstration, creation of local networks, target audience



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## Spain Case Study 2

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# 1. Background

## Programme

The Reboredo farm (pig meat production) is part of the Coren SCG cooperative. And it is where the AUTOFARM system is implemented, oriented towards animal welfare and management.

Coren is a cooperative of the second degree, that is, a cooperative of cooperatives. The products of the various activities (meat poultry, egg-laying, pigs, cattle or rabbits) are associated in first-degree cooperatives, which are made up of a total of 3,200 members (the farmers). In turn, these are integrated, through the cooperative regime, in Coren, which is why it is a cooperative of the second degree or "cooperative of cooperatives". This structure allows both the cooperative members and the Coren team to be directly involved in the management. They are the most interested in organising and financing 2/3 visits per year to this farm to achieve the highest quality in each phase of the production process and in a socially responsible management, keys of the "Coren model".

## Funding and Governance

The program of visits to the farm is managed in 2 ways:

- Visits through Coren SCG. In this case there is a team consisting of 3 vets assigned to each type of production, who coordinates the actions, logistics and carries out the visit to the farm with the farmer. These visits are financed entirely by the Coren cooperative with their own funds so that their farmers improve their profitability. The farmers who attend the visits are selected by Cooperative Coren, who is interested in knowing the Autofarm system and implementing it.
- Visit through the company Autofarm. In this way it is the farmer himself (Daniel Reboredo and owner of the farm) who manages and finances the visits. The farmer carries out the search for potential clients who can visit the farm and at the same time coordinates all the actions of the visit (from the reception to the farewell).

## Actors and networks

The actors involved in the visit are usually:

In case of organising the Cooperativa Coren SCG: There is 1 coordinator of visits to the farms that selects the topics that are interesting for the farmers. This selection of topics / topics are suggested by the veterinarians who are visiting the farms of the cooperative.

Later, when a group of 10 farmers interested in issues related to improving the management and automation of the farms, a date for the visit is proposed.

The visit to other interested partners is then disseminated through the livestock communication media.

Finally, the program of the day is coordinated with the farmer and the schedules do not coincide with any important activity of the farm. At the visit is present the veterinarian responsible for the farm, the owner who help each other in the explanation of the automation system AUTOFARM.

It is a closed visit program for members of the Cooperative and a nearby geographical area (50 km radius).

In case of organising the owners of the Reboredo Farm and Autofarm System: There is a visit coordinator who goes to other cooperatives / groups of farmers or agricultural vocational training schools. It makes a promotion during the first 2 months of the year and visits are usually made from March to October (3 visits / year). Visits are scheduled 1 month in advance.

The schedule of visits is from 11:00 h to 13:30 h. and there is no cost for the farmer to transport.

The groups are of 15 breeders.

#### **Event Farm and location**

- Name: Autofarm
- Description: Development, design and manufacture of software, hardware and automation for the control and remote control of livestock farms, including assembly and installation. Preparation, study, design and execution of technological projects. Design and programming.
- Country: Spain
- Website: Autofarm
- Event Date: 22/06/2018

## 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 2) and farm level interviews with demonstrators/hosts (Level 1) to reveal how the functional and structural characteristics enable learning. Data is based on one interview with the host farmer. Analysis of this interview is reported in Sections 3 and 4. 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 12 pre and post-demonstration participant surveys, 1 pre-demonstration demonstrator survey, 1 post-event 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.

### 3. Structural Characteristics

#### T1: Programme/network level

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

###### *Host farmer and demonstrator*

The host farmer is the leader of the demonstration day organised on his farm. He is a qualified specialist in pig production, knowing very well the sector as well as his own farm operations. He implements on this farm an innovative technological project, the *Autofarm* application, a system of monitoring and control of agricultural operations through easy management and compression with its own hardware and software (Farmer), which has been developed by the pig farmer himself with a team of computer experts (Observation tool).

The demonstration topics have always to do with the presentation of the Autofarm in pig/livestock production. The host farmer is always the demonstrator during demos, he leads the visitors guide on his farm, and he talks about farm's processes and explains the farming technologies he is implementing on his farm. It seems also that he is totally responsible for the content of the demo events. The main people involved in the demonstration activities are the host farmer and his parents. Sometimes other people, who know the development of the software and the hardware of the Autofarm platform, are invited to speak at the demo. He does not request feedback from participants or any evaluation for the demonstration activities. However he keeps contacts for the further engagement of participants after the demonstration, through social networks, email, telephone or personal contacts (Farmer).

Q: How are the demo activities on the farm managed? R: Well, normally it is me who guide the visit because I am a farmer and primary producer and, as such, I have some knowledge of the sector and had the idea at the time to explain this farming technology. I as a farmer decide at the moment who visit the holding, to whom can me can transfer this knowledge and above all I considerate which safety measures should be implemented. (Farmer)

Q: Who are the main people involved in the demonstration activities and what are their roles? R: Me, mainly, my parents and sometimes some experts to give explanations about the development of software and hardware. (Farmer)

Q: How are demonstration topics selected? R: To start with, we are going to focus on this technological project. [And also, to all farmers and other visitors you show your product ...]Which we are going to demonstrate, yes. [The product Autofarm.] (Farmer)

Yes, we always focus on the application and its application in the environment in order not to raise other issues. (Farmer)

I should do it, but well, in the productive cycle we primarily focus on the livestock topic. But what is there, I know that we should diversify and link it depending on whether there is a technical professional or other specialist. (Farmer)

Q: Do you request feedback on the event day from participants? R: No. It would be interesting to get a feedback not at the event day but after the visit to give some necessary time (to the participants) and ask them. (Farmer)

Q: Do you evaluate the demonstration activities overall? R: No. (Farmer)

Q: Do you continue to engage participants after the demonstrations? R: Yes. Yes, I try ... I try to do it contacting them (participants) social networks or writing them per email or calling them on the phone or face-to-face. In other words, being in a personal contact, talking with them. (Farmer)

### *Audience/type of participants*

The intended audience of the demonstration events are mainly stockbreeders/producers, companies (big integrating ones, animal feed manufactures, logistic etc.) and cooperatives. Most of the people attending the demonstration events are stockbreeders (mainly pig farmers), veterinarians, technical specialists, non-profit associations, and mass media representatives. The farm visits are organised upon request/registry of the visiting groups. The demos take place upon consultation and appointment between the visiting groups and the host farmer, who manages all these processes. It seems that participants are not involved at any processes before the demo. However during the demo participants are expected to be actively involved.

Well, primary producers, big integrating companies which can be cooperatives, companies that ... that manufacture animal feed, logistic companies and so on. (Farmer)

Q: Who typically attends your demonstrations activities? R: Stockbreeders mainly focused on pig farming, veterinarians, technical specialists, non-profit associations, mass media representatives. (Farmer)

R: [Those people who attend the demo are groups to attend... which you are looking for... well, to attend are organised or they register for a visit or you are... there are groups who request a visit and you handle it?] Yes, exactly. (Farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: Yes. [Why?] Because they have the possibility to participate in a real environment, enter the farm and we demonstrate all in situ. [How do they interact? With questions, how do they interact with?] It would be ideal, that they would interact with questions, logically. What we are looking for is they raise doubts and questions, they can have. (Farmer)

## 2. Networks

The host farmer's farm is not part of a programme or wider network. This could be the reason why the host farmer stated that he is not involved in the overall development of demos at the programme /network level. Furthermore the specific farm's demonstration activities are not connected to other demo farms and/or other knowledge exchange organisations in a context of a network. However, the host farmer has contacts with start-up businesses, technological centres, universities related to primary sector and some cooperatives (COREN etc.).

Q: Is your demonstration farm part of a programme or wider network? R: No. (Farmer).

Q: To what extent is the demo farm connected to other demo farms and/or other knowledge exchange organisations? R: We have contacts with other Start-ups but we aren't with any kind of network regarding the demo matter. [You also have some contacts with the university or...] Yes, we work with technological centres and universities even with universities which are closely connected with the primary sector and cooperatives such as COREN. [But you are not in any network.] No. [Well, neither do not hold any official position...]. (Farmer)

## 3. Resources, finances and incentives

The demonstration activities at the specific farm are mainly self-funded. However, the farm had benefited at its first steps of developing the system with some sort of public support in the context of an acceleration programme they participated to in order to work on livestock's facilities ventilation.

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? R: Well, what we usually use is our own funds, we had some public support, that we got some prize for participation in an acceleration programme and then we also focus it as a marketing strategy that can bring more sales. (Farmer)

Q: What do you think motivates participants to attend demos? R: It is a project which is carried out as an ad hoc project and which is exclusive for this farm and that there was a huge problem with air conditioning and that this issue can be interesting to the farmers for its application in their own farms. (Farmer)

In this farm we are developing a project and the system of comprehensive monitoring that is based on remote control of the operation, and thanks to a real time and a range of measuring parameters such as temperature, humidity, the CO<sub>2</sub>, and which allows to act from different locations and synchronise different parameters from any device farms. (Farmer)

#### 4. Goal/ objectives

The overall goal of the demo events is to show visiting groups the full potential of the Autofarm comprehensive monitoring application in a real farm's environment (Farmer). Extend demonstration and knowledge transfer of the opportunities offered by the monitoring system take place during the demos.

In this farm we are developing a project and the system of comprehensive monitoring that is based on remote control of the operation, and thanks to a real time and a range of measuring parameters such as temperature, humidity, the CO<sub>2</sub>, and which allows to act from different locations and synchronise different parameters from any device. [What are the goals of your demonstration farm?] Well, to transfer knowledge, synergy, show our products in real environment and solve the problems generated by the environment in the most productive way farms. (Farmer)

Well, because of the economic aspect, to show the product and see how it works in a real farming and well, in a family farm in a real environment. Is that you have something like a closer connection because it is a farm we had to rebuilt and which hat a problem, and the ventilation as well, and well... well, to transmit this technology base applied to this real environment and which truly works. (Farmer)

#### T2: Farm (event) level

The demonstration event was held on Ganaderia Reboredo farm. It is a family farm, which has been working over forty years (Farmer). The farmer owns a pig farm integrated in a cooperative (COREN) of 2000 places. The farm has implemented a management and monitoring system (smart farming) of the productive parameters since 2014 (Observation tool). According to the Farmer, the demonstrations on his farm are exemplary; indicating also that this approach is also more preferable. According to him the advantages and the opportunities offered by the application could be only demonstrated as a best practice.

We make a visit through the whole farm. [Is this an experimental or an exemplary farm, a best practice case?] It is exemplary farm, a best practice case. [Why?] Because we improve and apply the productive cycle and the animal welfare and we also reduce the energy consume and well, the quantity of invested products. So that's because it is a best practice case. (Farmer)

## 1. Farm's layouts and practice/technology demonstrated

There were not typical comparative layouts on the farm like tests strips etc. However the participants of the demonstration have been able to compare the productive data of the farm with other farms that do not have computer systems to measure the parameters (Observation tool).

## 2. Topic: GANADERIA REBOREDO – AUTOFARM.

The topic discussed was the monitoring, control and management of resources of the entire farm to improve the efficiency and the productive indexes of a farm (smart farming applications on the farm). The system was applied throughout the farm and all farm's facilities were visited (Observation tool).

## 3. Host farmer

The host farm was the demonstrator of the event. He explained the technical aspects of the AUTOFARM application and his personal history. During the demo the host farmer explained the computer system in a room on the farm. Thereafter they visited the farm, analysing how the sensors work and how the pig farmer makes decisions based on the parameters received by the monitoring system (Observation tool).

The host farmer guided also questions and/or discussions during the demo, and made himself available to solve participants' doubts of how to implement the monitoring in the milk production farms. He led the discussion so that all the farmers would participate and give their opinion on how to implement AUTOFARM on their farm (Observation tool). Moreover, the host farmer offer follow-up opportunities to the participants interested for further information or for the implementation of the application on their farm. Participants filled out a form for the farmer demonstrator, in order send them additional information or to visit their farm in the future (Observation tool).

## 4. Participants

The participants had the opportunity to observe the farm's system, to discuss extensively with the host farmer and to undertake some kind of hands-on activities. More specifically, they managed the environmental parameters through the software by entering data into the system and observing the results of on-site tests (Observation tool). Most of the participants were known to each other as well as to the demonstrator. More specifically the demonstrator already knew part of the participants through other training sessions of the cooperative he is part of (Observation tool). All demo participants have been interviewed. Three out of four participants (77%) work at the local area and they were farmers (50%) and/or advisers (42%). There were also one student and one forester (Pre demonstration survey participant). All participants stated that they were part of the same farmer network. The interviewed participants agreed or strongly agreed that they have actively been involved during the whole demonstration process (Post participant's survey).

I explain the system and how it works at the office where we have the system ... [So they can see the control panels ...] yes, where they can ... [How you make your decisions ...] how I perform, and then in the production hall we can see the results.

[So, at the beginning you give a little explanation of your system at the office and then ...] Yes, even some resources we can see outside the building different silage, external environment, the level of the water tank and so on, and then we see in situ, inside the farm in the production environment. [So inside you can see the results of the system.] Exactly, it is what I have told in the previous answer. That they (participants) can see all in situ; that it is not a laboratory; that it is a real farm environment and that they can see it working. Then, they can observe how these



animals are and their welfare conditions and the air conditioning which is properly adapted to the environment. Thus, we can talk about the productive outcomes and resulting improvements ... well, a bit ...] [Data over all ...] Technical data and data on results. (Farmer)

## 5. Frequency

The host farmer hosts more than 15 demonstration events per year (Farmer).

## 6. Duration

The specific demonstration event's duration was approximately 3 hours (Observation tool).

## 7. Accessibility

According to the pre demonstration participant survey, the travel time of all participants to reach the demo farm, was 60 minutes. However, the observation tool mentioned that the participants travelled for 2.5 hours together to the demonstration and they are from the same region. Every other participant interviewed (50%) rated its effort to participate as negligible or very little effort. Approximately 42% of participants have rated their travel effort to participate as little effort or quite some effort (Pre demonstration survey participant). Finally one participant (8%) has rated his travel effort to participate as the greatest possible effort.

## 8. Fees for participation

At the specific demonstration event, there were no attendance/participation fees charged (*Post demonstration participants*).

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

There was some public support, but predominantly the farmers used their own funds and focused the money on generating income for the project.

Well, what we usually use is our own funds, we had some public support, that we got some prize for participation in an acceleration programme and then we also focus it as a marketing strategy that can bring more sales. (Farmer)

#### 2. Motivations for host farmers

Host farmers were motivated by a personal connection to the project that they are presenting, and a personal passion for showcasing a working family farm in a 'real environment'.

Well, because of the economic aspect, to show the product and see how it works in a real farming and well, in a family farm in a real environment. Is that you have something like a closer connection because it is a farm we had to rebuilt and which hat a problem, and the ventilation as well, and well... well, to transmit this technology base applied to this real environment and which truly works. (Farmer)

#### 3. Motivations for participants

Participants were motivated by learning about the specific issue of ventilation and air conditioning, and the possible solutions that could be applied to their own farms.

It is a project which is was carried out as an ad hoc project and which is exclusive for this farm and that there was a huge problem with air conditioning and that this issue can be interesting to the farmers for its application in their own farms (Farmer)

#### 4. Target audience

The target audience was broad, including: primary producers, companies that manufacture animal feed, logistic companies, cooperatives, stockbreeders mainly focused on pig farming, veterinarians, technical specialists, non-profit associations, mass media responsible persons.

#### 5. Advertising and recruitment

Participants were not targeted, and the farmer gave no details as to how the events were advertised.

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

The Farmer described the nature of interaction as 'entirely bottom-up', emphasising that the personal relationship between host and participants. The approach appears to be farmer-to-farmer in its truest sense.

I think it would be "bottom-up". I mean, having a personal relationship mainly, not personal but rather an interaction with the farmer himself, farmer-to-farmer. (Farmer)

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

Participants' involvement in demonstrations consisted of being able to interact with questions and raise doubts that they have.

They have the possibility to participate in a real environment, enter the farm and we demonstrate all in situ. [How do they interact? With questions, how do they interact with?] It would be ideal, that they would interact with questions, logically. What we are looking for is they raise doubts and questions, they can have. (Farmer)

### 3. Focus

The farmer described the network as 'whole farm', as opposed to single focused.

### 4. Design

The Farmer described the network as 'exemplary' and expressed a preference for this approach. The farms that hosted demos were best practice cases, because they 'improve and apply the productive cycle and the animal welfare' as well as reducing external inputs, such as energy.

### 5. Group size

The optimal group size was 10, because any more than that and the animals can get stressed. As well as this, with more people biosafety becomes a more complicated issue. The Farmer added that depending on the set up of the demo farm it may be possible to have a greater number of participants (i.e. if the animals can be viewed without entering the production hall).

I believe that 10 people are enough for a visit because of the issue of biosafety and to avoid stressing the animals as we always enter the production hall, so that animals can remain calm. [And now, you could give explanations to more people if not this issue, there could be more than ten people if not the problem of ... eh ...] Yes, yes, provided that we not enter the farm building, where the production environment is and where we can see animals, we can always extend the group of participants. (Farmer)

### T3: Enabling learning appropriate to purpose, audience, context

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

The structure of the day consisted of a tour of the office where the air conditioning system was held, and an explanation of how it works, followed by a tour of the production hall to demonstrate the results of the system. There was also an opportunity to look at resources outside of the production building, such as the water tank and silage storage. The focus appeared to be on presenting the whole farm system in situ.

I explain the system and how it works at the office where we have the system ... [So they can see the control panels ...] Yes, yes, where they can ... [How you make your decisions ...] How I perform, and then in the production hall we can see the results. [So, at the beginning you give a little explanation of your system at the office and then ...] Yes, even some resources we can see outside the building different silage, external environment, the level of the water tank and so on, and then we see in situ, inside the farm in the production environment. [So inside you can see the results of the system] (Farmer)

Exactly, it is what I have told in the previous answer. That they (participants) can see all in situ; that it is not a laboratory; that it is a real farm environment and that they can see it working. Then, they can observe how these animals are and their welfare conditions and the air conditioning which is properly adapted to the environment. (Farmer)

No supplementary materials were provided to participants.

The Farmer cited 'Good quality expert advice & technical presentations' as the most important tool for engaging participants because this was the best way to resolve any doubts that were raised. The farmer did add that there was a balance to be achieved here, and that it was best to avoid getting too technical.

Yes, I believe, that to explain technically the product without entering issues which can be too technical, logically, to interact with a farmer. And then, well, that every doubt or question they raise, I can resolve them. (Farmer)

#### 2. Taking into account variation in learning

The Farmer expressed an effort to accommodate different learning styles, but this was mostly a matter of considering whether the audience consisted of farmers, vets or technical professionals. Prior knowledge and main interests of these groups was taken into account when giving a presentation, for example when dealing with farmers, the host farmer focused on the production side rather than the technical side of things.

Yes, yes, it is not the same to deal with a technical professional, a veterinarian or a farmer. [If the topic is more technical you focus more on the technical aspects...]

Yes, I do not go into any more detail or I explain the technical issue directly. In contrast, if I deal with a farmer, I talk more about production. (Farmer)

## T4: Effective follow-up activities

### 1. Follow-up activities and materials

The farmer made an effort to engage with participants after the event by contacting them personally, either through social networks or by email.

Yes, I try ... I try to do it contacting them (participants) social networks or writing them per email or calling them on the phone or face-to-face. In other words, being in a personal contact, talking with them. (Farmer)

No follow-up materials were provided after the event.

### 1. Assessing impact

The impact of the event was not assessed amongst participants, although the Farmer expressed that it would be interesting to do so. Likewise, there was no assessing the impact of the events in the wider farming community, but they would consider doing this in the future.

It would be interesting to see the participation level with the people you interact after the visit. (Farmer)

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 12 participants and all of them filled in the pre and post survey. Nobody works in the local area.

	n° survey participants	Adviser	Adviser pig production	Farmer
<i>Occupations</i>	12	1	1	10
<i>Gender</i>	12			
<b>Male</b>	9			9
<b>Female</b>	3	1	1	1
<i>Age</i>	12			
<b>18-30</b>	12	1	1	10
<b>31-40</b>				
<b>41-50</b>				
<b>51-60</b>				
<b>60+</b>				

### T1: Learning processes

#### 1 Communication initiation by participants

70% of the participants had no problem sharing their knowledge and experiences related to the topic, when in bigger groups. They knew each other, so in smaller groups everyone had no problem sharing. There was a lot of time for questions, about 45 min, and a lot of questions were asked. About 50 percent of the participants formulated their own points of view regarding the topic at the end of the demonstration.

	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	2/12	10/12	0
I asked at least one question during the demonstration .	8/12 yes				
I shared my own point of view at least once during the demonstration.	4/12 yes				
I felt encouraged to ask questions during the demonstration.	0	0	1/12	11/12	0
When there were any discussions, I felt comfortable sharing my opinion.	0	0	0	12/12	0

## 2 Interactive knowledge creation

### *Hands-on opportunities and other multi-sensorial experiences*

Participants could only see the result of the AUTOFARM system. They could touch the pigs and analyse the environment (temperature, humidity, etc. ...) throughout the farm where all the facilities were visited. More than one hands-on activity was demonstrated very clearly and the participants could participate in hands-on activities and got feedback on their doing. The participants were able to try the AUTOFARM system, touch the sensors and manage environmental parameters. Participants could clearly participate (open close windows, cut water circuits, etc.). The demonstrator allowed farmers to enter data into the system and see the results of on-site tests.

### *Discussion opportunities and negotiating conflicting points of view*

There was a facilitator available to the participants to solve the doubts on how to implement the monitoring in the milk production farms. The system is very interesting for young farmers, especially how to apply AUTOFARM to other types of production. Open discussions were stimulated and given a lot of time (15%). Everyone understood the AUTOFARM system perfectly and it was made sure that everybody understood the shared critical points of view.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	0	0	2/12	10/12	0
If participants didn't <b>agree</b> with each other during discussions, somebody (demonstrator/other participant) <b>tried to reach a consensus</b> between them.	0	0	8/12	4/12	0

### 3 Engagement during the event

Participants act like a group of friends who know each other really well. They travelled for 2.5 hours together to the demonstration and they are from the same region so they acted very close. The demonstrator already knew part of the participants through other training sessions of the cooperative and 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	0	1/12	11/12	0
I felt like the demonstration increased my ability to rely on myself as a farmer.	0	0	0	12/12	0
I could relate well to other participants (because they have an agricultural background similar to mine).	0	0	4/12	8/12	0
A lot of the other participants are part of the same farmer network as me.	0	0	1/12	11/12	0
I felt like I could trust the knowledge of (most of) the other participants.	0	0	5/12	7/12	0
The demonstration felt like an informal activity to me.	0	0	2/12	10/12	0
I thought the host farm was comparable enough to my own farm.	0	0	2/12	10/12	0
I had the feeling the demonstrator was like one of us.	0	0	2/12	10/12	0
I had the feeling I could trust the demonstrators knowledge.	0	0	3/12	9/12	0
I got along very well with the demonstrator.	0	0	0	12/12	0

## T2: Learning outcomes

Explained knowledge was very clearly understandable. Skills were addressed carefully and effectively to foster maximum uptake by participants. The demonstrator is the owner of the farm. He designed and implemented the system and that made it very clear. This allowed clear and concrete knowledge transfer. It was a very interactive demonstration, the group consisted of 12 people and that allowed to be very practical the demonstration. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. Common methods or ways of thinking on learning were questioned, but no elaboration on alternatives. There was no group discussion about this.

	participant answers				
What would you <b>ideally like to learn</b> today?	Resource efficiency; How I can do pig production; Resource management; Animal weight control; To reduce the environmental impact of my farm; To work with system monitoring; Control water consumption ; Control of environmental parameters in farms				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	0	2/12	10/12	0
The <b>demonstration exceeded my expectations.</b>	0	0	3/12	9/12	0
I <b>felt surprised</b> at some point(s) during the demonstration.	0	0	3/12	9/12	0
I <b>obtained a clearer understanding</b> of the topic(s) demonstrated.	0	0	1/12	11/12	0
I have the feeling I <b>learned something new</b> (knowledge, skill, practice, etc.).	0	0	1/12	11/12	0
I <b>thought about how I could implement</b> some of the ideas and practices on my own farm.	0	0	1/12	11/12	0
I <b>reflected on my own point of view</b> at some point during the demonstration.	0	0	5/12	7/12	0
I learnt about <b>the principles underlying a practice.</b>	0	0	1/12	11/12	0
I thought about <b>how we learn something new</b> on demonstrations (e.g.: teaching methods).	0	0	0	12/12	0
I thought about <b>why</b> I want to learn about <b>the topic(s) of this demonstration.</b>	0	0	2/12	10/12	0

### T3: Overall comments on the effectiveness of the event

#### *Participants:*

With an average of 5 on 5, participants rated the event overall as the most effective it can get. 12 on 12 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.

## 6. Annex: Case study poster July 2018



FarmDemo

### CASE STUDY Spain: Finca Reboredo-Autofarm

José Manuel Campos - Alberto Fernández  
Federación EFA Galicia

Reboredo livestock is a pig bait farm with capacity for 2000 places. It is located in the municipality of Maceda in the province of Orense. Two people work at the farm, Daniel Reboredo (owner) of 41 years (its owner) and also a full-time employee. The farm is dedicated to producing pig meat through an integrated production in the cooperative of 2nd grade COREN, the pigs enter with an age of 28/30 days and at 4 months they reach 100 kg for sale.

The farm is representative of smart farming, because it developed a system of monitoring and control of agricultural operations through easy management and compression with its own hardware and software, called AUTOFARM



#### Objectives

- Introducing smart farm technology in the farms through the training of young farmers to improve economic and productive indicators.
- Long term: Increase sales of AUTOFARM, the monitoring and control system of the farm

#### Motivations

- Find young farmers who want to introduce control and monitoring systems into their farms
- Know the technical problems that pig producers have to look for technological solutions.
- Transmit the advantages and ease of applying smart technologies to farms.
- Transfer the AUTOFARM system from pig farms to all types of livestock production.

#### Topic selection

- Pork meat Production
- Smart farming to improve productivity and quality of life

#### Audience & participation

- Audience: Farmers, veterinarians, advisers
- No participation fee.

#### Demonstration set-up

- It is top-down, but the farmers also participate in the demonstration with questions throughout the demonstration visit.
- It is the owner (Daniel Reboredo) who directs the presentation: first, he explains the visit we are going to follow in a room from where you can control the entire farm.
- After, we visit the farm to see the results of the monitoring and control system
- There is no subsequent control - evaluation of the results, but the farmer collects data from the farmers interested in applying the system to their farms.
- The explanations are different depending on the audience that attends the farm (advisors / veterinarians or farmers)

#### Evaluation peer-to-peer learning environment ( 22th June 2018 )

- 12 participants : one group
- Presentation based on control of environmental parameters and monitoring of feed / water consumption, etc.
- The farmer-demonstrator receives information on the problems of the farmers and advisers participating in the demonstration
- Participants do not receive documentation, only a presentation based on the information on the website
- The farms finally interested in the system receive more information by email and are visited by Daniel to implement the system.

- Being a demonstration farm is one of the objectives of this farm: it receives different groups per year
- The demonstration task is not professionalized but the owner (Daniel Reboredo) is always responsible for all visits
- Farmers observe and analyze the advantages of monitoring and controlling all the productive parameters.
- The system is not too expensive, which allows a low cost to implement a complex system of easy application
- It is the farmer himself who develops the software and hardware, this gives greater credibility to the demonstration.
- The topics discussed are always the improvement of the productive and economic parameters in the pig sector.



PLAID



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## Spain Case Study 3

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# 1. Background

Pistachio is a new emerging crop in arid and cold areas of Spain, since the end of the twentieth century various research and implementation projects have established an increasing number of farmers betting on their cultivation. This crop replaces traditional crops with very low economic yields such as cereals or other more profitable but not very sustainable due to high irrigation needs.

The SAT Pistamancha cooperative is formed by some of these pioneer farmers who perceive a need to associate and collaborate in transmitting to other farmers how to grow this suitable plant for its production and commercialization. The pistachio has the peculiarity of a very long exploitation cycle, from the plantation to crop, which makes it very important to avoid errors in its cultivation that would make the project unviable many years after planting.

The figure of the president of the cooperative, one of these pioneer farmers, who based on the documentation of first research centers, but in a self-taught way, invests a good part of his time in demonstrations to other partners and possible new members of the cooperative, is key in this case study.

The cooperative on its website (<https://pistamancha.com>) has abundant information for both consumers (including recipes) and potential new interested farmers (<https://pistamancha.com/cultivo/informacion-tecnica.html>). For example, technical information with links to articles from research centers in the area (<https://pistamancha.com/activos/informacion-tecnica/El%20pistachero%20en%20Castilla-La%20Mancha.pdf>), chosen for their clarity in the presentation of this crop for farmers.

The website also has clear data to contact the cooperative and announcement that interested parties will receive information from the partners, in clear and simple language for farmers:

"The partners of Pistamancha have access to the advice required to obtain these returns and enjoy the experience of the rest of the partners with older plantations, thus avoiding possible mistakes."

"To all those farmers who finally decide to invest in the pistachio plantation, you are welcome to this interesting and very special, pistachio world."

The demonstrations are integrated into the cooperative's current work so that the president and the member farmers with he the contact, voluntarily give their time and knowledge in visits to the fields. Generally the farmers who give their fields according to their time and the concrete aspect to show in each plot are present or not in the demonstration according to the indications / request of the president.

The actors are thus mainly the farmers of the cooperative management as point of contact and demonstrators, and the farmer partners as owners who bring their land for the demonstration and the participants in the demonstration. All of them are usually from the region where the SAT is located and which, for logistical reasons and land / climate similarity, is limited to the surroundings of the city of Manzanares (Ciudad Real, Spain) (<https://www.google.com/maps/place/Manzanares,+13200,+Ciudad.+Real/@38.9964163,-3.6343848,108710m/data=!3m1!1e3!4m5!3m4!1s0xd69143949c14057:0x40340f3be4c48c0!8m2!3d39.0437007!4d-3.3590446>). Mainly the towns of Membrilla and La Solana.

**Event Date:** 26/07/2018

## 2. Method

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

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of programme/networks (level 1) and farm level interviews with demonstrators/hosts (Level 1) to reveal how the functional and structural characteristics enable learning. Analysis of these interviews is reported in Sections 3 and 4. Data is sourced from 1 interview at the Farm Level with 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 2 pre and post-demonstration participant surveys, 1 pre and 1 post-event interview with the demonstrator/host farmer 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 Spanish workshop was held on November 14, 2018, in Coristanco, Coruña, Spain at the facilities of the partner EFA Fonteboa ([https://www.lavozdegalicia.es/noticia/carballo/2018/11/15/granja-puede-mejor-escuela/0003\\_201811C15C5997.htm](https://www.lavozdegalicia.es/noticia/carballo/2018/11/15/granja-puede-mejor-escuela/0003_201811C15C5997.htm)). The workshop held 11 people in total, mainly from Galicia region in Spain. The information collected in the case studies was represented through the interviewers of each case study.



### 3. Structural Characteristics

#### T1: Programme/network level

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

###### *The Co-operative: S.A.T Pistamancha – Pistachos de Castilla la Mancha*

This case study is articulated around the work of the cooperative of pistachio growers of Castilla la Mancha ‘Pistamancha’ and, even more of its president who has a central role, as a pioneer in the cultivation of pistachios, in the work of the cooperative and as a driving force of respective demos. The cooperative serves as a knowledge centre for members and a reference point for other farmers interested to engage into pistachio production. Organised demonstration events have a double objective, to share knowledge and to attract more members and strengthen the cooperative. Moreover, the cooperative organises demonstration for its own members as well, in which discussions and topics are more focused and detailed.

Interviewer: So, for now we can see that the different operations are connected, through your plc, at kind of knowledge do you share? Interviewee: We share everything, we also have a WhatsApp group just to share information. (Host farmer)

We have a group for sharing until, as a plc, we can afford a technician who can dedicate their time to this and other things, primarily manage our company but... (Host farmer)

People get in contact with us. Basically, people who are interested in the crop see our web page, or send us emails, and then we talk on the phone. (Host farmer)

We just want to do a good job. We would like a percentage of the producers, who get into the pistachio world, to become loyal members. In fact, a large part of current *Pistamancha* members joined after a visit. (Host farmer)

In the end I know, even though it is not compulsory, we do try to convince those who came that, if they decide to grow the crop, it is worth joining the plc. (Host farmer)

Do you have any plans of doing demonstrations on other things, for example, machinery? Interviewee: There are people who ask about that, but that’s when they’re going to become members of *Pistamancha*. In that case I show them the machinery. (Host farmer)

Interviewer: So, the idea is to discuss more general themes during the first visit, and then for members, or future members, something more professional. Interviewee: Exactly! (Host farmer)

The interviewee referred also to the Centre for Agro-environmental Research (El Chaparrillo) of Castilla-La Mancha. However, this seems to be more of a Centre of useful information on pistachio production and less of an organisation that is actively engaged in the case study’s demos nor in demo events in general.

When there’s a difficult problem the logical step is to call an expert. There’s the vade mecum of pistachios, the book from the Chaparrillo, which is the bible for pistachio producers. When there’s a problem that’s in the book, you can call Pepe G., who is the Chaparrillo’s director. (Host farmer)

When you’re growing a new crop, a lot of people don’t know what to do. The research carried out by the Chaparrillo gives a solid grounding, but most producers will find other producers’ experience more trustworthy. Because most technical information is carried out on half plots, or even smaller. (Host farmer)

There are no experts in the pistachio world, well, there's the *Chaparrillo*, but the experts there are state officials and they don't do these kinds of things. (Host farmer)

The president of the cooperative holds an instrumental role in organised demonstrations. He takes care of the organisational aspects and coordinates work, and he is the host farmer, expert/adviser and demonstrator during demos.

I always let them call me, and then we organise a visit. Once we have established the time and day, we start the tour and I explain the different things people want to know. It's a bit like a tutorial, it's not a course, and basically they get more than they would on a course. (Host farmer)

I don't choose. Normally, as I'm the one who does the visit, they call me, and we arrange something. It's mainly in the afternoons, and if necessary on Saturday afternoons – whenever's best for them. I try to be as flexible as possible in the afternoons when I've finished my workday. So, we try to arrange it for the afternoons. (Host farmer)

The number of demonstrations delivered each year varies and depends on the interest farmers express in cultivating pistachios. Normally events could range between two and ten per year, with the average duration of the event being around an hour and a half.

So, how long would a demonstration last? Interviewee: [...] On average the visit lasts around an hour and half, without spending too much time on each plot, because the important thing is to see the crop's growing process; the first six to seven years. (Host farmer)

Interviewer: And what would be the timescale between different visits, and why? For example, one event a year... Host farmer: It depends on the demand. Some years there can be two or three, but in others there can be eight or ten. Interviewer: So, it's basically as they turn up... Interviewee: Maybe a year can go by without any...

The host farmer prefers to use its one pistachio trees during events. When needed he might engage other members of the cooperative in demonstrations. Finally, there does not seem to be any other experts/advisers involved in the preparation and/or delivery of demo events.

And so, do other producers do these visits, or is it just you? Interviewee: As I'm the only one who's got the grade, I decide. In our area I show my operation and those of others only if I must. To show the evolution from zero to seven years... (Host farmer)

Interviewer: So, it's not organised around a single operation or a mix of operations, it just depends on what you need for the visit, but you are the primary producer involved?

Interviewee: I also know which operations I can go to, there are some I know I will never have any problems because I've already taken visitors there. Of course, we don't do anything there, it's just to see how things are done, the time of year, and talk about the produce. (Host farmer)

Interviewer: Right, so the main actors during the visit would be you and whoever's visiting? You don't normally have a third party, such as a technician or expert? Host farmer: No, because we are interested in how to manage the crop, and the person who knows how to do that is the producer. They have the experience and know-how with pistachios. Pistachios have been grown in Spain for thirty years, we've had them since 2004, and I've been involved since 2007. So, I've got ten to eleven years' experience.

The organised events are exemplary and have a whole farm approach. Depending on the season and the productive interventions the host farmer has engaged in before the event, techniques, such as grafting,

might be also presented and practical exposure of participants on those technics could be pursued. In general, though, such specialised technical sessions are not that often in organised demos.

I think you already explained this, but, how do choose the topic of the visit? The main topic for you is the type of crop, isn't it? Interviewee: Type of crop, land. There's also a difference from one plot to another, to see if it adapts better or worse. [...] So, basically you want to show them the different stages, so the people can differentiate between one way of doing things and another. You give them different options of dealing with the same problem... Interviewee: Covering the whole the area. (Host farmer)

Interviewer: Ok, and before you make an appointment, do you plan anything? Such as this year, we're going to talk more about the land, or more towards grafting, or something else?

Host farmer: The thing with grafting is, well, today for example if we did a visit, the plots have all been grafted and so you could do a graft. But normally we don't do the technical stuff, we could but we don't.

#### *Other actors involved in the demonstration activities*

The intended audience of the demonstration events are farmers in the region, interested in investing into an alternative crop production (pistachios). In most of the times there are only small groups that attend those demonstrations. Finally, participants are not involved in any way in the preparation of the demonstrations.

So, it's mainly farmers from the local area? Interviewee: Yes, most of them come from Castilla la Mancha. (Host farmer)

Interviewee: They come alone or in groups. Sometimes a couple of farmers or more come, sometimes just the one. (Host farmer)

Interviewer: And would they be producers that already have a certain crop, or would they be new to the area? Interviewee: Well, normally they are new to pistachio production, because what they want to know is if it is profitable, then what are the requirements, and above all what the annual benefits are. (Host farmer)

Interviewer: Do the participants get involved, do they bring anything to the table? I'll bring the sandwiches, or I can show you this property... Interviewee: Nothing, nothing at all. That's the second step which I'm really interested in. When they're really interested some of them do say "do you mind visiting my property to see if..." (Host farmer)

The organiser/host farmer is not actively engaged into recruiting participants. Word of mouth appears to be the main marketing channel they rely on in order to attract farmers interested in cultivating pistachios.

It's mainly by word of mouth, it works better than anything else. Posters for example for this kind of visit don't work. (Host farmer)

Interviewee: Normally I don't try to find participants. They call us, and what I do is organise the day. If there's more than one, I try and find a day that suits everyone. I don't look for them, they come to me with questions. (Host farmer)

## **2. Networks**

The only network indicated in this case study is the one of members of the pistachio growers' cooperative.

### 3. Resources, finances and incentives

There is no funding available for the demo events. The whole approach is based on voluntary efforts of the host farmer and of member of the cooperative. While in the organiser mind the need for additional experts is quite evident, it appears that this is to be postponed to the future when the coop will be in the position to afford this kind of expenses and support. Still, this does not seem to threaten the feasibility of organised demo event, although it definitely affects its depth and scope.

So as I was saying before, do you get any funding or is it all pro bono? Interviewee: We have never, and we don't charge anything, and the plc. doesn't have any money to pay for them. I tend to do it on a personal basis. My work and my rent have a price, but for now... (Host farmer)

Interviewer: And how does that influence the administration, by which I mean when you get tired or you don't have time... Interviewee: No, it's because we're only just starting. Most of the producers are members but as it takes between five and seven years to start producing, and most have just planted, we can't afford the help of a technician right now. When the different producers are up and running decently we will employ someone to help, but for now it's only our experience as producers that we share with each other. If someone has a problem someone else had before, well instead of hiring a technician, we have a member with certain experience and skills that can help. (Host farmer)

### 4. Goal/ objectives

The overall goal of the demo events is to expose farmers to the production of pistachios as a promising, needed but demanding alternative. In addition, when farmers-attendees confirm their willingness to engage a secondary objective is to link them to the cooperative and increase its membership, and thereby the coop impact.

Well we do it for the farmers that don't have pistachios. Normally a producer that has pistachios does a demonstration to those that don't, so they can see the technique involved in growing the crop, and to try and get them to join *Pistamancha*. (Host farmer)

Interviewer: So, it also works well for recruiting new members? Interviewee: Exactly! (Host farmer)

### 5. Follow-up material and evaluation procedures

The host farmer indicated that there are not any dissemination material shared with participants, during or after the event. Follow-up information and a comprehensive set of technical and economic details are share with those that decide to join the cooperative.

And do you distribute materials or equipment after? Nothing. (Host farmer)

There are people who ask, I have a cost calculation sheet, and if I think they'll become a member, I'll give it them, but otherwise no. (Host farmer)

I don't give them a paper with different parameters. I do that after, and only if they need it. (Host farmer)

There is not any structured assessment process in place on both the event's structure and content or of the impact the event had to participants. Indirectly though, and always informally, the host farmer tries to keep an eye on both participants post-demo actions as well as of the impact his farming choices have into non-participants.

How do you monitor those that participate in your visits? Interviewee: [...] Of course, the crop is increasing in the area. For those that come, it may be because of that [...] (Host farmer)

After a visit do you try and find out if a year later these visits have been successful?

Interviewee: No, I don't but... in the end I know [...] (Host farmer)

Right, for example, the different participants that come to visit you, do you follow them over time? For example, someone came to visit, we'll get back in contact in a year's time to see what's what... Interviewee: Not normally no, unless they say they're interested in keeping contact and want to join the plc. In that case I do keep in contact, but because we don't charge anything, even though we should, I can't do any follow up as it costs me time. (Host farmer)

Do you know how much influence these visits have (to non-participants)? Interviewee: Well I haven't thought about it. I do know of some producers in the area who have planted pistachio, not necessarily for me personally, but because of my plantations. Even though they don't admit it. (Host farmer)

As far as I know, of the people who have visited 70-80% have planted, and of those about 30% are pistachios. But we have no type of control or register on the subject, but most of the people who come end up planting pistachios, and some of them are now producing. (Host farmer)

## T2: Farm (event) level

The demonstration event was held on 26 July, 2018, as a guided tour on different farms in Castilla-La Mancha, close to the seats of the cooperative. Along with his own farm, the host farmer drove participants to cooperative members' farms to showcase different plots and development phases of pistachios. (Observation tool)

The host farmer organises one-off events, unless participants are interested in joining the cooperative (Farmer + observation tool). Dissemination material was not shared with participants. Moreover, no structured follow-up activities were envisaged, unless participants ask for an informal communication to take place, mainly through phone calls. (Observation tool). Feedback is not requested in a structured way (Host farmer + observation tool).

### 1. Topic

Pistachios crop in Castilla-La Mancha (Observation tool).

### 2. Structure of the event

The host farmer used an all-terrain vehicle to guide participants to a field trip, visiting different fields both his own ones and of his colleagues/members of the cooperative cultivating pistachios in the area. He compared differences in growing phases of fruits and health of trees/production. The farmer stopped in different fields and offered hands-on activities mainly with soils and fruits. In each stop, the whole field and its surrounding area was analysed. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated. The host farmer continuously offered examples to cereals crops, which are the dominant crop in the region. (Observation tool)

The demonstration felt like a continuous conversation among participants and the farmer, as following each field stop, they have engaged into Q&A and discussion until they reached the next field (Observation tool).

### 3. Group size

The farmer and 2 participants; both of them were interviewed (pre/post demo participant surveys & Observation tool).

### 4. Actors' roles

#### *Host farmer - demonstrator*

The host farmer was the demonstrator of the event. H guided participants to different fields, explained different development phases of the crop and offered participants, when convenient or necessary, hands-on opportunities to touch the soil (humid or dry) and the fruits (consistency and development). Finally, he used all available time to share information on production and reply to questions posed by participants (Observation tool).

#### *Participants*

The first attendee was a farmer and the second a factory employee, both interested into pistachio production (pre participant's survey). Both participants agreed or strongly agreed that they have actively been involved during the whole demonstration process (Post participant's survey).

### 5. Frequency

The frequency of the organised events depends on the interest/demand showed by farmers. They range from 2 to some 10 events per year, although there were years in which no event was scheduled (Host farmer).

### 6. Duration

There is no reference to the duration of the specific event. The host farmer has indicated that usually events last for about an hour and a half (Host farmer).

### 7. Accessibility

According to the pre demonstration participant survey, the farmer had indicated that it had to place substantial effort to attend as she had to travel for some 2 hours in order to reach the demonstration. On the contrary, the factory employee was a local resident and reached the demo fairly easy within 10 minutes' drive.

### 8. Fees for participation

At the specific demonstration event, there were no attendance/participation fees charged (Post demonstration participants). Moreover, none of the participants was in any way compensated for attending the event (Post demonstration participants).

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

It appeared that host farmers were not paid for demonstrations as the programme had no money to pay them and events, being free, did not generate income. The Farmer added that events were generally done on a personal basis.

We don't charge anything, and the plc. doesn't have any money to pay for them. I tend to do it on a personal basis. My work and my rent have a price, but for now... (Host farmer)

#### 2. Motivations for host farmers

The motivation for farmers was predominantly an interest in the crop itself.

People get in contact with us. Basically, people who are interested in the crop see our web page, or send us emails, and then we talk on the phone. (Host farmer)

#### 3. Motivations for participants

The Farmer was clear that people were not motivated by economic or social gain, but purely out of a desire to do a good job.

Interviewer: For example, what motivates people, or what are the reasons for doing this activity? Are they economic, to gain social status, or our produce is better than others'...

Interviewee: No, we're not interested in being the biggest or the best. We just want to do a good job. (Host farmer)

#### 4. Target audience

The target audience were farmers that were not currently growing pistachios but had the potential to invest in the crop.

Interviewee: Well we do it for the farmers that don't have pistachios. Normally a producer that has pistachios does a demonstration to those that don't, so they can see the technique involved in growing the crop, and to try and get them to join Pistamancha. (Host farmer)

#### 5. Advertising and recruitment

The Farmer found that word of mouth was the most successful way to recruit participants, adding that poster and other forms of advertising did not work.

It's mainly by word of mouth, it works better than anything else. Posters for example for this kind of visit don't work. (Host farmer)

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

The Farmer described the nature of interaction as Mostly top-down, as the tour and the technical information were delivered by the host.

I always let them call me, and then we organise a visit. Once we have established the time and day, we start the tour and I explain the different things people want to know. It's a bit like a tutorial, it's not a course, and basically they get more than they would on a course. (Host farmer)

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

It was unclear to what extent, if any, host farmers were involved in individual demonstrations or the network programme

Participating farmers were not involved in individual demonstrations, although the Farmer was keen to explore how this could be addressed in the future.

Nothing, nothing at all. That's the second step which I'm really interested in. (Host farmer)

### 3. Focus

The Farmer described the network as 'Whole farm', as opposed to 'Single focused'.

### 4. Design

The Farmer described the network as 'Exemplary', and expressed a preference for this approach, however gave no justification as to why.

### 5. Group size

The tour involved driving between plots; as such, the Farmer felt it was best to keep the group small enough to all fit in one car so that conversation could continue with consistency throughout the day.

For me it's best when we all fit into one car or vehicle. Since we'll be moving from plot to plot, if there's more than one vehicle then you'll end up talking with some of them and not all of them. If people change car at one plot, then the conversation stops half way or starts half way. If there's more than one car, people should stay in the same one for the whole visit. (Host farmer)



### T3: Enabling learning appropriate to purpose, audience, context

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

The Farmer's preferred structure of the day consisted of conversation with participants, and working from what they wanted to know.

Just conversation. First establish what they want, which takes five minutes, and then on the road you listen to what they have to say, you answer questions, you ask questions, because everyone has specific questions which I try to answer. (Host farmer)

The Farmer had a cost calculation sheet available to those he felt were likely to become members of Pistamancha.

No, that's all I need! There are people who ask, I have a cost calculation sheet, and if I think they'll become a member, I'll give it them, but otherwise no. (Host farmer)

The Farmer cited 'Participants ask questions & talk openly' as the most important technique for engaging participants, expressing again a preference for a day structured around open conversation around different plantations.

Interviewee: For me the best, is for it to be like a conversation, with a visit to the plots so they can see the plantations. They ask questions and I answer. This plot is like this because it has had a problem, this one is better because there's been no problem... (Host farmer)

#### 2. Taking into account variation in learning

When asked about variations in learning, the Farmer seems only to consider participants' attitude towards farming rather than their learning styles or prior knowledge. The Farmer felt strongly that the most important element of pistachio farming was patience, but gave no indication that those who did not understand this concept were accommodated.

Interviewee: For me, the basis of these visits is so that the pistachio producer internalises that the best way to grow this crop is with patience. So, if you understand that it takes seven years before it starts to produce, you'll be a good pistachio producer, no problem. On the other hand, if you think you are smarter than everyone else, and that instead of taking seven years it will take five, you are going to commit imprudent errors which will affect you in the long run.

Interviewer: So, more important than technique is for people to understand this idea, to be patient.

#### T4: Effective follow-up activities

##### 1. Follow-up activities and materials

There was no attempt to engage with participants after the event, either with follow-up activities or materials.

##### 2. Assessing impact

The Farmer supposedly assessed the impact of events among participants and among the wider farming community, however gave no further details regarding this.

## 5. Event analysis: effective peer learning characteristics

### Event details

2 out of 2 participants completed the pre and post-test. One was a 29 year old man who is a factory employee and works in the local area. The other one was a 47 year old women who is a farmer and doesn't work in the local area. They were not related.

### T1: Learning processes

#### 1. Communication initiation by participants

In a group of 2 participants (not related) and the demonstrator, it's easy for the whole 'group' to share their knowledge, so they had no problem doing that. There was a lot of time for questions, about 30-40% of the time, and a lot of questions were asked. Most of the time, the demonstration was a continuous conversation between participants and demonstrator. After each big explanation in the field, all the way to the next field, or on the road, the time was used for questions and discussion. Both participants tried 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	1/2	1/2	0
I asked at least one question during the demonstration.	2/2 yes				
I shared my own point of view at least once during the demonstration.	2/2 yes				
I felt encouraged to ask questions during the demonstration.	0	0	0	2/2	0
When there were any discussions, I felt comfortable sharing my opinion.	0	0	0	2/2	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	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*

A hands-on activity was demonstrated taking enough time, so it was clear to every participant. Participants could take part in a hands-on activity, and got some sort of feedback on their doing. This mainly with touching soils (humid or dries) and fruits (consistency and development) if they were available and in a field with explicit permission (4-5 times for soils and 2-3 for fruits). They could also smell and taste the fruits if it is the right period.

### Discussion opportunities and negotiating conflicting points of view

The demonstrator acted as facilitator. He is the leader and expert farmer of the cooperative and he conducted the demo. Open discussions are stimulated and given a lot of time, about 40%. With the most local participant, they discussed every field and techniques that every farmer is using and why. 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, <b>there were interesting discussions</b> during the demonstration.	0	0	1/2	1/2	0
If participants <b>didn't agree</b> with each other during discussions, somebody (demonstrator/other participant) <b>tried to reach a consensus</b> between them.	0	0	1/2	1/2	0

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

### 3. Engagement during the event

Participants all seem to know each other well, but are not close friends. But as farmers in a small group, they quickly start to talk about their farms, and to share experiences. The demonstrator acts as friends with the participants. E.g. He starts offering hats to protect about sun, and he make jokes about those with white skin not being real farmers.

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

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were <b>participants</b> (farmers, advisers, researchers etc.) <b>involved in the overall development of this demonstration?</b>	Yes: We explain more on topics about which they previously asked				
Most of the <b>participants were well known to me</b> .	0	1	0	0	0
A lot of the participants <b>are part of the same network as me</b> .	0	0	1	0	0
The demonstration felt like <b>an informal activity</b> to me.	0	0	1	0	0
I think the <b>host farm was well suited</b> for this demo.	0	0	0	1	0
I <b>got along well</b> with the participants.	0	0	1	0	0

## T2: Learning outcomes

The explained knowledge was very clearly understandable. Skills were very clearly and effectively addressed to foster maximum uptake by participants. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group.

	participant answers				
What would you <b>ideally like to learn</b> today?	More experience, to improve skills; Has this crop real options for succes?				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	0	1/2	1/2	0
The <b>demonstration exceeded my expectations.</b>	0	0	1/2	1/2	0
I <b>felt surprised</b> at some point(s) during the demonstration.	0	0	1/2	1/2	0
I <b>obtained a clearer understanding</b> of the topic(s) demonstrated.	0	0	2/2	0	0
I have the feeling I <b>learned something new</b> (knowledge, skill, practice, etc.).	0	0	0	2/2	0
I <b>thought about how I could implement</b> some of the ideas and practices on my own farm.	0	1/2	0	1/2	0
I <b>reflected on my own point of view</b> at some point during the demonstration.	0	0	1/2	1/2	0
I learnt about <b>the principles underlying a practice.</b>	0	0	1/2	1/2	0
I thought about <b>how we learn something new</b> on demonstrations (e.g.: teaching methods).	0	2/2	0	0	0
I thought about <b>why</b> I want to learn about <b>the topic(s) of this demonstration.</b>	0	1/2	1/2	0	0

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

### T3: Overall comments on the effectiveness of the event

#### *Participants:*

With an average of 5 on 5, participants rated the event overall as very effective. 2/2 would recommend the demonstration. They stated as most effective characteristics of the event: A lot of fields with diverse situations (examples) and very experienced demonstrator (Host farmer). The demonstrator is a real farmer with real aims to share knowledge and he has a lot of experience and field access (from other farmers). There were no suggestions for improvement.

#### *Demonstrator:*

The demonstrator reported on what made it effective: to touch real plants, a lot of cases (fields) and our experience. He had no suggestions for improvement.

#### *Observed main strong points of the event:*

A farmer very committed with the promotion of a new crop, he is a passionate “believer” and transmits that he truly believes in this crop. He has a long and profound experience with difficult techniques like ‘grafting’.

#### *Observed main points that could be improved:*

Targeting, and planning for a little bit bigger groups. Also, the self-recognition of his value as demonstrator, and the importance of communication about the demonstration. It seems that only people extremely interested in this crop who were using word of mouth could find the demo.

## Sweden Case Study 1

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# 1. Background

## Funding and Governance

The two main organisations (SFO west, and SpmO) are responsible for the funding and the governance of the demonstration day.

## Actors and networks

The organiser is responsible for the invitation to their members and network. The four farmers are very active in the planning of the demonstration and the logistic and to arrange coffee and lunch for all the participants.

## How it works

Every year there are similar “growers day” organised in different places in Sweden. Local actors are involved to find out which farms that is most interesting to visit. There is more unusual that these two organisations are collaborating to arrange the growers day. There are more often that they are organising own meeting.

## Event farm and location

The event was on Bäckén Farm, which was situated in the West, not far from the lake Vänern. The meeting was held on the 7<sup>th</sup> of June 2018.

The demo-day started with a presentation of the farm of three of the four farmers and a presentation of the Farming In Balance concept. Then there were four main subjects: Winter wheat, canola, biogas and slurry management, production of ley seed. After the field visit in four groups, there was a presentation of the market of canola, and some follow-up questions. There were also sellers presenting their products on the farm.



*Photo; farmers are impressed of the strong and healthy Canola growth on the farms. (Photo, H. Elmquist). The photo is from the field visit when the group is divided in four looking at different crops and management systems in the fields.*

## 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/Network members after the demonstration and from an interview of the four farmers, father, mother and the two sons immediately after the demonstration, and from some of the participants after the demonstration day. 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 4 post demonstration surveys for participants 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 17<sup>th</sup> of October, 2018.

### 3. Structural characteristics

#### T1: Programme/network level

##### 1. Actors involved

“The growers day” was organised by two organisations: the Swedish cereal producers association (SpmO), and a Swedish local organisation for seed and oil seed producers (SFO) in west of Sweden. The Swedish farm demonstration network OiB (Odling I Balans, Farming In Balance) was also invited to present their work. Bäckén is one of the demonstration farms in the OiB network. Advisers from the Hushållningssällskapet (The Rural Economy and Agricultural Societies) were also engaged during the field visit, where they gave advices and discussed how to handle this year’s threat from pests. Finally, a person from the Swedish Board of Agriculture was also active in the event. A member of the SFO board acted as the facilitator of the event.

According to Programme interviewees, this is a typical format in demonstrations organised by these two organisations. In essence, the organisations select and approach the demo farm, and upon host farmers agreement they work with the farmers to organise the event as well as with other organisations to engage with experts and advisers.

[The events are] organised with the help of representatives from each organisation.  
(Programme interviewee 2)

Head of the two organisations or representatives and one or two representatives from the host farm. (Programme interviewee 1)

[Our role is] Planning and organising the structure and also, delegated the demonstration activities to experts and advisers. Their role is to organise the demonstration and impart knowledge. (Programme interviewee 1)

...Advisers and experts. Their role is to impart something and exchange knowledge.  
(Programme interviewee 2)

This was also the case in this specific event. The two organisations SFO and SpmO conceived the idea of a demonstration day at the farm. Then, they contacted the Bäckén farm asking if they could host the event. Upon their approval, the organisations worked to activate the appropriate experts and advisers that would support as demonstrators along with the farmers. The manager of OiB was invited to give presentations on the demonstrations network and its projects different subjects. Advisers and experts on crops were invited to show crops in the field and to talk about actual issues concerning cultivations. Finally, representatives from commercial companies were invited to show their products during the event (observation tool; background info).

Both programme interviewees indicated that their intended demo audience are farmers. They also both stressed that although they select among their members/networks to organise demos those events are rather independent.

With reference to the funding arrangements of demonstration activities, the organisers rely on commercial companies which they approach to participate and cover the programme’s costs. In general, demonstration activities such as the “Growers day” are often free for farmers.

Sponsors are invited and they pay a certain fee. This should cover the costs of the programme.  
(Programme interviewee 1)

Sponsors. We ask relevant actors that would like to participate (Programme interviewee 2)

According to the programme interviewees, events may be organised annually but there are no follow-up activities to reach out to participants after each event. Moreover, there does not seem to be any formal evaluation process installed. Finally there are no dissemination materials shared with participants, during or after the events (Programme interviewees).

Q: Do you evaluate the demonstration activities overall? R: Just a little by listening among participants. (Programme interviewee 2)

#### The host farmer

As noted earlier, only one of the two programme interviewees referred to the active participation of host farmers in the organisation of the events. However, the farmer claims a quite advanced role in the organisation of the demonstration.

We are doing this together. Today the organisation (...) helps us. We did all the work on the farm. Planned everything and thought everything through. (Farmers)

The called us and arrange things, they said that they are doing everything, but it is so much more to be done. (Farmers)

Despite their, apparently intensive, engagement in organising and delivering the demo activities, according to the Programme interviewees host farmers do not receive any kind of compensation for their engagement. Thus, while one should rather trace into non-monetary incentives farmers' decision to host demonstrations, still there are indications that some sort of monetary incentives would be appreciated.

But we said yes, we can be the host farmer for this event, because we thought we will manage and take the extra work (Farmers).

We are having payment indirectly.... (Farmers)

One get knew knowledge and gets a broader view. I get new influences from others. (Farmers)

We don't get anything this time, but we are talking about requesting payment. (Farmers)

If we had been well paid and we could set up the agenda, then we could arrange a very suited demonstration that attracts those who not normally attend demonstrations (Farmers)

## T2: Farm (event) level

Bäcken farm is a mixed farm with both arable and pig production, situated in Dalsland not far from Mellerud. The farm is a rather new member in the OiB demonstration network. The farm is run by four members of the family. The father in the family was active in the SFO organisation in the past. The demonstration focused mainly on the actual situation of the crop this year, but also on OiB's holistic perspective and the market for oilseed producers (observation tool).

The organisers felt that their target was not reached.

Since approximately 10% of all invited turned up on the event, not so good. (Programme Interviewee 1)

Nevertheless, the host farmers felt that it is not easy to handle bigger groups, in order to get a nice and effective demonstrations.

During the field visit there were divided in four groups with 15 in each. It was an appropriate size of group. No one can step aside and be inactive (Farmer)

If it is 40 in a group, it does not work. At this demonstration day it was to large group in the end. Then only few ask questions (Farmer)

The event took place on June 7, from 9.00 to 4.00 pm (Farmers)

The president of the SFO (west) started the demonstration. He was also the facilitator of the day. Then three of the farmers from the host farm, were telling their Farm's story, their management strategy and their vision for development of their farm. After that, the manager of OiB presented the basic concept of their demonstrations network and some of their on-going projects. Then, the whole group (some 60 people in total) was divided in four and attendants were driven to different stations in the field. There were four stations, one on wheat production, one on rape seed oil production, one on ley seed production and one station at the biogas station. After the tour in the four station, participants were offered lunch which was followed by a final presentation on the market for oil production. There was also a poster presentation from some sellers of pesticides, fertiliser, and different agricultural technique. Although, there were only a few questions when participants where in the whole group, during the field visits when it was smaller groups there were lively discussions and many questions (observation tool).

Participants were mainly farmers from the nearby and surrounding areas, along with a small number of advisers who were also attending the demonstration. (Farmers)

Host famers had organised coffee and sandwich to everyone when they arrived and later lunch for participants, which in both cases facilitated participants' interaction either as a welcomed ice breaker or as a meeting point to discuss on what famers have seen (observation tool).

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives for host farmers

The host farm does not get any financial reward (although the farmer mentioned requesting payment), both Programme Interviewees confirmed that no incentive was offered to farmers.

However, the father and Son 1 said that they get indirect benefits like new knowledge, a broader view and positive influences from others. The father explained the benefits saying:

By increasing our knowledge makes us less [likely] to be stuck in only old ways on solving problem. It is also positive for the employed people on the farm to have others visiting our farm. (Father-farmer)

Son 1 and the father both commented that they have used the demonstrations to create a kind of a label or identity around the farm name. This provides new contacts for them that can be positive for example when they are selling cereals, or when they need to discuss finances with the bank. Indeed, they want to put more effort in developing this label. But they do not mean an ordinary label, they are talking about to develop a good farm reputation.

#### 2. Motivations for host farmers

With respect to motivations for hosts participating in demonstrations, Son 1 and 2 explained that their farm had some specific forms of management that they think that other farmers are interested in. They demonstrate their cropping management which aims to avoid soil compaction.

In line with what was said about incentives, Son 2 said:

To be a demonstration farm gives ones also [the] possibility to integrate with other farmers. When [I] integrate and meet other farmers it gives me a possibility to learn much myself. (Son 1)

The Mother-farmer agreed that there are these rewards and more practically the farm gets tidied up and cleaned as well.

Son 1 explained that new knowledge as well as other farmers discuss and study their management, it is a kind of validation. He knew then that they were doing the right thing and that give motivation:

I get new thought[s] from others and it is fun. The fact that someone says it is good, is “a carrot”. Often, I see only the things that is bad and everything that needs to be fixed. (Son 1)

They say that the demo events inspire them and that the demonstration day are enjoyable, being able to answer participants questions about what they have done.

The 2 programme interviewees supported these views, for example saying:

First of all, interest. They [the farm family] have something special that the want to show and share. Then it's fun to show others and it motivates them to host activities. (Programme interviewee 1)

#### 3. Motivations for participants

The family had a range of views about what motivates participants but Son 1 and 2 agreed that farmers come for high quality specialist knowledge:

It is important that it is a narrow and interesting topic. Then ones attend the demonstrations.  
(Son 1)

They agreed that farmers don't come to see cute animals, nor as the mother argued for the food anymore.

Both programme interviewees agreed that participants come to acquire specialist knowledge, but that the social aspect is important:

They want to learn something new and specific for that year. Also, for the social content.  
(Programme interviewee 2)

#### 4. Target audience

The father suggested that other farmers were the main target, so that they could talk business to business. The farmers who come, according to Son 2, are more interested in the biogas production and in the crop production aspects.

The mother and Son 2 referred to consumers as one sort of audience and they enjoyed talking to them, the mother said:

I think it is fun to talk with consumers. I want to show the consumer that we have a good status on the animal welfare. I speak directly to the consumers, telling them how I save piglets using the mouth to mouth-method. My story is to tell what my heart feels. The consumers that comes to the farm are mostly interested to look at the pigs. (Mother-farmer)

The programme interviewee (1) said that farmers who are members in the two organisations that organised the event are the target audience.

#### 5. Advertising and recruitment

The farm almost always has targeted events where participants are invited only, i.e. there is not open house event. The father explained that they had had one "open farm-day" before, when a new pig house was finished, but there were few participants, and there were mostly neighbours that came.

Son 1 and mother agreed that It is important that the invitations come from a well know organisation. As the mother said it is good to have a "heavy organisation behind us".

They both explained if they send the invitation themselves only neighbours would come.

If the invitations come from us, we would get visitors with a common interest and not specific in the crop and biogas production. (Son 1)

With respect to successful ways of advertising and recruitment, the programme interviewee (P2) suggested finding topical issues, as well as those that are not usually shown (such as biogas facility in this matter) as this will help recruit and target certain participants.

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

With respect to how topics are selected, according to the programme interviewee (P1) this is steered by several things, he explained that selection is:

Steered by current times. Time of the year and how the crops have developed on the fields. Also, what interests the participants. Since they are invited due to their membership in these two organisations they probably expect to hear about related subjects within growing cereals, ley and oilseed crops. Also, the hosts are involved, in topic selection, since the topic is based on what they want and what there is to show. (Programme interviewee 1)

When asked about the nature of interaction, the farmer described it as Mostly bottom-up as did the Programme Interviewee 2 saying this way

You are responsive, which can encourage people to come and they feel that they are involved. (Programme interviewee 2)

However, the Programme interviewee 1 described it as mostly top-down, saying

We expect big groups and therefore it is most suitable. Also, the participants probably expect advisers and expert to give them some kind of "lecture". It is also about time and logistics. (Programme interviewee 1)

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

According to the Programme interviewee 1 the host farmers are involved in the network programme as the demos are based on what there are to show. They are also involved in individual demonstrations by providing the location, the organisation and practicalities - for an example buses, food and so on, and the different plots depending on what there are to show. There was no answer to questions about the extent of participating farmers' involvement in the network programme and event.

### 3. Focus

With respect to the focus of the demo the farmer and the Programme interviewee 2 described it as neither Whole farm nor Single focussed but In between, while the Programme interviewee 1 described it as Whole farm.

### 4. Design

The Farmer described the demo approach as a mixture of Experimental and Exemplary. The Farmer explained that he is:

Interested to produce and to do it as best as possible from several views. We have had research on the farm before. (Father farmer)

However, the Programme interviewee 1 described the demo approach as Exemplary, but and explained that it has to be suitable for the set-up/arrangement. Interestingly the Programme interviewee 2 described the demo as a mixture' of both but expressed a preference for ... Experimental because, as he said:



You are trying something new that you can learn from. Development moving forward. Innovation. (Programme interviewee 2).

## 5. Ideal group size

With respect to optimal group size the family and the programmer interviewees agreed that 10-15 is best, as Programme interviewee 2 explained

Then most people dare to come up with questions and points of views and it is also easier to see and hear the demonstrator. It also invites to more interaction. (Programme interviewee 2)

Son 1 and the mother had experienced large demonstration days where the group was 40 and no one asked questions, although if they are divided in four groups with 15 in each (as was done in the field trip) this is appropriate size.

## T3: Enabling learning appropriate to purpose, audience, context

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

The Mother-farmer and Son mentioned how they had enjoyed a demonstration farm in the Netherlands where a farmer had built a conference centre where you looked at the milk production with cows grazing outside through during the meeting.

For structure of the day, food again appeared as important. In terms of delivery, they all mentioned how important it is to connect to the audience, to tell stories, not only to be superior and to also explain about mistakes. As the father said:

There is also important to tell about the mistakes I have done. It is not a way to act as I am better than I am, like a snob, though it is a way to tell real stories from the farm, what have worked and what have not worked. (Father-farmer)

The mother agreed saying how important it is to describe feelings, both positive and negative as this gets people listening. The programme interviewees both referred to the mix of learning needed saying you need a good mix of “lecturing” and interactions and practical activities and that it should be:

Pedagogic. Not only standing there and lecture but want to get the audience involved. Catch the audience in a good way. (Programme interviewee 2)

Regarding materials such as brochures, they do not provide any materials except for some leaflets used in a previous project about energy-efficiency.

Regarding what is an important outcome in a demo event, the father Farmer cited ‘Problem solving - farmers feel they know how to solve a problem’ as the most important because he said listening to other problems is what he is most interested in when he visits another farm demonstration. The Programme interviewee 2 cited ‘Participants ask questions & talk openly’, ‘as the most important ... because he said it encourages dialogue explaining:

There is a lot of knowledge among those who attend the meetings. You learn a lot. (Programme interviewee 2)

Whereas the Programme interviewee 1 cited ‘Good quality expert advice & technical presentations’ as the most important because the demo it is based on the advisers/experts sharing their knowledge.

## 2. Taking into account variation in learning

The farmer said they do take into account variation in learning style of participants.

### T4: Effective follow-up activities

#### 1. Follow-up activities and materials

Both Programme interviewees 1 and 2 said they do not engage with participants after the event nor provide any materials, saying that there are webpages with information.

#### 2. Assessing impact

When asked if they assess the impact of the event amongst participants, the farmers said yes while the Programme interviewee 1 said sometimes by talking with colleagues and members, whereas Programme interviewee 2 said no.

Regarding assessing the impact in the wider farming community, the farmer said he does not assess impact, but referred to an organisation called “Landshypotek” which aim is to get more consumers to engage with farmers and hosts a Facebook page providing a lot of information. Neither programme interviewee assesses the wider impact, but they do rely on the ripple effect, relying on participants who attend demos to talk to those who were not.

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 60 participants divided in 4 groups of 15. 4 of them filled in the post survey.

### T1: Learning processes

#### 1. Communication initiation by participants

When in the whole group or in smaller groups, between 10% and 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. Some of those who asked question, also shared some knowledge at the same time. After and during the walk towards, in between and from the demonstration plots, the participants discussed a lot and it sounded like they willingly shared knowledge. The participants were told at the beginning of the demonstrations that questions were welcome. It felt like the participants had opportunities/given time during the demonstration to ask questions and so they did. Percentage of the time is difficult to say, but the demonstrator and/or the leader asked the participants in average three times per 20 minutes. The ambience in the group and between demonstrators and participants made the atmosphere welcoming to ask questions, which probably contributed to the fact that many questions were asked. Few participants were pointing out their thoughts. For example, at the biogas facility some participants talked about the benefits of the facility but at the same time they pointed out that it was not suitable on their farms due to other conditions.

At the fields, some participants talked about their own experiences and explained why they managed things as they did.

	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	2/4	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.	3/4 yes				
I felt encouraged to ask questions during the demonstration.	0	0	2/4	1/4	1/4
When there were any discussions, I felt comfortable sharing my opinion.	0	0	2/4	1/4	1/4

## 2. Interactive knowledge creation

### *Hands-on opportunities and other multi-sensorial experiences*

As multi-sensorial experience, the canola was cut vertically through the stem to enable participants to study larvae inside the stem. Participants were encouraged to pick up a wheat plant to study its health and to touch the pipes in the biogas facility, where manure travels through, which was warm. The participants also took some own initiative through picking up plants to study them.

Three hands-on activities were noticed that have been demonstrated very clearly. Once the participants were asked to look at a canola plant that was cut in two through the stem to observe larvae. The other time the demonstrator talked about the pipes in the biogas facility, where manure travels through. It is warm, and the demonstrator said that we could hold our hands on it to feel the heat. The demonstrator picked up a wheat plant and talked about how to study the status of a wheat plant, some of the participants did the same. So, participants could take part in hands-on activities, and got some sort of feedback on their doing. The feedback was more or less just a comment, such as: 'Can you feel the heat, or can you see the larvae?'

### *Discussion opportunities and negotiating conflicting points of view*

There was a facilitator. This person was representing the organisation that arranged this event. The leader was mostly focused on keeping track on time. The leader was also encouraging the participants to ask questions by asking them if they had any questions now and then, and he was also contributing with some questions of his own.

Actually, no open discussion was noticed. There was time for open discussions, but nobody really engaged. There were a few times when more than one question and one answer were posed, but then it was more like an additional question or a clarification. There was also no elaboration/further explanation on shared critical points of view. A few points of views were shared, but there was no elaboration/further explanation.

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

### 3. Engagement during the event

Many of the participant have met before and seemed to know each other to a varying extent. Some may have been there without knowing any other participant before this event. Some seemed to have known each other several years and acted more closely related. While demonstrating, the demonstrator acted open and friendly, but not as close friends with the participants. After and during the walk towards, in between and from the demonstration plots, the demonstrator acts as a close friend to some of the participants.

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

## T2: Learning outcomes

The demonstrator(s) was explaining the knowledge in a clear manner and understandable for the participants. There was no need for explaining the knowledge in different ways since the participants seemed to follow. With these (few) practical activities encouraged, there was a small interest among the participants. The skills were not sufficiently addressed to promote the maximum uptake by the participants. Perhaps most of the participants felt that they already had “practiced” these activities several times before. For an example, picking up a wheat plant and studying it’s health was something in principle all participants had done before and therefore did not feel the need of doing that at this

moment. There was some questioning regarding intensified systems: 'Why do we use this kind of crop rotation? If we use ley in the crop rotation, we can get a crop rotation that is better.' There was also a brief discussion about what kind of crops that is good to incorporate in the crop rotation. Common methods or ways of thinking on learning were not questioned.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	0	3/4	1/4	0
The <b>demonstration exceeded my expectations.</b>	0	0	3/3	0	0
I <b>felt surprised</b> at some point(s) during the demonstration.	0	1/3	2/3	0	0
I <b>obtained a clearer understanding</b> of the topic(s) demonstrated.	0	0	4/4	0	0
I have the feeling I <b>learned something new</b> (knowledge, skill, practice, etc.).	0	0	4/4	0	0
I <b>thought about how I could implement</b> some of the ideas and practices on my own farm.	0	0	4/4	0	0
I <b>reflected on my own point of view</b> at some point during the demonstration.	0	0	4/4	0	0
I learnt about <b>the principles underlying a practice.</b>	0	1/4	2/4	0	1/4
I thought about <b>how we learn something new</b> on demonstrations (e.g.: teaching methods).	0	3/3	0	0	0
I thought about <b>why</b> I want to learn about <b>the topic(s) of this demonstration.</b>	0	1/3	2/3	0	0

### T3: Overall comments on the effectiveness of the event

#### Participants

With an average of 3,5 on 5, participants rated the event overall effective. 4 on 4 of the participants who answered the questions would recommend the demonstration.

As effective characteristics of the event, participants mentioned: Farming in Balance raised issues that concerns both conventional and ecological farming in a good way, which unites these two forms instead

of splitting them in a politically correct attitude; the farm, the farmers and the demonstrators. Also, the oil seed fields; Well-planned arrangement with a variety of questions. But, no time for going into depth within a subject; the field visit that was combined with discussion about the market.

One participant mentioned as a suggestion to improve the demonstration: Always good to have plots for comparisons, and to easily start discussions about different topics, and fields with different field inputs beside each other.



## 6. Annex: Case study poster July 2018



**FarmDemo**

**CASE STUDY "Sweden": Farm Bäckén**

Västra Sveriges Frö- och Oljeväxtodlare, SpmO, HS, Odling i Balans

These organizations arrange farm visits regularly to demonstrate crops status and discuss urgent topics. The host farm this time was the farm Bäckén 30 km north of Trollhättan, one Odling i Balans demofarm. Wheat, oat and field beans are produced on the farm to their pig production. Winter oil seed rape, wheat, peas and grass seed are produced for sale. There is a biogas production on the farm.



### Objectives for the demo

- The year's growing issues
- Innovative solutions
- Sustainable management – how to replace fossil fuel, increase biodiversity, IPM etc.

### Motivations

- Share experiences from the growing season, such as the draught, insects and nutrient status.

### Topic selection

- Current status of the crops rel. to management
- Innovation
- The market situation

### Audience & participation

- Farmers from the surrounding areas
- Suppliers of fertilizers & plant protection products
- About 60 participants

### Demonstration set-up

- The farmer introduce the visitors by telling the story about the farm and their management
- The Odling i Balans concept
- Field demonstrations of wheat, rape seed oil, grass seed production, biogas production
- Lunch-break with time for farmers to meet and discuss
- The market situation and future challenges

### Evaluation peer-to-peer learning environment (2018-06-07 "The growers day" )

- An interesting day for farmers to be updated about the status of the crops and what insects are believed to be a threat for the yield. Many farmers was impressed of their biogasproduction and how the farmers collaborate in the biogas-company.
- More time for interaction between the participant farmers would improve the exchange.

- A well organize demonstration which attracted many farmers in the surroundings.
- A balanced mix between yearly ordinary topics and "new thinking" (innovations).
- This farm was choosen because of the skilfull flarmers with two sons that recently have started to be engage in the business. They have a good management, interesting biogas production, and interest in sustainable production as a member of OiB.
- To discuss: What are the success factors during a demonstration? How to build thrust between visitors to get an open discussion? What does farmers take home from a demonstrations?



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## Sweden Case Study 2

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# 1. Background

## The Demonstration farm network – Farming In Balance

The Odling In Balance project started in 1992 by farmers who wanted to work for a more sustainable farm production. It is based on 17 Swedish pilot farms that work together with several stakeholders, researcher, and advisers with several projects. It is a multi-partner project. The OiB farms are showing trials and good management examples to other farmers. The OiB farm network meet at different farms together with stakeholders and academics, several times per year.

The farm network focuses on both production and environmental issues. The OiB network was an early developer of the nutrient balance method to evaluate fertilisation efficiency and environmental impact due to how and when fertilisation is applied. A huge amount of data has been gathered from the farms and a system with environmental indicators has been developed by the farm network. The nutrient balance method and the environmental indicators have later been adopted by the Swedish voluntary advisory system "Focus on nutrient". Example of questions that have been addressed in the OiB-project are;

- How to reduce eutrophication?
- How to fertilise optimally for both environment and economy?
- How to avoid soil compaction?
- How to increase energy efficiency on the farm?
- How to exchange fossil fuel with biofuel?
- How to increase biodiversity?
- How to use conservation agriculture?
- How to get to a sustainable use of pesticides (IPM)?
- How to set up a healthy crop rotation plan?
- How to increase yield without increasing environmental impacts?
- How to set up a sustainable water management?
- How to work to reduce climate emissions during production etc.

A motto of the network is that it needs to be balance between ecology and economy in production. The production needs to be economic but shall not affect the environmental in a bad way, and it shall support a sustainable production in the long perspective.

Innovations have been taken up and tested on the farms. When they are ready they have been available to disseminate to other farmers. One such example of an innovation from OiB is the biobed, which now are established on many farms in Sweden and the concept have been spread to farms in the whole world. An ongoing example of an innovation is called SamZones, which is about how to set up multifunctional protection zones to both promote and protect the environment and production. This farm demonstration event concentrates on the multifunctional buffer zones.

## Actors and networks

The pilot farmers consist of ordinary conventional and organic farmers. The manager of OiB together with the farmer arrange and administers workshops and seminars, writes reports and are responsible for gathering data and samples from the pilot farms. Demonstrations on the farms are often facilitated in collaboration between the farmer and the manager of OiB or between the farmers and the visitors. The most demonstration activities are a specific group invited, but sometimes it is an open invitation. Once a year there are a large seminar arranged with a topical theme, with an open invitation. At that event different groups are attending the meeting such as farmers, advisers, suppliers, researchers, authorities and NGO.

## How it works

- The OiB network choose among different projects to choose demonstrations activities suited to OiB purpose and goal.
- OiB is applying for money from a financing institution or from someone in the agronomic business that they collaborate with
- Many of the project is developed in close collaboration with farmers, advisers, researchers, suppliers, and sometimes NGO.
- Tests and field trials are set up.
- OiB experiences findings from the studies or the field trial are analysed and summarised.
- OiB experiences and findings from the studies or the field trial are communicated during demonstration on farms and on conferences and the farms are open for visits.
- Results are published in press and in scientific magazines.

## Funding arrangements

OiB is funded by research and development projects and by the stakeholders linked to the network. The OiB works is steered by a group of independent scientist and representatives from agricultural organisations that are stakeholders. The pilot farms are chosen to represent different productions and are situated in the South of Sweden in areas where there is dense arable agricultural production. Demonstration activities arranged are often free for visiting farmers. Many of the demonstrations on the farms are arrange voluntary by the farmers, some the farmers are paid by the group that is visiting the farm.



## 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/Network members were interviewed and the farmer that organise this demonstration in august 2018, and with some of the participants during the demonstration activity. 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 3 post demonstration surveys for participants 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 17<sup>th</sup> of October, 2018.

### 3. Structural characteristics

#### T1: Programme/network level

This demonstration activity was arranged by the farmer at Södergård in collaboration with the manager of OiB. The demonstration activity on the farm was part of a development project called SamZones. Participants from the project were also engaged in the planning of the demonstration.

#### T2: Farm (event) level

##### 1. Event Farm and location

Södergård farm is a mixed farm with both arable and meat production. The farm is situated in South Sweden near Ystad, in Scania (Skåne). The farm has been a member of OiB since many years. The farm is run by MA, JT and TT. There are pig and meat production from beef cattle grazing in field. The demonstration was focused on the arable production and specially the multifunctional buffer strips, called SamZones. All topics were discussed and agreed with the farmer (Farmer).

##### 2. Event

Before the field demonstration, a project working group consisting of farmers, advisers, authority, experts and industry partners had a meeting. After the project meeting everyone was visiting the farm and fields with buffer strips with different herbs and grass species on. There were more people joining the visit in the field. After the field visit a meeting on the farm was arranged. At the farm, the visitors were welcomed by the farmers he told the story about the farm and basic information about the crops and the animal production. The OiB manager spoke about the Farming In Balance (OiB) concept. Also, some of the stakeholders in OiB told their view on why they are engaged in the Farming in Balance concept. Some of the participants asked questions during the meeting at the farm.

The farmer classified the event as a mixture of exemplary and experimental approach which falls in between a whole farm and single focus dimension.

This visit on Södergård farm was facilitated by the farmer and the manager of OiB. Both have some 6-7 years of experience in demonstrations. Only one of them has reported that he benefited from some kind of training in pedagogic during his academic life, which proved to be useful in demonstrations. Both stated that they could use some, practical/technical (Demonstrator 1) and/or group management/facilitation (demonstrator 2), training could have been useful in their roles.

In the field the farmer showed up the SamZones and told the visitors how he has managed the buffer strips. There was also a visit on another farm with buffer zones. After the field walk the meeting continued on the farm, with coffee and small talk. Then the farmer presented his management strategy and their management to balance ecology and economy in a holistic way. The farmer told the story about the farm and their strategy to use the concept of lean for their management on the farm. The farmer is very much involved in the SamZones project and had made an innovation in that project.

Many other steps that increased sustainability have been taken on the farm, a biobed that collects and breaks down pesticides during cleaning of sprayer, integrated plant protection (IPM), efficient fertilisation strategy, healthy crop rotation, roof on the manure wells to reduce ammonia emissions and they have done an energy efficiency survey in order to reduce the use of fossil fuel.

Participants had been targeted/specifically invited to attend the demo (interviewed demonstrators). They travelled from nearby and some from long distance. Participation was free of charge, none of the interviewed participants was compensated (participants' post survey interviews).

No dissemination material has been used during or after the event. Moreover, there is not a formal or informal procedure set to assess the demo event (Farmer).

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

Although no financial incentives are offered, costs are covered by whoever arranges the demo events, the cost for food and drinks is covered and they will also pay for farmer's time spent on the visit.

#### 2. Motivations for host farmers

According to the farmer, a key motivation is recognition and validation of what he is doing:

It is a pure pleasure to get a confirmation of one's own thoughts and the organisation's thoughts about good things I do and show up. I want to develop this in a future programme and show it to others, so people will light up. That confirmation is like any nod. [...] It is based on my own driving ability to do something good. (Farmer)

Talking more widely about, he noted the importance of providing demonstration farmers for changing farmers' practice:

The demonstration farms should be able to try and show both what works and what does not work. Demo-farmers are required, which can show other farmers what works. They can show positive examples for other farmers. If there are no demonstration farms that administer and show up news, nothing will happen and there will be no change. (Farmer)

#### 3. Motivations for participants

With respect to what motivates participants to attend, the farmer explained that, for both consumers and other farmers alike, it is largely curiosity and wanting to learn, saying:

It is curiosity and education. People do not know how a farm work. Most consumers are far from production. One example is the field tour we arrange for consumers. Then people come because of pure curiosity, very basic. Afterwards I can hear very positive talks and discussions about farm production. Consumers are happy to know for example that a cow gets a calf every year, etc. Farmers are also coming [be] cause of curiosity. It is not a single farmer who does not want to see how somebody else has their management. Farmer

The farmer explained that the demo topic is the main reason for many farmers:

Yes, before, it was always so that if there were something to eat is attracted more people. But today only farmers who are genuinely interested in the subject come, then they can attend the meeting at any time, and they prioritize it. Farmer

#### 4. Target audience

The target audience includes farmers and others, such as advisers, officials and consumers, although those who usually come on a field walk are officials and advisers. It appears that for an invited demonstration, officials and politicians mainly participate:



If you have a farm that is well-managed, it is a front that can be displayed to other farmers. But when you invite a demonstration, it's usually officials and politicians who come. We also invite the public every summer to show the farm and our production. (Farmer)

Regarding the characteristics of a typical farmer participant, according to the farmer interviewee, they will be forward thinking and have an interest in new issues, and in making a change, and need some practical advice on the way. There are also advisers of various kinds who want to come to a demonstration, as the farmer explained:

We have many different crops on our farm, i.e. trials with minor use of pesticides on our farm. Connected to those trials we also have a commitment. That is something we have worked with in many years. Sometimes it's just a meeting arranged for advisory to show that a new management works and sometimes it's the growers for a specific crop that is invited. Issues could both be about today management and strategies in the future. (Farmer)

## 5. Advertising and recruitment

Participants are sometimes targeted. It could be a direct invitation, when it is a demonstration in collaboration with the farm network OiB, and then the invitations come through their channels. The farmer explained that targeting depends on the goals:

Sometimes it is a demonstration suited for advisers and sometimes it is for farmers. It is target [ed] depending on what you want to achieve and who you invite. You must match the audience with the invitation. (Farmer)

He said that to be effective in the recruiting the hard to reach group, the recruitment process should be much targeted.

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

The farmer described the nature of interaction as both top-down and bottom-up, as he explained that it depends on the subject, remarking:

When we are part of ERFA meetings then we share experiences with other farmers. But when we demonstrate results of a project such as SamZones then there's a message we want to bring out. But even then, we feel that we are on the same level as other farmers. (Farmer)

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

When asked about involving farmers, the farmer explained that the farmers had to have the right mind-set for more participatory processes to work but that this is happening now with the interest in environmental topics:

It's a lot of fashion and trends in this. Recipients must be mentally set. They are taking place, modernization and changes all the time now that issues about the environment are top on the list. (Farmer)

Regarding the extent to which participating farmers are involved in individual demonstrations, the farmer explained that they decide together what to show on the farm.

### 3. Focus and Design

With respect to the demo approach the farmer described this as In between whole and single focussed. Regarding the demo design the farmer described this as a mixture of Experimental and Exemplary, he expressed a preference for Exemplary because, as he explained:

The most inspiring thing is to show something that is my own idea, and I can convey my innovation it to someone else. (Farmer)

### 4. Ideal group size

The farmer considered that the optimal group size was 10-15 people as the group will not be active if it is too large. This size allows the farmers to feel that they belong to the group. He likes to start with coffee and small talk.

## T3: Enabling learning appropriate to purpose, audience, context

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

The farmer felt that an effective structure for a demo event needs:

To start at the farm with a whole farm presentation. But if the theme is about a specific issue this will be presented first. Visitors expect to hear about what is written in the invitation. The things the visitors have seen in field or outside the farm can also be substantiated during a lecture inside. It is important to have a combination of theory and to look at practical things on the farm. It is not necessary to have a practical activity, it is not necessary to have someone driving a machine around. In a larger group it is hard to hear, so the group size need to be kept small. (Farmer)

The farmer described his style as asking questions to the participants so that they are active and feel that they are participating in the event. He explained that a stand up and talk showing a PowerPoint or a map makes them feel passive. When believes interaction is good with two way questioning. His approach is to be direct:

When you are direct it is the best tool, to get participants active. You address someone specific, ask questions and involve the participants. (Farmer)

He does however sometimes show a presentation of the farm with photos or pictures of something what he has done in the previous year, If he has time to prepare.

The farmer cited 'Good quality expert advice & technical presentations' as the most important ... aspect of a demo because it provides some structured substance and complements his experiences, as he explains:

Good quality expert advice and technical presentation creates new interesting conditions for others. It gives the demonstration a structure. Otherwise it can be unstructured. I will compare it with setting an agenda at a meeting. You have expertise and science to talk around. There is substance around what you want to tell the visitors. Then comes my experiences and I can show what I have done. (Farmer)

## 2. Taking into account variation in learning

The farmer does not take variation in participant learning into account. He remarked that the approach is different depending on who is coming, saying that you need to match the difficulty and complexity of the topic with the audience and the sort of visit.

### T4: Effective follow-up activities

#### 1. Follow-up activities and materials and assessing impact

They do not try to engage with participants after the event, nor do they provide any materials after the event. They sometimes assess the impact of the event amongst participants, but this is informal as he explained:

I see what neighbours do. A visual analysis. (Farmer)

They do not assess the impact of the event in the wider farming community.

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 30 participants and 3 of them filled in the post survey.

### T1: Learning processes

#### 1. Communication initiation by participants

More than 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic, when they were in the big group or in smaller groups. It was a positive feeling among the participants. The aim of the meeting before the field visit was to discuss the project. There was some time for questions and a lot of questions were asked. Almost every participant formulated their own points of view regarding the topic. The facilitator encouraged questions and the discussion.

	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	0	3/3	0
I asked at least one question during the demonstration .	3/3 yes				
I shared my own point of view at least once during the demonstration.	2/3 yes				
I felt encouraged to ask questions during the demonstration.	0	0	0	3/3	0
When there were any discussions, I felt comfortable sharing my opinion.	0	0	0	3/3	0

## 2. Interactive knowledge creation

### *Hands-on opportunities and other multi-sensorial experiences*

The participants go around the field to identify the different species, and tried to observe the benefits for insects, birds and wildlife, by looking at the sunflowers too. There were no hands-on activities demonstrated. Participants could take part in a hands-on activity but didn't get any feedback on their doing. For example, they went to the fields to identify species.

### *Discussion opportunities and negotiating conflicting points of view*

M. A (a board member of OiB) was facilitating the morning session and came with us to the field. H (OiB) was coordinating the organisation of the day and took care of timing of different parts and of some of the presentations.

Open discussions between a few participants were stimulated and shared critical points of view were clarified/rephrased so more people could understand. For example, problems and regulations for the SamZones were discussed. More specifically, the problem of bare soil, because there is a problem with the space for wildlife.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	0	0	0	3/3	0
<b>If participants didn't agree</b> with each other during discussions, somebody (demonstrator/other participant) <b>tried to reach a consensus</b> 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 and the demonstrator acts open and friendly, but not as close friends with the participants. There was a friendly atmosphere during the meeting.

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

## T2: Learning outcomes

Explained knowledge was very clearly understandable. Different issues were explained. Skills were carefully and effectively addressed to foster maximum uptake by participants. SamZones were showed through pictures inside and afterwards also in field. The connection to regulations and subsidies was made. Common methods or ways of thinking on farming and on learning were questioned and alternatives were shortly elaborated on in group. There were discussions on the issues and different goals related to the SamZones. Evidence based literature research was explained with a clear example.

The demonstrators intended for the participants to 'open their eyes that you do not need to do...you shall not stare at only one mixture/compound. Use field edges and create good environments zones. What's important is to show that it really works. One should have had more established options, we have had a hard year this year due to the draught. We did not have the moisture with us this year. They built a seed drill, but you would probably have slim suited seed drill to get better results. Now, the bio drill is very easy for performing sow test and to adjust the settings. Just these experiences enable showcasing of different management. Farmers can pick up different experiences from different places. 'Things that have been bad and things that have been good.'; 'see in practice that it works, and that they get inspired and start at their own farm with a manner of management that suits the local situation.'

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	0	1/3	2/3	0
The <b>demonstration exceeded my expectations.</b>	0	0	3/3	0	0
I <b>felt surprised</b> at some point(s) during the demonstration.	1/3	2/3	0	0	0
I <b>obtained a clearer understanding</b> of the topic(s) demonstrated.	0	0	3/3	0	0
I have the feeling I <b>learned something new</b> (knowledge, skill, practice, etc.).	0	0	2/3	1/3	0
I <b>thought about how I could implement</b> some of the ideas and practices on my own farm.	1/2	0	0	1/2	0
I <b>reflected on my own point of view</b> at some point during the demonstration.	0	0	2/3	1/3	0
I learnt about <b>the principles underlying a practice.</b>	0	0	3/3	0	0
I thought about <b>how we learn something new</b> on demonstrations (e.g.: teaching methods).	0	2/3	1/3	0	0
I thought about <b>why</b> I want to learn about <b>the topic(s) of this demonstration.</b>	1/3	1/3	1/3	0	0

### T3: Overall comments on the effectiveness of the event

#### *Participants:*

With an average of 3,7 on 5, participants rated the event overall as effective. 3 on 3 of the participants who answered the questions would recommend the demonstration.

As effective characteristics of the event, two participants mentioned: To see everything in real, to see that it is working; it was highly relevant subject. Qualitative demonstration farm, the farmer came across skilled as a demonstrator.

One participant mentioned as a suggestion to improve the demonstration: If it is a large group, make sure everybody can hear and see everything.

The main strong aspects of the demonstration included the many actors together, which gave an excellent synergy effect. They also included the examples of improvements able to be seen in the field, as well as a map of farms so one could get an even better idea of how close to the water we were.

The people who came only to the field visit, might have needed a little more explanation about the mixtures and SamZones. The general impression about this demonstration was that it was a very good and interesting one!



## 6. Annex: Case study poster July 2018



**FarmDemo**

**CASE STUDY "Sweden": Farm Södergård  
Odling i Balans – the SamZon project**



Södergård is part of the Odling i Balans demo/pilot farms. The host farm is situated in the south of Sweden not far from Ystad. Pigs, beef production feed and crops for sale are produced on the farm.

**The SamZon project** aim is to use buffer strips to grow herbs and grass that provide food and shelter for insects which can increase the number of wild pollinators and field birds in the agricultural landscape, prevent losses of phosphorus or pesticides to water bodies, promote natural enemies which reduce the need for pest control, benefit honey producers and increase the yield for crops that require pollination. They can be customised to attract field wildlife or be used as field roads for farmers which protect the field against soil compaction, etc.

### Objectives for the demo

- Demonstrate SamZon concept on the farm
- Discuss implementation of the concept
- Discuss rules regarding management

### Motivations

- There is a consensus that it is important to discuss with farmers and all partners how the SamZon concept can be implemented. It must be practical and comply with the regulations.

### Topic selection

- The aim of the SamZon project
- Experiences from the test
- Expected goal completion of the SamZon project

### Audience & participation

- Farmers, project partners, agricultural industry, NGO, advisory services
- Authorities and other stakeholders from the reference group
- Media

### Demonstration set-up

- The aim of the SamZon project
- The farmers' view
- Experiences from the test in different fields
- Field demonstration of the SamZon project
- Discussion
- Conclusions and future challenges

### Evaluation peer-to-peer learning environment (16-08-2018 "SamZon meeting" )

- It is a challenge to have a multi-actor approach and how to come to common conclusions.

- To discuss:
- What is important to succeed with a multiactor's approach?
- What are the success factors during a demonstration with a multi-actor approach?
- How to build thrust between visitors to get an open discussion?
- The meetings should end with a common view on how to resolve the issue – what is needed for that?



PLAID



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## Sweden Case Study 3

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# 1. Background

## Programme

The Odling In Balance project started 1992 by farmers who wanted to work for a more sustainable farm production. It is based on 17 Swedish pilot farms that work together with several stakeholders, researchers and advisers on several projects. It is a multi-partner project. The OiB farms are showing up trials and good management examples to other farmers. The OiB farm network meet at different farms together with stakeholders and researchers several time per year.

The farm network works with both production issues and environmental and climate issues. The OiB network was an early developer of the nutrient balance method to evaluate fertilisations efficiency and environmental impact due to how and when fertilisation is applied. A huge amount of data has been gathered from the farms and a system with environmental indicators was developed by OiB. The nutrient balance method and the environmental indicators has later been adopted by the Swedish voluntary advisory system "Focus on nutrient". Example of questions that have been addressed in the OiB-project are; how to reduce eutrophication, how to fertilise optimally for both environment and economy, how to avoid soil compaction, how to increase energy efficiency on the farm, and how to exchange fossil fuel with biofuel, how to increase biodiversity, how to use conservation agriculture, how to get to a sustainable use of pesticides (IPM), how to set up a healthy crop rotation plan, how to increase yield without increasing environmental impacts, how to set up a sustainable water management, how to work to reduce climate emissions during production etc. A motto that the network work for is that it needs to be balance between ecology and economy in production. The production needs to be economic but shall not negatively affect the environment; it shall support a sustainable production in the long perspective.

Innovations have been taken up and tested on the farms. When ready they have been available to disseminate to other farmers. One such example of an innovation from OiB is the biobed, which now is established in many farms in Sweden and the concept have been spread to farms in the whole world. An ongoing example of an innovation is called SamZon, which is about how to set up multifunctional protection zones to both promote and protect the environment and production.

## Funding and Governance

OiB is funded by research and development projects and by the stakeholders linked to the network. The OiB work is steered by a group of independent scientists and representatives from agricultural organisations. The pilot farms are chosen to represent different productions and are situated in the south of Sweden in areas where there is dense arable agricultural production. Demonstration activities are often free for the visiting farmers. Many of the demonstrations on the farms are arranged voluntarily by the farmers, while some are financed by the group that is visiting the farm. When it is a field trial in a farm, it is financed as a part of a research study.

## Actors and networks

The pilot farmers consist of ordinary conventional and organic farmers. The manager of OiB arranges and administers workshops and seminars, writes report and is responsible for gathering data and samples from the pilot farms. Demonstrations on the farms are often facilitated in collaboration between the farmer and the manager of OiB or between the farmers and the visitors. Usually demonstration activities are targeting to a specific invited group, but sometimes it is a more open invitation. Once a year, a large seminar is organised on a topical theme, with an open invitation. At that event, different groups are attending the meeting such as farmers, advisers, suppliers, researchers,

authorities and NGOs. Since OiB is an economic entity, this is the formal annual meeting with its members-owners. OiB is working with the agricultural business network in Sweden, which is involved in different projects.

### **How it works**

- The OiB network choose different project to choose demonstration activities suited to OiB purpose and goal.
- OiB is applying for money from a financing institution or from someone in the agronomic business that they collaborate with.
- Many of the project is developed in close collaboration, farmers, advisers, researchers, suppliers, and sometimes NGO.
- Tests and field trials are set up.
- OiB experiences and findings from the studies or the field trials are analysed and summarised.
- They are then communicated at demonstrations on farms and at a yearly meeting every year to other farmers, advisory companies, authorities, and suppliers.
- Findings and practical experiences are shown at OiB farms, and the farms are open for visits.
- Results are published in press and in scientific magazines.

### **Event Farm and location**

The Hacksta farm is an arable farm near Enköping, Sweden. The Hacksta farm has been a member of OiB almost from the setup of the network. The owner bought this, previously family, farm in 2012 and runs it together with another farmer.

Apart from the group of grazing beef cows, whose task is to graze at the beach beds and in the semi natural grassland, the farm is focusing on plant cultivation.

Many steps towards increased sustainability have been taken on the farm. These include buffer zones for protection of watercourses and support for pollinators, pond for phosphorus retention, a biobed that collects and breaks down pesticides during cleaning of sprayer, integrated plant protection (IPM), and various technologies for efficient energy and nutrient utilization such as how they use a Yara sensor to vary and optimize the fertilisation on the field according to the crops need. They have recently replaced the oil boiler to a dryer with biofuel. One of the farmers expressed that one of the interesting thing about being a pilot or a demonstration farms is that by telling what we do to others, we also begin to look at ourselves with new eyes.

### **Event**

During the world water conference in Stockholm a group of about 50 persons visited the OiB farm Hacksta outside Enköping. The event took place on the 29<sup>th</sup> of August.

Participants were a wide range of people from several countries of Africa, Asia, North and South America and Australia. As they are responsible for water irrigation and water supply to fields and households, many of them have direct contact with farmers, and they were interested in how Swedish farmers handle water problems such as drought, contamination of clean water and irrigation.

Participants had traveled by bus from Stockholm. During their trip, a researcher from SLU told the visitors basic facts on Swedish climate, cultivation conditions and common management of farms in Sweden. At the farm, the visitors were welcomed by the farmers, who gave them basic information about the farm and their management. The farmers told the visitors how they work with environmental and production issues, and how they balance both ecology and economic issues in their management. The OiB manager showed the biobed and spoke about the Farming In Balance (OiB) concept. After a

round trip on the farm, participants visited a field where the phosphorus dam and a semi natural grassland with high biodiversity quality was shown. The organisers received several interesting questions, such as how OiB works to motivate farmers to work for sustainability and to adopt new methods.

## 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 1 interview with a Programme member and 1 at the farm level with the host farmer. 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 3 pre-event 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. The workshop for the Danish and Swedish case studies was held on the 17<sup>th</sup> of October, 2018.

### 3. Structural characteristics

#### T1: Programme/network level

The initiative of this demonstration came from the Swedish University of Agriculture, they have been asked by the organiser of the world water week to find a farm that could demonstrate their management. The topics that should be shown on the farm were chosen in a collaboration between the farmer and the Swedish University of Agricultural Science. Since the topic of the conference was about water management. The main focus was on issues about limiting water resources and how to protect water bodies from contamination.

#### 1. Objectives of the network OiB

The network's objectives when organising demos is to show how production can be both efficient and sustainable at the same time. Thus, its overall demonstrations are characterised as having a whole farm approach and are a mixture of exemplary and experimental approaches, depending on the network's initiatives and/or project collaborations (programme level interview). At the farm level, the host farmer described their approach as exemplary with a whole farm approach as a guiding principle. Their objectives are both showcasing sustainable farm management practices, but also, through interaction with other farmers, their self-improvement and further advancement of approaches.

It is that both being able to showcase the management direction we think is good. We like feedback and questions from others about our production management. This visits and visitor can lead to development of our business as well. (Host farmer)

To meet its objectives, the organisation, being a network of farms, manages demonstrations with its member-farmers, and when appropriate or needed, it teams up also with other farmer organisations, the authorities, advisers and researchers (Programme interviewee). The farm level interviewee confirmed this direct involvement of farmers.

Decisions are made by us at the farm or together with OiB, i.e. that how it was managed for the World Water Week. (Host farmer)

Despite those statements though, interestingly, both the programme and the farm level interviewees describe the organisation of demos as an entirely top down approach.

At the farm level, this is also reflected in the host farmer's statement that they are not involved in the development of the overall programme of demonstrations (Host farmer). However, this contradicts the views of the programme interviewee who has described an instrumental role of member/host-farmers both in the development of the overall programme as well as in individual demonstrations.

Q: Are host farmers involved in the development of the overall demonstration programme?  
Always - It is their farm, they need to decide. You cannot decide over someone else's farm. It's somebody's business you visit. (Host farmer)

Q: Are host farmers involved in the development of the individual demonstration activities?  
Always - It is very important that the host farmer is involved. It is their farm. The visitor wants to come to a real farm, with an honest farmer who shows his farm. The farmer must decide what to show up and what the visit should focus on. (Host farmer)

On the other hand, interviewees convey a more coordinated view on how demo topics are selected, as both underline the active engagement of farmers in the process of decision-making.

It depends on whether it is a demonstration activity with a specific theme or not...Otherwise I decide (Host farmer).

I discuss this with farmers if it is a farmer event. I am also following the media about farming that guides what is the interesting subject... In discussions with farmer, adviser or in discussions with the OiB board. It is common that visitors ask to see something special or are interested in a particular topic as well. (Programme interviewee)

Depending on the demo's objectives and topics, according to the Programme interviewee, beyond the farmers and the manager of the network specific roles may be delegated to other actors such as advisers and researchers, and authorities.

## 2. Funding arrangements

Finally, with reference to the funding of the demonstrations both interviewees shared their concerns on the limited resources channelled to support/compensate both the relevant activities of the network and host farmers' engagement. Nevertheless, the farm level interviewee provided a wider view of potential benefits, beyond monetary ones, that host farmers might gain through their engagement in demo activities.

...Generally there is no payment to the network for arranging the demonstrations. It is part of communication in a project. But this is a problem that there is no payment for the network to arrange the demonstrations on the farm. (Programme interviewee)

Sometimes the visitors pays it, i.e. visitors, but half of the visits we work without compensation. (Host farmer)

It's fun and developing. I think I want to say that. One of the interesting things about being a demonstration farm is that by telling what we do to others, we also look at ourselves with new eyes. (Host farmer)

## 3. Dissemination material, follow-up and assessment procedures

With reference to the use of dissemination material, basic information on the demo farm are available to participants. At the programme level, this seems to be also the case with regard to follow-up materials, albeit less consistently.

We usually hand out some kind of information. A paper which some data is a good thing, the visitors will remember things better then. (Host farmer)

Yes, we will issue a paper with basic information about the farm. (Host farmer)

There are some materials on our website. Sometimes we leave leaflets to the participants. (Programme interviewee)

There does not seem to be any formal procedure employed for both feedback collection and the overall assessment of individual and/or overall demonstration activities. The organisation feels that such procedures are more likely to be development in organisations that see demonstration as an income stream, a statement that was reflected also into the host-farmer's views.

Everybody who participated either by talking, or showing something usually discusses how it seemed after the demonstration (Programme interviewee).

We can feel the result anyway. We don't get any income from the demonstration. If (...) was a business build on demonstration, then we would have asked for feedback regularly (Programme interviewee).



This question does not feel relevant for us. It is not such visits. It would be interesting if we sold demonstration activities for example (Host farmer).

Obviously, I evaluate myself but do not write it on a paper. I am, of course, evaluating and trying to improve me on next visit (Host farmer).

A similar reaction was traced with regard to follow-up activities and /or assessment if the demo has actually triggered any action on behalf of participants because of what they have learned in the demonstrations. Unless this is a formal requirement of a project the demo is part of, the organisation does not take such actions. In the same vein, the host farmer felt that this is not something s/he should be interested in.

This question is for a different category of demonstration farms, than our usual farm business. We are a regular farm organising farm demonstrations (Host farmer).

Normally not, but in a project about energy efficiency, I called farmers and followed up if they have make any changes after the visit Programme interviewee).

If the visitors are part of a project, sometimes we followed up and study if farmers have changed their management in some way due to the demonstration (Programme interviewee).

## T2: Farm (event) level

This was a one off event, which was organised as a study visit for participants attending the world water week in Stockholm. The topics of the demonstration were related to the themes of the conference i.e. water management and techniques to reduce/avoid contamination from fertilisers and pesticides.

The event was designed to offer a whole farm approach while at the same time show-cased specific environmental and water management interventions, installations and techniques (observation tool).

There were two demonstrators, the host farmer and the network manager, a farmer himself as well, along with a researcher from the Swedish University of Agriculture who escorted the conference participants to the farm and facilitated the visit (pre-event demonstrator tool; observation tool). The researcher serves also as member of the scientific board of the network (pre-even demonstrator 3). All three are reported to have rich experience both in terms of years active as demonstrators and in number of events they facilitated (20 years and 5-50 events each – pre-event demonstrator tool). Only the researcher stated that s/he had relevant training as demonstrator.

Participants were guided throughout the farm as a whole group (50 people). During this tour they had several stops to observe how buffer zones are installed and managed, how technology can be employed to control the use of fertilisers (yara sensors), and how drainage works with appropriate pods to avoid water contamination from phosphorus. Time constraints, along with the size of the group, did not offer many opportunities for a detailed Q&A and discussions were rather brief (observation tool).

Information/dissemination material/leaflets, which were prepared by the network and University people, were available for participants. Due to the nature of attendees (conference participants) as well as for personal data management reasons (GDPR), no follow-up activities were envisaged. Finally, there were no references to participation fees, nor on any other funding arrangements to compensate farmers and or demonstrators for their engagement in the event (observation tool).

The farmer was compensated for the time to demonstrate and arrange the event.

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

There were no financial incentive offered to farmers, however, the Programme Interviewee noted how farmers were rewarded by being part of the project and access to the project results.

#### 2. Motivations for host farmers

The farmer was motivated by the opportunity to develop on the farm, which took shape in various ways. The Farmer felt that providing demonstrations to others allowed for self-reflection and evaluation. The Farmer also expressed an eagerness to showcase the work being done on the farm. The Programme Interviewee offered similar motivations, such as the opportunity to connect with non-rural citizens as well as with other farmers.

Being able to showcase the operating direction we think is good. We like feedback and questions from others about our production. This visits and visitor can lead to development of us as well (Host farmer)

It's fun and developing. I think I want to say that. One of the interesting things about being a demonstration farms is that by telling what we do to others, we also begin to look at ourselves with new eyes (Host farmer)

They like to meet other people and to show their production and they like the discussion with others. It gives them new ideas and input on their management. They also want to show that they take responsible for the environment and produce in a sustainable way. There is a large distance between citizens and people who lives in the country side. Farmers know that they need to show ordinary sustainable production on farms (Programme interviewee)

#### 3. Motivations for participants

Both the Farmer and Programme Interviewee observed participants' desire to learn from other farmers and communicate from other farmers about their ideas and developments.

They are interested in learning how others [farmers] are doing (Host farmer)

Farmers want to see and hear how other farmers do. They are interested to hear about innovations, and it is always interesting to talk about the crops development each season and the latest advices about pesticides, efficient fertilisation (Programme interviewee)

#### 4. Target audience

The Programme Interviewee listed farmers, consumers, student, authority figures and researchers as their target audience. The Farmer added that most visitors come from the agricultural university (SLU), but some events have managed to reach a foreign audience.

Most visitors we have had have been student from the Swedish University of Agriculture, SLU, but we have had some foreign farmers who looked at several farms in Sweden (Host farmer)

Farmers, consumers, student, authority, researcher (Programme interviewee)

## 5. Advertising and recruitment

Generally, visitors are specifically invited to a particular event. The Programme Interviewee considered the most effective form of recruitment was to host an event that people would really want to attend.

‘Sometimes targeted’ - In most cases, all visitors are specially invited. It can be about showing project results or offering a special event for a particular group (Programme interviewee)

To invite targeted people with a personal invitation and to arrange an interesting event, with both demonstrator with practical, and theoretic background. It is important that the farmers are very active. Visitors want to meet real farmers in on a real farm (Programme interviewee)

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

Both Farmer and Programme Interviewee described the nature of interaction as ‘entirely top-down’, with the Farmer emphasising that the point of the day is to teach visitors about the farm, not to leave them questioning or coming to their own conclusions about it.

The Programme Interviewee described the nature of interaction as ‘Entirely top-down’. He continued: ‘The goal of OiB is to work for a holistic approach about sustainability and agriculture. Our motto is ecology and economy in balance’. (Programme interviewee), i.e. the purpose of the programme is to share a central ethos.

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

Host farmers were involved in both the network programme and individual demonstrations. This was seen as an important aspect by the Programme Interviewee, who noted that visitors want to see a real working farm and the farmer is in the best position to decide how to show this.

It is very important that the host farmer is involved. It is their farm. The visitor wants to come to a real farm, with an honest farmer who shows his farm. The farmer must decide what to show up and what the visit should focus on. (Programme interviewee)

Participating farmers were not involved in the network programme or individual demonstrations. All topics were decided on with host farmers, advisers and the OiB board. Although the Programme Interviewee did note that visiting farmers often request to see something particular during the day.

Demonstration topics are decided on ... In discussions with farmer, adviser or in discussions with the OiB board. It is common that visitors ask to see something special or are interested in a particular topic as well. (Programme interviewee)

### 3. Focus

Both the Farmer and Programme Interviewee described the network as taking a ‘whole farm’ approach.

### 4. Design

The Farmer described the network as exhibiting ‘exemplary’ practices, and expressed a preference for this as he considered it to have the strongest impression on the visitors.

That's what makes the visit most effective for the visitor. But there are degrees in this. To see something that someone else have done. Then there may be interesting research as well. (Host farmer)

The Programme Interviewee, on the other hand, viewed the network's approach as being 'a mixture' between exemplary and experimental practices, and considered this to be the best approach as it incorporates holistic issues and technical details. He also added that a mix between practical experience (from the farmer) and scientific findings were good.

A mix between holistic issues and technical details is good. It is also good to have both the practical view of from the farmer and to show scientific experiments at the farm. (Programme interviewee)

## 5. Ideal group size

The Farmer and Programme Interviewee considered between 10-15 people to be the optimal group size, as this allowed everyone to hear and ask questions easily.

A group of ten is a good group. Then everyone dares to ask questions and can see and hear. (Host farmer)

Around 15. (Programme interviewee)

## T3: Enabling learning appropriate to purpose, audience, context

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

Both considered a mixture between a verbal presentation and time in the field with a practical activity to be the optimal design for the day. The Programme Interviewee added that having time for coffee or a shared meal can add to the effectiveness of the day. There was no mention of additional materials being used to assist the learning.

I start by talking a little bit first and then we go and look in the field (Host farmer)

A balance between presentations, time for questions, field visits, and also practical activity. A friendly and open atmosphere are important. Coffee or meal could also be essential to make the visit effective (Programme interviewee)

Both Farmer and Programme Interviewee cited 'participants ask questions and talk openly' as the most important tool for providing effective demonstrations.

It is obviously, if you get questions it is most important. I choose the alternative "to ask questions" as the first option (Host farmer)

Everybody who participated either by talking, or showing something usually discusses how it seemed after the demonstration (Programme interviewee)

### 2. Taking into account variation in learning

The Farmer did not take in to account variations of learning when delivering demonstrations. However, the Programme Interviewee did take time to find out who the visitors were and what they were expecting from the day prior to arrival.

No, they must take care of themselves (Host farmer)

I always find out who the visitors are and sometimes what they expect from a farm demonstration (Programme interviewee)

## T4: Effective follow-up activities

### 1. Follow-up activities and materials

In general there was no continued engagement with participants after the event, although the Programme Interviewee did cite a particular project in which farmers' behaviour after the event were followed up.

Normally not, but in a project about energy efficiency, I called farmers and followed up if they have make any changes after the visit (Programme interviewee)

There were some follow-up resources available on the network website; however no materials were available at the farm level.

There are some materials on our website. Sometimes we leave leaflets to the participants (Programme interviewee)

### 2. Assessing impact

There was little done in regards to assessing the impact of events on participants. The Farmer played no part in this although did add that it would be exciting to do so. At the network level, there is occasionally a follow-up study on participants changing behaviour, but this will only be in the participants are part of a specific projects. There was no attempt by either at the farm level or programme level to assess the impact on the wider farmer community.

If the visitors are part of a project, sometimes we followed up and study if farmers have changed their management in some way due to the demonstration (Programme interviewee)

## 5. Event analysis: effective peer learning characteristics

### T1: Learning processes

#### 1. Communication initiation by participants

When in the whole group not more than 10% of the participants hesitated but shared their knowledge and/or experiences related to the topic. There were little interactions between them. There was not much time for that during the visit. Presumably, they talked to each other more in the bus on their way back to Stockholm. They were only in one large group, never in smaller groups on purpose. A little time was made for questions, about 2% of the time, some (5-10) questions were asked. There was no time for more questions at the farm, but some questions were asked on the bus on the way back. There were a few participants trying to formulate their own points of view regarding the topic. For example, there was a man from Colombia, he was very impressed about the OiB concept and how it worked. He asked about how he could come back and send farmers to Sweden to learn more about management and how to take care about the environment in Colombia. For example, they could learn more about building a phosphorous pond etc. Many of the visitors were very impressed by the flowering buffer strips. They expressed that this is something they could do at home.

#### 2. Interactive knowledge creation

##### *Hands-on opportunities and other multi-sensorial experiences*

Two hands-on activities were demonstrated and could be carried out by the participants, but only very shortly. At the SamZon, the buffer zone in the field, the demonstrator asked everyone to be silent and to listen to the bees that were working in the field. This was a nice experience. Many bees were out and flew from flower to flower. Additionally, when the group visited the solid fuel boiler for drying grain, everyone was asked to touch the pellets that were used in the boiler.

##### *Discussion opportunities and negotiating conflicting points of view*

There was a facilitator, but she was not so active in facilitating discussions. She was mostly responsible for the time schedule. The visit event had a very tight schedule. Open discussions between a few participants were stimulated. It was a discussion about how to implement new ideas at farms. There was no elaboration/further explanation on shared critical points of view since there was no time for that.

#### 3. Engagement during the event

Participants act more distant then open. They did not know each other. Some knew each other from before and acted more as friends with each other. Everyone was very polite. The demonstrators were open and very friendly towards the participants.

### T2: Learning outcomes

Explained knowledge was sufficiently understandable, but the group was very diverse and came from very different places in the world. This made it not easy to know if it was sufficiently described. The background, knowledge, and experience were probably very diverse. Skills were addressed, but it was hard to say if it was sufficient or not. Time was very short. Common methods or ways of thinking on

farming and on learning were questioned, but there was no real elaboration on alternatives. There was no time for further elaboration. One of the visitors (from South Africa) asked how the OiB network worked with farmers to inspire them to adopt new management systems. After that there was a small discussion about this topic. The OiB manager expressed her believe that it is really effective when farmers meet other farmers. The reason for that it is a mutual trust between farmers.

### T3: Overall comments on the effectiveness of the event

The biobed was shown and explained. The manager of OiB told the visitors where to find a free description on how to build one on a farm. This is a cheap and easy solution. Since the visitors were at a water conference and the central issue was about supplying farmers and society with clean water, many of the visitors were very interested about this.

## The Netherlands Case Study 1

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# 1. Background

## **Programme “Practice centre for precision farming”**

The umbrella Programme of the specific demonstration is called “Practice centre for precision farming” (‘Praktijkcentrum voor Precisielandbouw’). The programme “Practice centre for precision farming” is working in some regions on precision agriculture.

The programme Practice centre for precision farming covers Practice Centre for Precision Agriculture (PCvPL) in Reusel and AgroFood Innovation Centre in Colijnsplaat. (Programme interviewee)

There are different actors who take part in the programme. The consortium consists of five partners and ZLTO is the leading partner. Besides this, there are universities and other supporting entities, as well as groups of arable farmers who constitute an innovative group to work on those new techniques.

Partners in Proeftuin are farming vdBorne & ZLTO: universities: HAS, TU/e, WPLR; advisory: Rusthoeve, Delphi. (Programme interviewee)

## 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 interviewee and 1 farm level interviewee, who were 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 13 pre and 10 post demonstration surveys for participants, 1 pre survey and post survey for the demonstrator, 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. For the Belgian and Dutch cases, a workshop was held on the 9<sup>th</sup> of November.

### 3. Structural characteristics

#### T1: Programme/network level

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

###### ZLTO

The Southern Agriculture and Horticulture Organisation (ZLTO) represents the interests of entrepreneurs working in green areas. Around 15,000 farmers and growers in the South-Netherlands are members of the association. ZLTO works with farmers, in order to produce healthy food innovatively and sustainably (ZLTO website) ZLTO undertakes projects to accelerate the adoption and the application of precision farming in the Netherlands (Background info) ZLTO is linked with many different parties and actors related to agriculture.

ZLTO takes the responsibility to channel developments on precision agriculture on EU, national and (inter) regional level. This is done in lobby, projects and advice. (Programme interviewee)

It is mainly ZLTO who manages the project «Proeftuin for Precision Agriculture», as the project manager supported by a programme leader are both ZLTO employees. (Programme interviewee +personal contact ZLTO) The manager of ZLTO supports the cooperation between ZLTO and the farmers, while he also has coaching responsibilities toward the collaborating farmers. (Programme interviewee) Finally, there is an employee of the VandenBorne farm who is in charge with the planning of events, daily administration and organisation in PCvPL. (ZLTO personal contact)

Most important is the extraordinary host farmer. The ZLTO project manager built up a relation with the host farmer in many projects and converted the relation in a structural cooperation. The host farmer warns him when it seems to become too innovative and makes the stories economically sound. The ZLTO manager supports this complex cooperation and coaches the host farmer when needed. (Programme interviewee)

ZLTO target farmers to host demonstrations through its extensive network in the Netherlands' farming community and the long term relations that ZLTO keeps with farmers. Another criterion is related to the willingness and ability of the host farmer to get actively involved in the development of the demonstration. Additionally, through its networking, ZLTO identifies relevant topics that will interest farmers, as farmers' needs are an absolute priority for ZLTO. (Programme interviewee)

ZLTO always involves the host farmer as well as participants at the topic selection (Programme + Farmer) Furthermore, the topics selected for demos are strongly related to the topics funded through the projects that ZLTO applies. The demos organised fit with each project's aims. (Programme interviewee)

The project's results and/or progress are also an inspiration for the selection of the demo topics. (Farmer)

Finally, each demo topic has to be adapted to available crops and farming cycles. (Programme interviewee)

They (host farmers) are always involved in general, in the subjects or demonstration. Hosting the demonstration is part of a longer relation. Involving them only to host a demonstration will not work: so many projects are rejected and we have to disappoint them in that case. (Programme interviewee)

Q: How are demonstration topics selected? R: Preferred selection: we answer requests from visitors. In other cases, we show progress in projects. (Farmer)

Q: How do you target farmers to host demonstrations? R: Via board members (ZLTO, Delphy universities etc.) and employees direct contacts. We give everyone a chance by our media (weekly, E letters, soc media, etc. (Programme interviewee)

Q: How do you identify/select relevant topics that will interest farmers? R: Our ZLTO members tell us what is interesting for them. {Host farmer name} relations do the same. (Programme interviewee)

Q: How are demonstration topics selected? R: Main direction: need of farmers. Precondition: being financed: this is mostly covered by applying for projects. In PCvPL we make a place where it is attractive and affordable to get demo's for farmers groups without subsidy. (Programme interviewee)

Overarching: we provide possibilities that fit in the Programme (in EFRO project: uptake of PCvPL) Individual demo is determined by season/plant growth stage and wishes of groups. (Programme interviewee)

ZLTO employees undertake several tasks when they organise demo activities, such as the adaption of the content to attendees, the feedback activities (about the demo itself and on probable adoption of practice), evaluation procedures and the continuous engagement of demo participants after the event. Again, ZLTO's extensive connections, collaborations and networking with the farming community help the organisation to accomplish these difficult tasks.

Q: Do you plan and design demonstration activities differently for different audiences? R: Yes the story should fit to the audience. (Programme interviewee)

Q: Do you request feedback from demo participants? R: Yes. Just ask. Sometimes simple inventory (max 5 questions). (Programme interviewee)

Q: Do you evaluate the demonstration activities overall? R: Yes. For next meetings, we - optimise the PowerPoints, - change the approach of the subject, - and include others to take part of the message from their own experience, - send forward better information - manage expectations. (Programme interviewee)

Q: Do you - at the Programme level - continue to engage participants after the demonstrations? R: Yes. From project to project. Stay involved with the core people expectations. (Programme interviewee)

Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations? R: Yes. Time consuming and not always possibility, but we do it by asking people I know during other meetings. We plan to do more, that's one of the aims of innovation groups around. (Programme interviewee)

Do you try to assess the extent of influence (diffusion) from your demonstration programme(s) to non-participants? R: Yes. We ask in our farmers groups. (Programme interviewee)

The specific demonstration was managed and planned by the programme director of ZLTO and the host farmer. The host farmers, were in charge of the financial arrangements of the organised activities (Farmer). The topic selection of the specific demo has been determined by the participants and the farmer/demonstrator (Poster)

Together with {programme manager}, the planner or I {one of the host farmers' name} make appointments. We have a shared agenda, a tariff list and a standard presentation, that we improve permanently. The {ZLTO manager and the ZLTO employee} are coaching the

entrepreneurs. The host farmer checks if the developments are financially ok. Apart from the management, the 2 employees of vdBorne take care that everything is clean when demonstrations start. (Farmer)

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

### *Host farmer and demonstrator*

The owners of *Vandenborne farm* and host farmers are two brothers. They cooperate with ZLTO in the frame of the project "Proeftuin for Precision Agriculture". One of them does the administrative and Precision Agriculture part and the other one is the straightforward farmer (ZLTO personal contact). The host farmer is a very well informed person in precision agriculture (Programme interviewee). He is actively involved in topic selection, the organisation and the management of the demo. He is a well-connected person, who uses his contacts with other farmers to select inspiring demo topics (Programme + Farmer). At the specific event one of the host farmers was the demonstrator (Poster + Observation tool). The other one organised the event in close cooperation with ZLTO and he was preparing the exposed farm data for the demo.

Q: How do you identify/select relevant topics that will interest farmers? R: Our members tell us what is interesting for them. {Host farmer's name} relations do the same. (Programme interviewee)

The Programme interviewee stated that host farmers are always involved in the development of the individual demonstration activities as well as in the overall demonstration programme. The collaboration of ZLTO with a host farmer for a demo event, presupposes an agreement with the host farmer as well as his active involvement on the subject selection of the demonstration.

They will only open their farms if they agree on what is demonstrated. (Programme interviewee)

They are always involved in general, in the subjects or demonstration. Hosting the demonstration is part of a longer relation. Involving them only to host a demonstration will not work: so many projects are rejected and we have to disappoint them in that case. (Programme interviewee)

At the specific demonstration the host farmer have had an active involvement at the management of the demo activities on farm. He was involved in preparing the demo agenda, the fees definition and the preparation of the presentation.

Together with (Programmes manager name) the planner {planner name} or I (one of hosts' farmers' name) make appointments. We have a shared agenda, a tariff list and a standard presentation, that we improve permanently. {ZLTO Manager of the project manager name and of another ZLTO employee name} is coaching the entrepreneurs. (One of the two host farmers, real farmer) checks if the developments are financially ok. (Farmer)

Moreover, the host farmer is always involved in the overall development of demos at the Programme / network level. Because of his deep knowledge and wide connections, he strengthens partnerships and knowledge exchange (both technical, economical etc.) in the farming community. (Farmer)

I'm often the person bringing inspiration, connecting partners with specific knowledge of their developments. I give a critical advice on technical aspects and the feasibility: financially and in the market. (Farmer)

The host farmer undertakes several tasks when he organises demo activities, like the adaption of the content to attendees, some informal feedback and evaluation activities and the continuous engagement

of demo participants. (Farmer) Again, the host farmer's extensive connections, collaborations and networking through farming community allow him to accomplish these difficult tasks. (Programme and Farm level Interviewee + Observation tool) The host farmer has several demo events, open days and meetings with farmers groups through a year. In total he hosts over 50 events per year. (Pre survey demonstrator)

Q: Do you plan and design demonstration activities differently for different audiences? R: Yes the story fits to the audience. But they can react unexpectedly: elderly beekeepers (some former farmers) were better informed than policy makers in innovation. (Farmer)

Q: Do you request feedback on the event day from participants? Yes. Just ask: was it worth the effort? R: Only few times critical reactions: very good to learn. (Farmer)

Q: Do you evaluate the demonstration activities overall? R: Yes. Looking back on the results of the project. Ask feedback from people who hear my story once in a while (yearly). (Farmer)

Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations? R: Sometimes. Time consuming and not always possibility, but I do it by asking people I know. Plan to do more, that's one of the aims of innovation groups around PCvPL. (Farmer)

For this specific demonstration and its visitors there were no follow-up activities. But for the farm and the farmer there are a several demonstrations and visiting groups through the year (Observation tool)

#### *Audience / type of participants*

According to the Programme interviewee, the intended audiences of the demonstration events are everyone who is interested in precision farming (students, farmers, technicians, processors, university professors, policy makers, citizens, etc.) According to the farm level interviewee the demo participants on his farm are usually innovative, early majority farmers, manufactures of precision farming machines and policy makers. As the host farmer is very well known in the farming community, many demo participants are through his personal connections or are part of the same networks he is in too. These connections, as well as ZLTO's extensive networking, result to the great variety of participants in farm demos.

Through the year, a lot of different visitors (national and international) visit the farm. (Background info)

Q: How effective are you in recruiting in 'the hard to reach' or those who have never attended a demonstration event before? R: Very :{ host farmer's name} attracts all kinds of people. ZLTO attracts active farmers and people with interest in farming. (Programme interviewee)

Q: Who typically attends your demonstrations activities? R: Innovative and early majority farmers, policy makers. Machine manufacturers sometimes come to me, but more often I visit them (easy to talk in their development departments). (Farmer)

Q: How effective are you in recruiting in 'the hard to reach' or those who have never attended a demonstration event before? R: I organised an open day after a visit of the queen. There 2000 relations of the family, people renting their land to us, people from the near environment came to visit me. (Farmer)

Both the Programme and Farm level interviewees pointed out the involvement of participants in the demos' topic selection. The Farmer stated that participants are also involved in the overall development of the demonstrations. However, it seems that this was not the case, in the specific demonstration event, as according to the Post survey demonstrator, participants (farmers, advisers, researchers etc.) were not involved in the overall development of this demonstration. Before a demonstration the participant/applicant could make appointments with the demonstration about the topic. In this specific demonstration event they make appointments in front.

Q: How are demonstration topics selected? R: Preferred selection: we answer requests from visitors. In other cases we show progress in projects. (Farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: Yes. Well yes, I ask what they want to hear, they often know what I told on other events. And I discuss about demonstrations with colleague demo farms. (Farmer)

Q: Were participants (farmers, advisers, researchers etc.) involved in the overall development of this demonstration? R: No. (Post survey demonstrator)

### 3. Networks

As already mentioned partners in this Programme are farming associations, advisory entities, universities etc., with ZLTO leading the network's consortium.

The Programme Proeftuin Precisielandbouw covers "Practice Centre for Precision Agriculture" (PCvPL) network, in Reusel and AgroFood Innovation Centre in Colijnsplaat. Partners in Proeftuin are farming: vdBorne & ZLTO; universities: HAS, TU/e, WPLR; advisory: Rusthoeve, Delphi. (Programme interviewee)

The specific demonstration farm is part of four programmes and wider networks. The host farmer also holds elected or appointed roles on three farming networks/boards. The farm is also widely connected to other demo farms as well as other knowledge exchange organisations. Individual farmer colleagues, farmer networks or groups, universities and companies are some of them.

Q: Is your demonstration farm part of a Programme or wider network (e.g. LEAF)? R: Yes. We join in the many industry networks (f.i. DIH in Smart Industry), by projects like IoF2020, Optimove, and in private initiatives, like Making sense (with a farm near Rotterdam) (Farmer)

Q: Do you hold elected or appointed roles on farming networks/boards? R: Yew. Glasfiber (Vice chair), Reuselglas (chair) and Ver high agro campus (chair) (Pre survey demonstrator)

We are connected to colleague farms: experimental farm Colijnsplaat (in project Proeftuin), Forward Farm Abbenes, a Bayer Forward farm (together in IoF2020), we share experiments with University farm Vredepeel (Wageningen University) For many years vdBorne test management measures with sensors in the group 'making sense', now with Rotterdam. We cooperate with de Enk (to demonstrate soil scan and auto drive machines in golf courses) and Fleuren (fruit trees). (Programme and Farmer)

However, in the specific event it seems that the participants were not part of the same network with the host farmer. (Post survey demonstrator) Additionally 70% of participants were not connected in any way through common networks. (Post participant's survey)

### 4. Resources, finances and incentives

The demonstration activities organised in the frame of the Programme are partly funded by regional development fund and also by partners funds to which all partners contribute. (Programme interviewee) The Practice Centre for Precision Agriculture network is supported by EU, national and provincial funds (EU Rural Development, the Dutch government, the province Noord-Brabant) and also by participants fees. (Background info) The network intends to be self-funded through demonstrations activities. (Programme interviewee)

During project Proeftuin there is funding from regional development fund (EFRO) and partners. After the project PCvPL will generate its own funding from demonstrative experiments and introductions and trying to attract other projects. (Programme interviewee)

The university pays a fee, so the students can visit the farm. The farm is part of the 'Practice centre for precision farming'. This practice centre is supported by the EU Rural Development, the Dutch government and province Noord-Brabant. (Background info)

ZLTO offers incentives to farmers to host demonstration activities. The exact type of these incentives was not clarified. It is mentioned also, that funded projects is a feasible way to cover demo expenses and to benefit the involved farmers.

Q: Do you offer any incentives to farmers to host demonstration activities? R: Yes. We pay our organisation effort. In the case of PCvPL we invested much time in a new development (cooperation between individual and association is rare). (Programme interviewee)

Precondition: being financed: this is mostly covered by applying for projects. In PCvPL we make a place where it is attractive and affordable to get demo's for farmers groups without subsidy. (Programme interviewee)

Part of the starting costs is always covered by project funding. (Farmer) The demonstrations as a business case, is not for big profit, but just for covering costs for the host farmer. (Poster) Furthermore, there are different price-lists for participants depending on the size of the visiting group, the institution behind each visiting group i.e. school, university etc. Additionally there is an internal pricelist for research activities and preparation of demo events.

However, it is still not quite clear if participants are paid or pay for attending a demonstration event or what criteria differentiate this decision. More precisely, it is mentioned that a small payment is offered to participants. (Farmer)

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? R: During project Proeftuin we are financed partly by EFRO funding. We already ask small amounts of money to be sure that visitors are motivated for introductions. Schools pay €150 per group visit of 3 hours, groups of 15p pay €300, groups bigger than 15 pay €400. For research and preparation of demos there is an internal pricelist. Part of the starting costs is covered by project funding. (Farmer)

Q: Are participants targeted in demo recruitment? R: Always. It's well known what I offer, groups select themselves by asking for a meeting and accepting a small payment. (Farmer)

ZLTO makes efforts to reinforce the skills of collaborating farmers, as for instance in the case of the manager of ZLTO who is responsible for coaching the entrepreneurs.

{Manager of ZLTO, supports this complex cooperation and coaches {host farmer name} when needed. (Programme interviewee)

The demonstrator of the case study has never received any training in order to become demonstrator. He commended that it is a learning by doing process. (Pre survey demonstrator) However, he agreed that he could benefit from some extra training as a demonstrator. (Post survey demonstrator)

## 5. The decision-making process in organising demonstrations

Both Programme and Farm level Interviewees agreed that their general approach (as organisation or as a coordinator/demonstrator respectively) is mostly bottom-up.

Mostly bottom-up. Trigger people to think actively is first requirement of demos. (Programme interviewee)

It is already mentioned that ZLTO seeks the collaboration of host farmers who are willing to get involved actively in the demo development. Furthermore ZLTO always involve host farmers as well as



participants at the topic selection and actively pursue to keep in touch with farmers and participants needs. (Programme interviewee) In the same vein, ZLTO makes some effort to follow multi-participatory approaches like feedback, evaluation and follow-up activities. (A resume from Programme interviewee)

## 6. Goals and objectives

The primary goals of this Practice Centre is to accelerate the adoption and application of precision farming in the Netherlands. (Background info) To achieve this, they provide demonstrations and test precision techniques in practice, alongside a commercial arable farm. (Farmer)

Q: What are the overall goals/objectives of the demo farm? How are these decided? R: Demonstrate and test precision techniques in practice. Decided after long cooperation period between farmer and union: very relevant for farmers to know what direction to take in Precision Agri. (Programme interviewee)

### T2: Farm (event) level

The demonstration event took place on Vandenborne farm (VdBorne), an average sized (500ha) and very innovative commercial arable farm in the southern part of the Netherlands. The main crop is potatoes. There are also a few hectares with maize and sugar beets. Since 2016 the farm has participated in precision farming and since 2017 the farm is part of the practice centre for precision farming (PCvPL). The farm is considered as innovative and as a pioneer in precision farming. The two farmer owners are supported by three fulltime employees. (Poster + Post host farmer interview + Background info)

The demonstration event took place on 1 March 2018. The overall objective of the event was to demonstrate and test precision farming techniques in practice. At the specific event, the precision farming focused on arable farming (Observation tool). The event included a presentation and a farm visit. There was also enough space for discussion during the event (Poster).

### 1. Topic and focus

Precision farming in arable farming (potatoes) (Observation tool).

Both Programme and Farm Level Interviewees stated that the demos organised by their organisation/or on the specific farm respectively, fall within a whole farm approach. During the specific event, the demonstrator stated that he actively aimed to apply a 'whole farm approach' rather than showing an isolated topic/technique (Post survey demonstrator). However, in the observation tool it is mentioned that only a few notions/remarks of whole farm approaches were demonstrated, as most of the time the demonstration was about the cultivation process of potatoes (Observation tool).

Both Programme and farm level interviewees 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 also identical. They also believe that a mixture of experimental and exemplary approaches are better, as in their view the two approaches are the two sides of the same coin. The specific event was also classified as a mixture of experimental and exemplary approaches. (Post survey demonstrator)

Experimental: I discuss, investigate and start trials yearly (with scientists ZLTO, others, partly own interest) some new developments and varieties. Exemplary: given my machinery and experience on the farm I can show state of the play in innovative agriculture. These are 2 sides of the same coin. (Farmer)

## 2. Group size

According to the observation tool, 50 participants attended the event. Attendees were a group who followed the same courses at university (Observation tool), who intend to be future-farmers. (Background info) Their teacher selected/decided which pupils, would take part at the demonstration and the host farmer didn't know his audience (Pre survey demonstrator + Post survey demonstrator). Almost 70% of participants worked in the local area (Pre demonstration survey participant). The event's participants were farmers (66%) with some different occupations were also mentioned (high school professor, traders, students etc.)? (Pre demonstration survey participant)

## 3. Actor's role during the event

The host-farmer was the demonstrator and the leading person of the event. He started with a presentation, and answered questions of the visitors. At the first part of the demonstration (presentation), the visitors could mainly listen to the host farmer. During the presentation, the host-farmer told a lot about the different techniques he used in the farm. After the presentation, the host farmer guided a tour in his farm. During the tour, the visitors could listen to the tour guide/demonstrator, touch the machinery and touch and smell the potatoes (Observation tool). There was not a dedicated facilitator to guide the questions at this event. However, the host farmer could be seen as a facilitator, as he was available to answer questions (Observation tool). No other actor is mentioned during the specific event.

## 4. Practice/technology demonstrated

The host farmer started from the beginning of the cultivation process and explained the precision farming tools he used. In almost every step in the cultivation process, precision farming is used. He showed, soil scan to know exactly the capacity of the soil and sensors during storage of the potatoes who measure the temperature of the potatoes in order to analyse its effect during the storing period (Observation tool).

## 5. Event Farm design and layout

The test area consisted of a few big storehouses with potatoes and space for machines. There wasn't a specific test field area where the visitors could have a look. From a practical point of view, of course all the fields are test fields because the farmer tests precision farming on his own fields (Observation tool).

There were no real fields or storehouses to compare. However the host-farmer started the demonstration with a presentation. In this presentation he showed a lot of pictures which showed the difference between 'normal farming' and precision farming. During this presentation, the farmer gave more information about the profitability of precision farming (Observation tool).

## 6. Duration

According to the farmer, a typical time span for a demonstration event is 3 hours in total. Generally he devotes 1,5 hour for storytelling i.e. presentation and 1,5 hour for showing machines and practices. Discussion is always included during machines/practice demonstration. (Farmer)

## 7. Frequency

Presentations and demonstration events are organised approximately 2-5 times a week at the specific farm (Post host farmer interview). Additionally, the frequency of the events is related to the type of the demonstration topic. Depending on that, an event could be one off or more complex.

Of course, every content needs adapted process and format. Format for sustainable is not different from new technology? Measure for sustainability can be one off and intro of new technology is a complex process. (Programme interviewee)

## 8. Other farm's infrastructure or arrangements

During the demonstration events organised on farm, some arrangements are made for the participant's i.e. coffee-breaks. (Programme interviewee)

Generally, the host farmer takes care of participants' requirements. These requirements are not clarified or detailed.

I listen to the requirements of the participants and try to do something with their requirements. Sometime it is possible, sometimes not. (Post host farmer interview)

Finally, the demonstrator mentioned that some better reception room(s) would be necessary in order to improve the effectiveness of demonstration events. (Post survey demonstrator)

## 9. Farm's accessibility

The travel time of participants to reach the demo farm, ranged from 150 to 270 minutes, with an average time of 180 minutes (Pre demonstration survey participant). Six out of thirteen participants rated their travel effort to participate as very little effort or little effort. An equal number rated their travel effort to participate as quite some effort and one as 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, who travelled for 270 or 180 minutes, rated their travel effort to participate as very little effort or little effort and some participants who travelled for 150 or 180 minutes rated their travel effort to participate as quite some effort or great effort.

## 10. Fees for participation

At the specific demonstration event, all participants had to pay fees for participation. (Post participant's survey) Moreover, seven out of ten participants did not receive any financial compensation as they were students, with the remaining three reporting to have received a financial compensation for their attendance. These were no further details on this differentiation. (Post participant's survey)

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

The project Proeftuin receives funding from EFRO, a regional development fund. Some of this funding goes to carrying out on-farm research and setting up demos. Farms then charge a small amount for group visits and demonstrations; the price varies depending on the group size and the length of visit. By charging for demonstrations the project aims to be self-funded after initial start-up costs are covered. Host farmers are paid for the effort of organising demos and research.

During project Proeftuin we are financed partly by EFRO funding. We already ask small amounts of money to be sure that visitors are motivated for introductions. Schools pay €150 per group visit of 3 hours, groups of 15 persons pay €300, groups bigger than 15 persons pay €400. For research and preparation of demos there is an internal pricelist. Part of the starting costs are covered by project funding. (Farmer)

During project Proeftuin there is funding from regional development fund (EFRO) and partners. After the project PCvPL will generate its own funding from demonstrative experiments and introductions. (Programme Interviewee)

We pay our organisation effort. (Programme Interviewee)

#### 2. Motivations for host farmers

Farmers are motivated by a desire to share their knowledge with other farmers. The Farmer observes that this desire comes from a firm belief in the effectiveness of the precision techniques being shared. The farmer also comments that by allowing them to test new techniques, the Programme offers new business opportunities.

Demonstrate and test precision techniques in practice, alongside a commercial arable farm. (Farmer)

As I need Precision Agriculture to do the complex planning of a farm with many parcels, I'm convinced of the usefulness of it. I'm sure new techniques will give me new business opportunities. I see demonstrations as a business case (not for big profit, but covering costs), therefore I'm in cooperation PCvPL. (Farmer)

#### 3. Motivations for participants

Participants are interested in learning new techniques; they are particularly motivated by the opportunity to observe these techniques in practice on a working farm.

The real practice situation and newest techniques interests them. In some networks I'm well known. (Farmer)

Participants themselves stated as main motivators to attend the demonstration: To discover new issues; Interest in potatoes; to learn something new; precision farming is important for the future; it is part of the farm visit and big interest in the sector; I'm interested in precision farming; at my own farm we cultivate potatoes and I'm interested how we can improve.

## 4. Target audience

There is a broad mixture of people who attend demonstrations.

They could be students, Farmers, Technicians, Processors, University professors, Policy makers, citizens, etc. (Farmer)

## 5. Advertising and recruitment

The farmer believed that a good quality demo event advertises itself as word spreads naturally. While the Programme interviewee agreed, they added that in order for demos to attract participants they need to address the most pressing issues to farmers, and cover the topics that farmers are actually interested in. These subjects are established using the organisation's network.

Give good demos, the word spreads itself. (Farmer)

Combination: offer good quality on the long term; and use organisation's network to find the actual highlights that need to be demonstrated. (Programme Interviewee)

## T2: Appropriate demonstration and interaction approaches

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

Both the Farmer and the Programme Interviewee described the nature of interaction as mostly bottom-up. The Programme Interviewee explained that this approach was taken in order to 'trigger people to think actively,' which is the 'first requirement of the demos.'

There is no formal process in place for involving participating farmers in the network programme. However participants are able to request demonstration subjects. Within individual demonstrations, the farmer will offer participants the chance to ask for specific areas or topics to be covered during the day.

We answer requests from visitors...I ask what they want to hear. (Farmer)

Host farmers are involved in deciding the subject to be covered by a demonstration, as well as the planning of the event. The Programme Interviewee emphasised the ongoing relationship between the host farmers and the network programme. They indicated that the host farmers have a leading role in establishing the subject of a demonstration: members inform the Programme of what they are interested in, and a demonstration is developed around this.

They are always involved in general, in the subjects or demonstration. Hosting the demonstration is part of a longer relation. Involving them only to host a demonstration will not work: so many projects are rejected and we have to disappoint them in that case...They will only open their farms if they agree on what is demonstrated...Our members tell us what is interesting for them. (Programme Interviewee)

### 2. Focus

Both the farmer and the Programme interviewee described the demos in the network as having a 'Whole farm' focus.

### 3. Design

Both the farmer and the Programme leader described the network demonstrations as 'a mixture' between experimental and exemplary practices. Both prefer this approach as oppose to favouring either one or the other, as they consider experimental and exemplary practices to be one in the same.

Experimental and exemplary are two sides of the same coin. (Farmer)

### 4. Ideal group size

The optimal group size varied depending on the goal of the meeting or event. For planning and deep discussion smaller groups were preferable, as these are the sessions where participants want to contribute more and ask more questions. Events focused on raising interest and knowledge, usually in the form of a presentation, could handle a greater number of attendees. Generally, the less audience participation was expected or required, the greater the group size could be.

Now average 15. Depends on the goal of the meeting: up to 10 for planning; they ask most questions, 10-25 for discussion and involvement; I ask questions and wait till I get answers. Bigger groups: raising interest and knowledge: I ask questions and answer myself. (Farmer)

For planning and deep discussion: up to 10. For discussion and involvement: up to 25. For interest and knowledge: bigger – presentation. (Programme Interviewee)

## T3: Enabling learning appropriate to purpose, audience, context

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

The general structure for a demonstration day consisted of a mixture of presenting information and a tour of the farm, within which there is a discussion. The tour could include the machines, crops or experiments in question. This format allows for the host farmer to encourage participants to ask and answer questions, so as to be actively engaged throughout the day.

Start with coffee, - then introduction, - if needed of the visitors, - Introduction on the subject, - coffee break - farm visit /looking at machines/ crops/ experiments and discuss on the way - wrap up; Challenge them to ask and answer questions. Expose a fresh and passionate approach. (Farmer)

The Farmer mentioned various materials used to aid the demonstration. Presentations provide a large amount of practical experience condensed in simple terms. Demonstrating real sensors and machines, or looking at the difference between plants, offers a visual understanding of technique or technology being discussed. Various other resources may be used to boost interest, such as PowerPoints or physical farm artefacts.

Management cycle (a presentation developed during 5 years) Very practical experience in simple words; PowerPoint, real sensors and machines, real (difference between) plants. The notebook of my grandfather! (Farmer)

Both the Farmer and the Programme Interviewee cited 'participants ask questions and talk openly' as the most important factor in providing an effective demonstration. This was because it encourages participants to think for themselves, which was considered the most effective learning tool.

People should learn by thinking themselves. (Farmer)

You can bring a horse to the water, but you cannot make it drink. You can bring a visitor to the solution, but you cannot make him think. (Programme Interviewee)

## 2. Taking into account variation in learning

Both the Farmer and the Programme Interviewee said that they do take into account variations in learning. The Programme considers the different goals in different groups of farmers, mainly in reference to their age and what this means for their priorities in farm management (e.g. 20-30yrs need to earn money, while 50-60yrs need to prepare for farm succession). However there was no mention of accommodating for different learning styles amongst participants.

We connect to the level on which the target group is in the position to make decisions. Young farmers 20-30yrs need to earn a lot of money in few years, 30-40 build a family and network, 40-50 want to make a difference (innovation), and 50-60 prepare the farm for succession. (Programme Interviewee)

## T4: Effective follow-up activities

### 1. Follow-up activities and materials

Both the farmer and those at the Programme level try to engage with participants after the event, either by staying connected to the relevant networks or by keeping in touch with the 'core participants.'

The Programme is very active on its own websites as well as on social media, providing videos, stories, interviews, Tweets etc. for participants after the event. These resources tend to be put out the day after the demonstration, while engagement is high and people are likely to be checking for more information on the subject.

Video, pictures, small stories, tweets, interviews, etc. Very active on Sites vandenborneaardappelen.com and pcvpl.nl, Facebook, twitter, LinkedIn, YouTube (many images with drones) Many introductions. (Farmer)

### 2. Assessing impact

The Farmer stated that they sometimes assess the impact of the events on the participants by taking an informal approach and following their progress on social media. The Programme Interviewee stated that they do assess the impact, but did not comment on how they do this.

Video, pictures, small stories, tweets, interviews, etc. Very active on Sites vandenborneaardappelen.com and pcvpl.nl, Facebook, twitter, LinkedIn, YouTube (many images with drones) Many introductions. (Farmer)

Assessment of the impact of an event on the wider farming community was carried out by asking the farmers themselves. The farmer also commented that it is possible to deduce the impact on the farming community by considering the spread of the products they provide to farmers at demo events. The impact of increasing the use of drone data or Crop-r management, for example, can be figured out through their understanding of the scope and impact of the technology.

We know the use of products that we provide to farmers: Scans, drone data, use of Crop-r management Programme (no difference between participants and non-participants). (Farmer)

We ask in our farmers groups. (Programme Interviewee)

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 50 participants, of which 13 filled in the pre survey and 10 the post survey.

	n° survey participants	beef farmer	farmer	High school professor	farmer's son	vegetable farmer	pig farmer	student	trading in potatoes	unknown
<b>occupations</b>	<b>13</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<i>working area</i>	<b>12</b>									
local area	4	1		1			1		1	
not local area	8		5			1		1		1
<i>gender</i>	<b>13</b>									
Male	8		3	1	1	1			1	1
Female	5	1	2				1	1		
<i>Age</i>	<b>13</b>									
18-30	12	1	5		1	1	1	1	1	1
31-40										
41-50	1			1						
51-60										
60+										

### T1: Learning processes

#### 1. Communication initiation by participants

When in the whole group, not more than 10% of the participants hesitated but shared their knowledge and/or experiences related to the topic. In our view, the visitors had no problem sharing their knowledge. However it still didn't happen. In addition, the size of the group was too big so there was not much interaction during the presentation. In smaller groups the visitors talk more to each other and share their knowledge. But they don't necessarily share their knowledge with the demonstrator.

There was sufficient time for questions but the visitors didn't ask a lot of questions. There was room for questions during and after the presentation and during the tour. During the presentation there were some questions, during the tour was it limited.

The demonstrator had a sufficient amount of information, it was nice listening to him. Some good discussions took place when the demonstrator asked the visitors a question. During the discussions the visitors gave their point of view. The demonstrator made enough time for discussions however the visitors did not have questions or felt the need to engage in discussions, so the demonstrator continued the presentation.



	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	8/10	1/10	1/10	0
I asked at least one question during the demonstration .	7/10 yes				
I shared my own point of view at least once during the demonstration.	2/10 yes				
I felt encouraged to ask questions during the demonstration.	0	3/10	6/10	1/10	0
When there were any discussions, I felt comfortable sharing my opinion.	0	2/10	2/10	0	6/10

	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 were no hands-on activity demonstrated or possible to carry out by the visitors. Visitors could only listening, look and touch. During the first part of the demonstration (presentation), the visitors could mainly listen to the host farmer. During the tour, the visitors could listen to the tour guide/demonstrator, touch the machinery and touch and smell the potatoes.

### *Discussion opportunities and negotiating conflicting points of view*

There was no specific facilitator to guide the questions. The host farmer could be seen as a facilitator, as he was available to answer questions.

There was time for an open discussion, but nobody really engaged. Approximately 15% of the time was spent on discussions. There was more time but not all the time was used by the visitors. During the tour in smaller groups there were more discussions. There was no elaboration/further explanation on shared critical points of view. The visitors didn't have enough questions to have a good discussion and conflict.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	0	6/10	2/10	0	2/10
If participants didn't <b>agree</b> with each other during discussions, somebody (demonstrator/other participant) <b>tried to reach a consensus</b> between them.	0	1/10	0	0	9/10

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

### 3. Engagement during the event

Participants all seem to know each other well, but are not close friends. The visitors were a group who followed the same courses at university, so they know each other well. They share their point of view but not their own farm situation. The demonstrators talked openly about his company and the possibilities of different techniques he used. Also the demonstrator acted quite informal to the visitors, this created an open and informal ambiance.

	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.	2/10	4/10	3/10	0	1/10
I could relate well to other participants (because they have an agricultural background similar to mine).	1/10	4/10	5/10	0	0
A lot of the other participants are part of the same farmer network as me.	7/10	0	3/10	0	0
I felt like I could trust the knowledge of (most of) the other participants.	0	1/10	9/10	0	0
The demonstration felt like an informal activity to me.	1/10	1/10	5/10	3/10	0
I thought the host farm was comparable enough to my own farm.	1/10	5/10	3/10	0	1/10
I had the feeling the demonstrator was like one of us.	0	3/10	4/10	3/10	0
I had the feeling I could trust the demonstrators knowledge.	0	0	2/10	8/10	0
I got along very well with the demonstrator.	0	1/10	9/10	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?	No				
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	0	1	0
I think the host farm was well suited for this demo.	0	0	1	0	0
I got along well with the participants.	0	0	0	1	0

## T2: Learning outcomes

Most of the visitors were familiar with the explained knowledge, so the knowledge was sufficiently understandable. In addition, the demonstrator explained the knowledge very well so it was understandable. There was sufficient depth on the subject, and the demonstrator made sure that the visitors were alert during the presentation. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. During the demonstration precision farming was demonstrated as an alternative on 'normal' farming. The precision farming was focused on arable farming. The demonstration was focused on the way of precision farming. How to use it and the advantages/disadvantages. Common methods or ways of thinking on learning were not questioned.

	participant answers				
What would you <b>ideally like to learn</b> today?	Content on precision farming and arable farming; More silage from own fields; A lot about increasing of yields; How to collect data; Innovation in potato cultivation				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	0	8/10	2/10	0
The <b>demonstration exceeded my expectations.</b>	0	4/10	3/10	3/10	0
I <b>felt surprised</b> at some point(s) during the demonstration.	0	2/10	5/10	3/10	0
I <b>obtained a clearer understanding</b> of the topic(s) demonstrated.	0	0	4/10	6/10	0
I have the feeling I <b>learned something new</b> (knowledge, skill, practice, etc.).	0	0	3/10	7/10	0
I <b>thought about how I could implement</b> some of the ideas and practices on my own farm.	1/10	1/10	4/10	4/10	0
I <b>reflected on my own point of view</b> at some point during the demonstration.	0	6/10	4/10	0	0
I learnt about <b>the principles underlying a practice.</b>	2/10	4/10	4/10	0	0
I thought about <b>how we learn something new</b> on demonstrations (e.g.: teaching methods).	5/10	3/10	2/10	0	0
I thought about <b>why</b> I want to learn about <b>the topic(s) of this demonstration.</b>	6/10	2/10	1/10	0	1/10

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

### T3: Overall comments on the effectiveness of the event

#### Participants:

With an average of 3,7 on 5, participants rated the event overall as effective. 10 on 10 participants who answered the questions would recommend the demonstration.

As main effective characteristics of the demo participants mentioned: Presentation in order from cultivation process; to learn how to optimise the use of a field; demonstrator told his own story about the

development of precision farming; good presentation; the demonstrator was one of us; demonstrator used a lot of examples from his own experience and farm; Presentation with new information for me

Participant mentioned following suggestions for improvement: tour was not effective. Sometimes you can't follow the demonstrator; group was too big (60 people); try to have more discussions; more test fields to see better the advantages of precision farming.

#### *Demonstrators:*

As main effective characteristics of the demo, the demonstrator mentioned: they want to come and they got to be active.

As suggestion for improvement the demonstrator mentioned: better reception room(s)

#### *Observed main strong points of the event:*

The demonstrator has a strong sense of empathy with the different visitors, which he uses to adapt the presentation on their level. The results in an optimal knowledge uptake.

#### *Observed main possible improvements of the event:*

The demonstration was on the potatoes farm, because of this the knowledge information was ideal. First there was a presentation, after that during the tour we can see a part of the practice. One missing point was a view on a real test field. In a test field, the theory will be shown in practice.

Although time was foreseen, there was a lack of questions and discussion input from the participants. Maybe some questions to foster discussion could be prepared in the future, when participants don't have much inspiration themselves.

## 6. Annex: Case study poster July 2018



FarmDemo

CASE STUDY 1 Netherlands: Arable farm

Peter Paree & Ivoonne de Bruijn - ZLTO



Case study 1 is commercial arable farm in the southern part of The Netherlands. The main crop is potatoes. There are also a few hectares with maize and sugar beets. The farm has 420 hectares arable land in total. The farm is part of 'Practice centre for Precision farming' (PCvPL) and a pioneer in precision farming. In addition of the 2 entrepreneurs, there are 3 fulltime employees.



### Objectives

- Demonstrate and test precision farming techniques in practise

### Motivations

- New techniques will give new business opportunities
- Demonstrations as a business case, not for big profit, but just for covering costs.
- Cooperation with Practice centre for Precision farming.

### Topic selection

- Bottom-up
- Farmer shares his point of view with the participants
- Determined by participants and farmer/demonstrator

### Evaluation peer-to-peer learning environment (Demonstration – 1 march)

- Learning from demonstrator (farmer) to participants (farmer)
- Participant (farmer) to participant (farmer).
- Room for discussions and questions
- Trigger participants with questions

### Audience & participation

- Everyone who is interested in precision farming (E.g. farmers, technicians, students, university professors, policy makers, citizens etc.
- Not for free, participants have to pay

### Demonstration set-up

- Give good demonstrations to attract participants (the word spreads itself)
- Presentation and farm visit
- Room for discussion

The overall impression of this demonstration farm is very good through a few points. The farm is part of the network 'Practice centre for Precision farming', the farmer is a good story teller and anticipates to the knowledge level of the audience and it is an innovative farm in precision farming.

The three key areas for the workshops are the program of PCvPL, story telling and earnings model of demonstration farms.



PLAID



AGRIDEMO



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Praktijkcentrum  
Voor Precisie Landbouw

## The Netherlands Case Study 2

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# 1. Background

## Event Farm and location

The main visitors were consumers/citizens, with activities for all ages including tasting and playing. The demonstrations during these days are also interesting for farmers and policy makers.

Most of the farmers and policy makers participated in the demonstration in the morning, because the day starts with a few presentations about the future and sustainability of the agricultural sector. After the presentations there was a tour in the greenhouse and warehouse to see the growing, sorting and transporting process of the sweet peppers. The host farmer is tour leader and told them about the process. The farmers and policy makers asked different questions, focusing on the things they saw during the demonstration and on the introductions at the start of the day.

The main goal of the demo days is to emphasise the force of the horticulture in the local environment. It demonstrated the management of the farm and a few innovations.

This day in Someren is part of a national event with more than 200.000 visitors over more than 200 horticulture farms. More than 95% of the participants are consumers. Someren got 3000 people that visited most of the six open farms.



## 2. Method

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

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of programme/networks (level 1) and farm level interviews with demonstrators/hosts (Level 1) to reveal how the functional and structural characteristics enable learning. Analysis of these interviews is reported in Sections 3 and 4. Data is sourced from 2 interviews, one with a Programme/network member, and one with a farm level interviewee. Both were 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 14 pre and 11 post demonstration surveys for participants, 1 pre survey and post survey for the demonstrator, 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. For the Belgian and Dutch cases, a workshop was held on the 9<sup>th</sup> of November.

### 3. Structural characteristics

#### T1: Programme/network level

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

###### ZLTO

The open days in Someren were jointly organised and coordinated by ZLTO and five host farmers (local group of market gardeners), in collaboration with the Open Greenhouse day's foundation. ZLTO's role was supportive as the overall approach was almost entirely bottom-up and host farmers were engaged in most of the demo functions (Observation tool + Programme interviewee). A ZLTO employee was responsible for the overall coordination (plan, preparation and get network together) of the event over the whole region (ZLTO personal contact). The Open Greenhouse day's foundation has selected and contacted each host farmer and thereafter they have jointly organise the network event at the region. However, ZLTO seems to have been also engaged in recruiting host farmers. The preparation and organisation of the public event was a joint effort between ZLTO employee and the 5 host farmers of the region. Actions were decided between ZLTO and the host farmers, and thereafter each host farmer was responsible for planning, preparing and implementing the demonstrations activities. The events are also jointly evaluated by the ZLTO employee and the host farmer. The host farmers, ZLTO and other stakeholders were responsible to "advertise" the network meeting by sending invitations.

Q: Who are the main people involved in the demonstration activities and what are their roles?

R: The role of the 5 open farms is to plan, prepare and host the farm demonstration. My role is to plan and prepare the 'Open Greenhouse Days' Someren. (Programme interviewee)

Q: Do you evaluate the demonstration activities overall? R: Yes. During a meeting after the event we (I and host farmers) evaluate the event. (Programme interviewee)

Q: Who are the main people involved in the demonstration activities and what are their roles? R:

The main people involved in the demonstration activities are the 5 host farmers and the organisation group (one representative of ZLTO, one representative from the Open Greenhouse day's foundation. This group is responsible for planning and preparing the demonstrations activities. During the day my role is to explain the greenhouse and answer question of the visitors. (Farmer)

For the networking event host farmers, stakeholders and ZLTO sent invitations. (Farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: Yes. The host farmers and organisers make the program, participant only visit. (Farmer)

The foundation of the Open Greenhouse days contacted us. We agreed to host the network event in the morning. The foundation organised the network event, with support of the 5 host farmers in 2018 and the ZLTO's employee. For public event, we discussed the plan in this group. After deciding actions, we were responsible for our part. (Farmer)

We (the organisation group) contact the farmers and ask them to host the demonstration. When the farmers want to host the demonstration we go for the next step. Some farmers say immediately yes, other farmers doubt longer or say no. (Programme interviewee).

### *The 'Open Greenhouse Days' foundation (Stichting Glastuinbouw Oost-Brabant)*

The foundation holds a co-organising role in the network's events, supported by the host farmers and ZLTO. The foundation's employees were responsible to approach the local sponsors for funding.

The national foundation has national sponsors. As organisation in this region we have searched for local sponsors. First this sponsors are contacted by the programme maker (of Open Greenhouse Days foundation), the response was very low. After that we, as horticulturist, approaching personally the sponsors. That was more effective. (Farmer)

The foundation of the Open Greenhouse days contacted us. We agreed to host the network event in the morning. The foundation organised the network event, with support of the 5 host farmers in 2018 and {ZLTO's employee name}. (Farmer)

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

### *Host farmer/network as an actor*

The Open Greenhouse is a national ranged initiative, including approximately 20 regions in Netherland (Farmer). Every year, different regions throughout Netherlands and different farms are alternated to host the open event (Observation tool). Therefore, every year there is a new group of host famers. This is why the specific farmer involvement at programme level has only to do with this year's local organisation of 'Open Greenhouse days' in Someren. So there is not any involvement of the host farmer at the national level.

Q: Are you involved in the overall development of demos at the programme / network level? R: No. I'm only involved in the regional network for one year, not in the national level. (Farmer)

Yes, as said before we have two different event. The day start with a network event in the morning. The network event consists of introduction and discussions. The public event in the afternoon was free moving and some demonstrations. The visitors were free to visit the demonstrations. For the other groups who visit the farm, I customise my story ..... To engage participants it is important to tell your own story, no slide show. Besides a story, the tour in the greenhouse is most important and effective. ....During the farm walk, I share some content about the production systems and the working flows. It is depend on the audience. (Farmer)

In Someren, the role of the five open farms was to plan, prepare and host both the network meeting and the public event (Programme interviewee). The network event was jointly organised and coordinated by the foundation, the five host farmers and ZLTO. The actions for the public event were decided between ZLTO and the five host farmers and each host farmer was responsible for planning, preparing and implementing the demonstrations activities on their owns farms. The host farmers were actively involved in the development of the overall demonstration programme, as they had several meetings to discuss and decide on organisational aspects of the events. They were also actively involved in the topic selection process, as the topics were discussed and decided by them. The ZLTO employee was also present in this process. In the network meeting, the topics were based on actual relevant developments in the sector. The public event's topic, was connected to the type/production of the host farm. Nevertheless, as will be detailed in the relevant section below, the funders do have a say in the selection of topics.

As mentioned earlier the overall approach was almost entirely bottom-up and hosts farmers were engaged in most of the demo functions and decisions, evaluation and dissemination of the events. The specific host farmer is demonstrator/presenter at the demo events on his farm.

Q: Are host farmers involved in the development of the individual demonstration activities. R: Always. The host farmers are involved to develop the demonstration on their own farms. (Programme interviewee)

Q: Are host farmers involved in the development of the overall demonstration programme? R: Always. In the overall demonstration programme the host farm makes the decisions together. Before the event the farmers talk to each other in meetings. (Programme interviewee)

The foundation of the Open Greenhouse days contacted us. We agreed to host the network event in the morning. The foundation organised the network event, with support of the 5 host farmers in 2018 and ZLTO. For public event, we discussed the plan in the group of 5 and ZLTO. After deciding actions, we were responsible for our part. (Farmer)

The main people involved in the demonstration activities are the 5 host farmers and the organisation. This group is responsible for planning and preparing the demonstrations activities. During the day, my role is to explain the greenhouse and answer question of the visitors. (Farmer)

Q: Do you evaluate the demonstration activities overall? R: Yes. After the event, we have a meeting with the 5 host farmers and some organisers. In this meeting, we evaluate the Open Greenhouse Day. And there is a national evaluation. (Farmer)

We ask the farmers which topics they interested in. In a meeting with the farmers the topics were discussed and decisions made. (Programme interviewee)

Q: How are demonstration topics selected? R: For the network event the topics are chosen based on actual relevant developments in the sector. For the public event it depends on type of farm, but the most important point is to show citizens a real farm life. Also the main funder has influence to select the topics. (Farmer)

Q: Do you request feedback on the event day from participants? R: Yes. The Open greenhouse days are a proven concept for 41 years. For now, things we do are good. The future is always a question mark. In the end of the day we ask visitors about their experience. (Farmer)

#### *Audience / type of participants*

In the Open Greenhouse days two different events with different type of participants are organised. At the network meeting a specific target group, i.e. peer-farmers (25%) and relevant stakeholders in the sector (75%), attend. The intended audience of this event are mainly local greenhouse farmers, local policy makers and stakeholders of the sector i.e. suppliers etc. (Programme interviewee + Farm level Interviewee).

The public meeting is open for citizens/ consumers and any interested person in the region. Most of the people attending the public event are young families and older people (Farmer). Families see this day as a nice day out. In Someren, around 3500 people have visited the 5 host farms. All over the Netherlands, around 200.000 people visit an Open greenhouse farm that day.

The demonstration starts with a network meeting to meet colleagues and relevant stakeholders in the sector. The public event shows consumers where products come from and how the farmers produce. (Programme interviewee)

For the network event we reach 90% of relevant persons were there (80 people, 20 farmers). For the public event, we don't know which participants we don't reach. But we know that around 3500 people visit the farms in this region. In the Netherlands, around 205.000 people visit an Open greenhouse farm. To recruit young people is hard. (Farmer)

Yes, in the morning with introductions for the stakeholders. In the afternoon the demonstrations was focused on the citizens. The citizens could free moving in the greenhouse (Programme interviewee).

I have different intended audience. We also host the network event in the morning, before the start of the real event. The audience for the network event are local policy makers, colleague greenhouse farmers and stakeholders like suppliers. After the network event, the public event start. This public event is intended for citizens and people in the region. The intended audience for the plant breeding companies are choose by the companies itself. But everyone is welcome, sometimes scouting or school groups visit the greenhouse. (Farmer)

### 3. Networks

The network 'Open Greenhouse Days' in Someren is part of a new foundation, the Stichting Glastuinbouw Oost-Brabant (Programme interviewee). The 'Open Greenhouse days' is a yearly-based activity and lasts for one day (Observation tool). It is a national ranged initiative, which includes approximately 20 regions in Netherland each year (Farmer). Every year, different regions throughout Netherlands and different farms are alternated to host the open event (Observation tool) and, thus, there is a new group of host famers at different regions every year. This rotation results to once in every 5 years that the open days take place in the same region (Farmer). In the frame of 'Open Greenhouse day', more than 200 horticulture farms were open the same day.

According to the Programme interviewee, on this specific day similar demonstrations took place on different sectors. Host farms are not connected to other farm demo in a sense of a common goals and implementation of specific activities in the frame of a demo programme. Each region has the autonomy to organise its own programme under an open day general theme defined nationally, and farm events are simply part of the national Open Greenhouse Day network for this year. This year 5 farms in the Region of Someren were chosen to be open in the context of 'Open Greenhouse Days'. (Programme interviewee). The network of the farms included is not sector-specific (Farmer). Each event includes a network meeting on a selected subject between colleagues and sector stakeholders, and a public event for consumers (Programme interviewee + Poster). The specific farm's owner do not hold any elected or appointed roles on farming networks or boards (Pre survey demonstrator).

Overall, the demo farm is not connected to other demo farms. But during the Open greenhouse days, the farm is connected to the 4 other host farms of this day. The network in this region is part of the national network. The national network is an umbrella for approximately 20 regions. The network consists of different sector. Most of them are greenhouses. (Farmer)

The local 'Open Greenhouse Days' in Someren are connected with the national foundation 'Open Greenhouse Days'. The national foundation is part of SIGN. SIGN is LTO Glaskracht and ministry LNV. (Programme interviewee)

The National 'Open Greenhouse Days' has an overall theme. The local 'Open Greenhouse Days' can do something with this theme but have their own local programs. (Programme interviewee)

The role of the five open farms is to plan, prepare and host the farm demonstration. My role is to plan and prepare the 'Open Greenhouse Days' Someren. (Programme interviewee)

The demonstration start with a network meeting to meet colleagues and relevant stakeholders in the sector. The public event shows consumers where products come from and how the farmers produce. (Programme interviewee)

Every year other farmers are the host farmers of this event. Once in the five years the open days are in this region. (Farmer)

#### 4. Funders

The Open Greenhouse Days events are funded by local sponsors and a subsidy from the national foundation 'Open Greenhouse Days'/SIGN. The national foundation is part of SIGN. (SIGN is LTO Glaskracht and ministry LNV). According to the Farm level Interviewee, the main funder (i.e. the local sponsors) has influence to topic selection.

For the network event the topics are chosen based on actual relevant developments in the sector. For the public event it depends on type of farm, but the most important point is to show citizens a real farm life. Also the main funder has influence to select the topics. (Farmer)

#### 5. Breeding companies

At the farm level, besides the Open Greenhouse Days, the specific farm also host demonstrations of breeding companies which focus on research on specific techniques. For these demos the intended audience are chosen by the companies themselves. The farm is always open to visitors like scouting groups, school groups, or any interested entity under an appointment.

Besides the Open Greenhouse Days we also host demonstrations of plant breeding companies. Everyone is welcome. Sometimes the plant breeding companies visit the greenhouse with visitors. (Farmer)

The demonstrations of the breeding companies do have a specific technique for research. (Farmer)

During a year, we host demonstrations for breeding companies and other groups like school and scouting. Everyone is welcome who ask for a visit. It start with one group and request. One group, becomes two etc. (Post host farmer interview).

#### 6. Incentives

According to the Programme interviewee, there are no incentives offered to farmers in order to host demonstration activities (Programme interviewee).

#### 7. Human Resources

The case study demonstrator has never received any training in order to become or act as demonstrator (Pre survey demonstrator). Additionally s/he stated that s/he would not benefit from some extra training as a demonstrator (Post survey demonstrator).

#### 8. Goals and objectives

Both Programme and Farm level interviewee mentioned that the overall goal of the 'Open Greenhouse Days' in Someren is to create support of the people in the region. The two different events though (network and public event) serves two different goals. For the network meeting the goal was to bring sector's stakeholders together (networking) and discuss about a specific subject. For the public meeting the goal is to show to consumers/public how a farm works and how the products grow (Programme interviewee).

The overall goals of 'Open Greenhouse Days' is create support of the people in the region. For us it was the region Someren. (Programme interviewee)

My goal to host this day is to create support of the people in the region. Hopefully we give them another view to the sector. (Farmer)

The demonstration start with a network meeting to meet colleagues and relevant stakeholders in the sector. The public event shows consumers where products come from and how the farmers produce. (Programme interviewee)

## T2: Farm (event) level

The demonstration event (network and public event) was held on the 7<sup>th</sup> of march 2018 on the Joosten Growers farm. The Joosten Growers farm is a commercial, large sized red pepper farm in the southern part of the Netherlands (Someren). It is a family farm, operated by the father and his sons. The farm has a greenhouse of more than 8.5 hectares with red peppers. Around 150.000 plants produce 13 million red peppers in a year. The peppers grow all year round. An average of 25 full-time employees work at the farm (Poster + Post host farmer interview).

### 1. Topic

Open Greenhouse Days - Red Pepper and Energy-management (Observation tool + Poster)

Subtopics (Observation tool):

- 1) Bumblebees for natural pollination of the plants;
- 2) Drip installation system for precision irrigation, including fertigation to apply nutrients for optimal growth and regulation of leaf/fruit ratio;
- 3) Sorting machine which guarantees optimum uniformity;
- 4) Transport utilities including load dock for trucks;
- 5) The facilities for personnel

### 2. Group size

The specific demo described is the network event. According to the observation tool, some 25 participants attested the network meeting. All interviewed participants work at the local area and they were farmers (42%), horticulturists (25%) and Rabobank representatives (25%) (Pre demonstration survey participant). Three out of four participants stated that they were part of the same farmer network (Post participant's survey).

### 3. Event layouts and practice/technology demonstrated

The demonstrations organised in the programme are exemplary (Programme interviewee + Farm Level Interviewee). Both farm and Programme interviewee, believe that these exemplary approaches are also more preferable in relation to the audience they address to. The event's demonstrator has also classified the specific demo event as a showcasing of best practice/existing experience (Post survey demonstrator).



Q: Which approach do you prefer? R: Exemplary. Q: What influences this choice? R: The audience. (Programme interviewee)

Q: Which approach do you prefer? Exemplary. Q: What influences this choice? R: During the demonstration, we showed the best practice of the greenhouse sector and this farm. With this approach, we reach the right audience. (Farmer)

As stated earlier, the first part of the day was the network event in the morning. The network event consists of introduction/presentation and discussions between farmers and stakeholders. The second part of the day (public event) took place in the afternoon. The public event consists of free moving around the farm facilities and looking to the working process. It included also small group discussion, Q&A, tasting and some demonstrations (Farmer). More specifically, there was a greenhouse on farm with 8.6 hectares of red peppers, a warehouse with sorting machine for the red peppers and a loading/unloading place. External equipment have been also shown to visitors (Observation tool). Visitors were allowed to go everywhere, except between the plants: they had to stay in the central pathway for precautionary reasons (Observation tool). The goal of the day was to give a general overview of the farm's management. The current situation of growing and handling red peppers have been demonstrated. In that way there were not any trials and comparisons of treatments or races. (Observation tool).

The day start with a network event in the morning. The network event consists of introduction and discussions. The public event in the afternoon was free moving and some demonstrations. The visitors were free to visit the demonstrations. (Farmer)

There is a difference between the network and public event. The network event is based on an introduction/presentation and discussion. The public event consist of tasting, testing and looking to the working process in the red pepper farm. It depends on the audience. (Farmer)

#### 4. Actor's role during the event

##### *ZLTO employee*

The ZLTO employee was present at the event and was facilitating the whole process (Observation tool). More specifically, he acted as a moderator/ facilitator and he was making the link between regional and local. He also acted as demonstrator (ZLTO personal contact).

Yes, there was a facilitator to guide questions and/or discussions. That person was part of the organisation of the 'Open Greenhouse Days'. He receives the questions and take care of them. When he could answer the question them self, he give the answer. Otherwise, he asked the right person for answer this question (Observation tool).

##### *Host farmer*

The host farmer had different roles. He was preparing the event by taking care of the good looking and the cleaning of the farm (ZLTO personal contact). He conducted also the tour guide; he was the presenter of the farm and answered the questions of the visitors.

The host farmer had different roles. During the demonstration activity, he was the tour guide and answers the questions of the visitors. His wife was the organiser of the day and coordinated the ca 10 people that helped to lead the stream of people in the right direction, did the catering and entertained children. (Observation tool)

During the day my role is to explain the greenhouse and answer questions of the visitors. (Farmer)



## 5. Frequency and Duration

According to Post host farmer interview, besides his participation in the open days, approximately 15 demonstration events are organised on his farm each year (Pre survey demonstrator).

The Open Greenhouse Days are organised in Netherlands for 41 years now. Each host farmer is only involved in the regional network for one year period.

This event is once a year, 1 day. Every year other farmers are the host farmers of this event. (Farmer)

I'm only involved in the regional network for one year, not in the national level. (Farmer)

## 6. Timing

The day and timing of a demonstration event are important. If an event takes place at the same time, or in the same period, with other events/open days organised in the region, it could have a negative impact on attendance numbers.

For the network event in the morning, maybe the Sunday morning could be a reason to feel discouraged. But they come anyway. For the public event, citizens who are not interested, does not matter where food comes from and discourage. Another reason could be, a lot of other open days are organised in this region and period. People can have enough of it. (Farmer)

## 7. Other farms infrastructures or arrangements

The host farmer and the organisers had made some arrangements for hosting the specific event. He has prepared the event by taking care of the good looking and the cleaning of the farm. Moreover, catering or homemade food is generally offered depending on the size of the event. In this case, the organisers offered breakfast and tastings.

The network meeting start with breakfast at 8.30. (Programme interviewee)

Q: Did you make specific arrangements to host the event (accommodation, catering, etc.)?

Which ones? R: It depends of the event. For bigger event like Open Greenhouse Days, we rent a catering. For smaller event we do it ourselves. (Post host farmer interview)

The visitors could taste the red peppers (smoothie), smell and touch the red peppers and plants. (Observation tool)

Finally, a guided walk with small groups of visitors is mentioned as an arrangement toward a more effective organisation of the farm's event.

Maybe smaller groups with a guide make it more effective for some visitors. Not all the visitors wants a guide and can free move. I think that should be a good combination. (Post survey demonstrator).

## 8. Accessibility

The travel time of participants to reach the demo farm, ranged from 1 to 180 minutes, with an average time close to 32 minutes (Pre demonstration survey participant). Eight out of twelve participants rated their travel effort to participate as very little effort, while three out of twelve participants rated their travel effort to participate as little effort.

Two participants, who travelled for 180 minutes, rated their travel effort to participate as little or very little effort and the two participants who travelled for 1 and 2 minutes respectively, rated their travel effort to participate as quite some effort (Pre demonstration survey participant). So the effort rate is maybe related to other than travel distance factors i.e. participants motivations, free time etc.

## 9. Fees for participation

Both network and public events were free of charge (Poster + Post participant's survey). 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

Funding from the event came from both local and national bodies. Support from local sponsors was subsidised by a national union (SIGN) and a national foundation ('Open Greenhouse Days'). The Programme Interviewee emphasised that they tended to look for local sponsors to fund local events.

There was no mention of whether or not farmers are paid for hosting demonstration days.

The event is funded by local sponsors and subsidy from the national foundation 'Open Greenhouse Days'/SIGN. (Programme Interviewee)

The funding arrangements are local sponsors, subsidy from SIGN (national union), and national foundation 'Open Greenhouse day. The national foundation has national sponsors. As organisation in this region we have searched for local sponsors. (Farmer)

#### 2. Motivations for host farmers

Both the farmer and the programme interviewee expressed a desire to create acceptance and support for the greenhouse sector amongst local citizens. The farmer added that another key motivation for hosting demos is introduce people to the work they do in the greenhouse sector, in the hope of inspiring people to enter the sector as employees. The farmer was clear that he was not motivated by commercial reasons.

My goal to host this day is to create support of the people in the region. Hopefully we give them another view to the sector. (Farmer)

For the public event it's important for me and colleagues' farm that we work sustainably and show it to the citizens. My motivation to host the network event is to create a new learning ambiance for the greenhouse sector. For the sector, it is hard to find good employees. A day like this can contribute to find good employees. I have no commercial reason. (Farmer)

Create support and acceptance in the region. (Programme Interviewee)

#### 3. Motivations for participants

The first half of the demonstration day consisted of a network meeting, which was attended by stakeholders in the farming sector and by other farmers. Participants of this event consisted of other greenhouse farmers who attended in order to 'meet relevant persons in the sector and to learn about a specific subject.'

The public event was attended by local residents who were interested to know how their food is actually grown inside the greenhouses. The farmer added that it also a nice day out for citizens.

For the network event in the morning, I think that other farmers want to meet relevant persons in the sector and to learn about a specific subject. The stakeholders of this subject are present. The motivations for the participants of the public event is to see how food grows and have a nice day out. Normal, the citizens only see the outside of a greenhouse and want to know what is inside (Farmer)

The demonstration start with a network meeting to meet colleagues and relevant stakeholders in the sector. (Programme Interviewee).

Participants themselves stated as main motivators to attend the demonstration: Interest; Stakeholder in the agricultural sector. For both private and work situation; Networking; to see new developments and ideas for success; Interest to see innovation by colleagues- horticulturist.

#### 4. Target audience

The target audience was different for the two parts of the event. The network event in the morning was aimed at local policy makers, other greenhouse farmers and stakeholders (such as suppliers). The public event was aimed at local citizens, including scouting or school groups.

I have different intended audience. We also host the network event in the morning, before the start of the real event. The audience for the network event are local policy makers, colleague greenhouse farmers and stakeholders like suppliers. After the network event, the public event start. This public event is intended for citizens and people in the region. The intended audience for the plant breeding companies are choose by the companies itself. But everyone is welcome, sometimes scouting or school groups visit the greenhouse. (Farmer)

The intended audience are local greenhouse farmers, policy makers and stakeholders of the sector. (Programme Interviewee)

#### 5. Advertising and recruitment

Participants were targeted for the network event; invitations were sent to host farmers, stakeholders and ZLTO. The public event was advertised publically via the organisation's website, the local papers and billboards. The Farmer commented on the fact that the programme would benefit from researching the most effective form of advertising, indicating that without this, money could be being wasted by investing in ineffective advertising. The farmer speculated that billboards were the most effective means of recruitment for the public event, and that local newspaper adverts were the least effective.

For the networking event host farmers, stakeholders and ZLTO sent invitations. (Farmer)

For the network meeting we send invitations to a special target group. For the public event we advertise in local papers, posters and website. (Programme Interviewee)

In my experience the most effective way is dependent of the target group. For the network event it was target invitations to some people. For the network event it was a lot of advertising in local newspapers and billboards. (Programme Interviewee)

We should do research to this. But I think that the most effective way are the billboard in the region. For the public event it is important to be in 'the picture'. We also place an expensive advertisement in the local newspaper but I think the response of this advertisement is too low (Farmer)

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

Both the Farmer and the Programme Interviewee described the nature of interaction within the organisation as 'entirely bottom-up', agreeing that 'farmers should be and are in the lead' as they are the ones that understand how the sector functions.

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

The network events consisted of topics which were reflective of current developments in the sector; however there is no explanation for how they establish the most relevant developments. Nonetheless, shows the value placed on providing demonstrations that address the interests and concerns of participating farmers.

For the network event the topics are chosen based on actual relevant developments in the sector. (Farmer)

The Farmer expressed that host farmers were 'involved' in developing the demonstrations they will be hosting, however he did not detail the extent of this involvement. In regard to individual demonstration days, these are hosted by 5 different farmers, all of whom make decisions about the day together in formal meetings leading up to the event.

The host farmers are involved to develop the demonstration on their own farms. (Farmer)

In the overall demonstration programme the host farm makes the decisions together. Before the event the farmers talk to each other in meetings. (Programme Interviewee)

Participants of the event were seen as visitors to the event that has already been created by organisers and farmers, they are not involved in the network programme.

The host farmers and organisers make the program, participant only visit. (Farmer)

### 3. Focus

The Farmer described the network demos as taking a 'whole farm' approach, while the Programme Interviewee described the approach as 'in between' whole farm and single focused.

### 4. Design

Both the Farmer and the Programme Interviewee described the network approach as 'exemplary' as appose to 'experimental'. Demonstrating 'exemplary' practices of the greenhouse sector was the preferred approach by both as they considered this to be what the audience want to see.

### 5. Ideal group size

For the network event there was 'no limit' to the number of attendees; both the Farmer and the Programme Interviewee referred to their last event in which 80 people were present and an effective network meeting took place. However for the farm tours the Farmer considered 8 to be the optimal group size, as this allows everyone to stay together and hear what is being said, as well as being able to ask questions more freely.

The most effective way for 80 persons is a presentation during the network meeting.  
(Programme Interviewee)

For the network event, I think there is no limit. There were around 80 people and that was okay. For a farm tour, for me the maximum is 8 persons. With 8 person, everyone could hear your story, ask more questions and stay together. (Farmer)

### T3: Enabling learning appropriate to purpose, audience, context

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

Both the Farmer and the Programme Interviewee considered the most effective structure for the day to consist of a presentation in which to explain things, followed by a farm tour to show these things in action. The Farmer emphasised the importance of the farm tour as a means to engage people, and added that telling a personal story is an equally important factor in keeping people interested.

The most effective way are presentations followed by farm walk in the presentation you could explain something but in a farm walk people can see things with their own eyes.  
(Farmer)

The most effective way is a presentation followed by a farm walk. (Programme Interviewee)

To engage participants it is important to tell your own story, no slide show. Besides a story, the tour in the greenhouse is most important and effective. (Farmer)

The farmer provided more in depth content relating to the production systems and the working flows.

I share some content about the production systems and the working flows. (Farmer)

Both Farmer and Programme Interviewee cited 'participants ask questions and talk openly' as the most important characteristic of farm demonstration. Active participation, along with interaction between demonstrator and the audience, aids the learning process and so contributes to an effective demonstration.

#### 2. Taking into account variation in learning

The Programme Interviewee stated that variation in learning was not taken into account. In contrast the Farmer considered that different learning styles were taken into account, however this was predominantly in regard to the variation in event design between the network event and the public event. The network event was focused on introductions and discussion between attendees, which the public event was focused on conveying the working process of the farm. While they acknowledged that different audiences required different content, there was no mention of accommodating for different learning styles within groups.

There is a difference between the network and public event. The network event is based on an introduction/presentation and discussion. The public event consists of tasting, testing and looking to the working process in the red pepper farm. It depends on the audience. (Farmer)

## T4: Effective follow-up activities

### 1. Follow-up activities and materials

There was little in the way of continued engagement with attendees after the event. Supporting material is not provided to participants; and the Farmer only followed up attendees on a personal level, for example if he made an interesting contact.

Both Farmer and Programme Interviewee comment on the fact that there is a new group of host farmers each year as the demonstration site is moved to a new area. The implication is that the lack of continuity makes continued engagement difficult.

Yes and no. Every year there is a new group of host farmers. For me there is no reason the engage participants after the demonstrations. Only when I make some interesting contacts to follow-up. (Farmer)

Every year there are new host farmers in another region. (Programme Interviewee)

### 2. Assessing impact

The Farmer and Programme Interviewee had conflicting responses to the question of whether they assess the impact of the event amongst participants. The Farmer described a follow-up meeting with the host farmers and organisers in which they evaluate the Open Greenhouse Day. As well as this he mentions a national evaluation. On the other hand the Programme interviewee gave the impression that there is no assessment of this kind.

There is a similar conflict in regards to the assessment on the wider farming community. Again the Farmer referred to a meeting held after the event in which the host farmers evaluate its impact, and again the Programme Interviewee contrasted this by observing no assessment of the impact of these events on the farming community as a whole.

After the event we have a meeting with the 5 host farmers and some organisers. In this meeting we evaluate the Open Greenhouse Day. And there is a national evaluation. (Farmer)

During a meeting after the event we (I and host farmers) evaluate the event. (Farmer)

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 25 participants, of which 14 filled in the pre survey and 11 the post survey. Everyone who filled in the pre survey stated they worked in the local area.

	n° surveys	account manager food & agri Rabobank	Farmer	financial specialist Rabobank	Horti-culturist	manager Rabobank	poultry famer and poultry feed consultant	Risk specialist	unknown
<i>occupations</i>	14	1	4	1	3	1	1	1	2
<i>gender</i>	14								
male	13	1	3	1	3	1	1	1	2
female	1		1						
<i>age</i>	14								
18-30	1			1					
31-40	2	1					1		
41-50	3		1		1	1			
51-60	6		3		2			1	
60+	2								2

### T1: Learning processes

#### 1. Communication initiation by participants

Everyone had no problem sharing their own experiences, the topic and their own situation when in the whole group or when in small groups. That is their way of learning. There was a lot of time for questions and a lot of questions were asked. The demonstrator had an open attitude and took enough time to answers all the questions. Everyone had the opportunity to ask questions. Most questions were on the sustainable goals for which the farmers group wanted to get support from other partners, like governments and banks. There were a lot of participants formulating their points of view regarding the topic. Because it was a small group, the participants shared their own point of view and wanted to know insights of others.



	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	3/11	2/11	5/11	1/11
I asked at least one question during the demonstration .	3/11 yes				
I shared my own point of view at least once during the demonstration.	3/11 yes				
I felt encouraged to ask questions during the demonstration.	2/11	3/11	3/11	0	3/11
When there were any discussions, I felt comfortable sharing my opinion.	0	1/11	6/11	0	4/11

	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	1	0	0	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*

More than one hands-on activity was demonstrated very clearly/ instructively. Participants could take part in a hands-on activity, but didn't get any feedback on their doing and most of the time they could only look. There was a table with food substrates, an organic adviser with bumblebees and the visitors could touch the red peppers.

There were different multi-sensorial experiences possible for the visitors. They could taste the red peppers (smoothie), smell and touch the red peppers and plants. In addition, visitors could see the bumblebees and the sorting machines for red peppers. This was mainly focused on citizens. Farmer-colleagues focused on networking; which was very effective (for example, good starting points were made for finance of a study on geothermal heating.)

### *Discussion opportunities and negotiating conflicting points of view*

There was a facilitator to guide questions and/or discussions. That person was part of the organisation of the demonstration days. He received the questions and took care of them. When he could answer the question himself, he gave the answer. Otherwise he asked the right person to answer the question.

Open discussions are stimulated and given a lot of time. Most participants were involved. Around 50% of the time was spent on open discussion between demonstrator and participants and between participants and participants. There was no real elaboration or further explanation on shared critical points of view.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	1/11	2/11	4/11	0	4/11
If participants <b>didn't agree</b> with each other during discussions, somebody (demonstrator/other participant) <b>tried to reach a consensus</b> between them.	0	2/11	2/11	0	7/11

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

### 3. Engagement during the event

Participants all seem to know each other well, but are not close friends. The farmer-colleagues share a lot of things about their own farm situation. All of the participants were farmers or people directly related to farming so everyone could act open about their farm situation. The demonstrator acts open and friendly, but not as close friends with the participants.

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

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

## T2: Learning outcomes

The demonstrator and participant were on the same level so the knowledge is easier to explain, it was very clearly explained. The participants could sufficiently practice their skills during the activities. It was their own responsibility. Common methods or ways of thinking on farming were questioned and alternatives were shortly elaborated on in group. There were no questions about the common methods or ways of thinking on learning. That was not the topic.

What would you <b>ideally like to learn</b> today?	Situation about earth heat/energy in the region; Networking; Information; About new energy sources; Geothermal heat.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The <b>demonstration met my expectations</b> regarding what I wanted to learn.	0	0	4/11	6/11	1/11
The <b>demonstration exceeded my expectations.</b>	0	4/11	5/11	1/11	1/11
I <b>felt surprised</b> at some point(s) during the demonstration.	1/11	4/11	5/11	0	1/11
I <b>obtained a clearer understanding</b> of the topic(s) demonstrated.	1/11	1/11	5/11	3/11	1/11
I have the feeling I <b>learned something new</b> (knowledge, skill, practice, etc.).	0	5/11	4/11	1/11	1/11
I <b>thought about how I could implement</b> some of the ideas and practices on my own farm.	0	0	5/11	1/11	5/11
I <b>reflected on my own point of view</b> at some point during the demonstration.	0	1/11	5/11	4/11	1/11
I learnt about <b>the principles underlying a practice.</b>	0	0	5/11	3/11	3/11
I thought about <b>how we learn something new</b> on demonstrations (e.g.: teaching methods).	1/11	2/11	4/11	2/11	2/11
I thought about <b>why</b> I want to learn about <b>the topic(s) of this demonstration.</b>	1/11	0	7/11	2/11	1/11

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

### T3: Overall comments on the effectiveness of the event

#### Participants:

With an average of 3,4 on 5, participants rated the event overall as effective. 11 on 11 participants who answered the questions would recommend the demonstration.

As main effective characteristics of the demo participants mentioned: Demonstration about geothermal heat; Networking with a lot of different people; to be aware of new developments for my role as director ZLTO Astén; Contact with policy makers.

One participant mentioned following suggestion for improvement: 'don't only listen but interact more with the participants.'

*Demonstrators:*

As main effective characteristics of the demo, the demonstrator said: 'In my opinion the concept of these demonstration days. Citizens want to come to my greenhouse and see how red peppers grow. It is not obligatory.'

As suggestion for improvement the demonstrator mentioned: 'Maybe smaller groups with a guide could make it more effective for some visitors. Not all the visitor want a guide, so they can move more freely. I think that could be a good combination.'

*Observed main strong points of the demonstration event:*

Almost everyone (consumers, farmers, policy makers, demonstrators, host farmers, organisers) saw the added value of this event. The farm was mostly an inspiring environment for networking between farmers and policy makers.

## 6. Annex: Case study poster July 2018



### FarmDemo CASE STUDY 2 Netherlands: Open Greenhouse days

Peter Páree & Ivonne de Bruijn - ZLTO



Case study 2 is a commercial red pepper farm in the southern part of the Netherlands and started in 2008. The farm is operated by father and his sons. The farm has more than 8 hectares with red peppers. Around 150.000 plants produce 13 million red peppers in a year. The peppers grow all year round. An average of 25 full-time employees work at the farm.



#### Objectives

- To grow red peppers
- For one day, the farm was decor for the 'Open greenhouse days'.
- To create support of the people in the region
- To bring stakeholders of the sector together and discuss about a specific subject

#### Motivations

- To show consumers how they work and how food grows
- A motivation for host the network event is to meet colleagues and stakeholders in the sector.

#### Topic selection

- Bottom-up
- The growers should take the lead
- Energy-management

#### Audience & participation

- The network event was intended for other farmers, policy makers and stakeholders in the sector.
- The public event was intended for everyone but most of all for citizens.
- Network and public event were free of charge.

#### Demonstration set-up

- Network event in the morning
- Public event in the afternoon
- Presentations, Q&A, small group discussion, farm tour and multi-sensorial experience (taste and smell).

#### Network

- Part of a national yearly event with more than 200 farms)

#### Evaluation peer-to-peer learning environment (Demonstration – 8 april)

During this event, P2P-learning happens in a different way than previously thought. After talking with farmers of the greenhouse-sector, we could say that the way of learning is changed. Nowadays network events (like the event in the morning) are more and more popular. This events are focused on a specific subject. Only the employees focused on this subject visit the network event.

The Open greenhouse day is a very good day to create public empathy for the greenhouse sector. The special issue of this demonstration event is the public event in combination with the network event. In this event, we saw a good example of the change in learning by the greenhouse sector.

The three key areas for the workshop are the change in the way of learning in the sector, to analyze a event for both citizens and farmers and learning through a specific theme.



PLAID



AGRIDEMO



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## The Netherlands Case Study 3

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# 1. Background

## **Programme**

The demonstration of vertical ventilation system is part of a 2,5 hours tour along all demonstrations in the Aardbeiendemodag. Aardbeiendemodag is a yearly event where strawberry growers and their suppliers gather on a commercial strawberry farm. Basis are in- and outdoors demonstration fields; in addition suppliers and advisors have booths at a central place.

## **Funding and Governance**

Aardbeiendemodag is organised by a foundation, with a board of strawberry growers, linked to ZLTO.

Main costs for the foundation are tent, catering and preparation of demonstrations. The main income is the payments of suppliers.

## **Actors and networks**

During this demonstration day there were around 400 visitors. 60 of them followed the tour. In the ventilation demo (in the glasshouse) 25 visitors participated.

Half a year before the Aardbeiendemodag the grower and the foundation agree on the location. After that Delphy plants the fields for demonstrations, in cooperation with suppliers, for some experiments subsidy from RDP and other sources are used.

ZLTO provides the organisational basis, as association and does the promotion of the day.

## **Event Farm and location**

The farm is host of the meeting for the first time, but on local level the farmer and colleagues have experience with demonstrations.

The main visitors during this demonstration are strawberry growers, but also researchers, students, advisors, suppliers etc. attended the demos.

**Event date:** 07.09.18



## 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 1 Farm level interviewee, who were 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 13 pre and 13 post demonstration surveys for participants, 1 pre survey and post survey for the demonstrator, 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. For the Belgian and Dutch cases, a workshop was held on the 9<sup>th</sup> of November.

### 3. Structural characteristics

#### T1: Programme/network level

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

###### *The foundation*

Aardbeidendemodag is organised by a foundation, with a board of strawberry growers, linked to ZLTO. Half a year before the Aardbeidendemodag the grower and the foundation agree on the location. After that Delphy plants the fields for demonstrations, in cooperation with suppliers and ZLTO provides the organisational basis (Background info).

###### *The Organisation*

In the available data the word organisation is usually referred. The organisation is a few people from ZLTO and Delphy organisations, who makes the overall demonstration program. (Poster) The organisation selects potential strawberry growers by making use of a list with all the strawberry growers.

The organisation partners ZLTO and Delphy make a selection of potential strawberry growers. The growers are asked to be the host farmer of the strawberry demo day. At the end, Delphy and ZLTO make the decision. (Programme interviewee)

The network around the strawberry demo day consist of Delphy and ZLTO. Delphy take care about the test field. ZLTO take about the organisational part of the demonstration. From this two organisation, a few people are the organisation. (Programme interviewee)

###### *Delphy*

Delphy, is a commercial organisation. It is partner of the strawberry demo day network and one of the main organisers of the demonstrations (Farm level interviewee + Programme interviewee), and it has the overview of demonstration activities (Farmer). Moreover Delphy has established field trials / test locations on farms i.e. they plant the fields for demonstrations, in cooperation with suppliers (Farm level Interviewee + Background). Delphy is involved at the targeting and selecting of potential strawberry growers together with ZLTO. The two organisations jointly decide on the growers selected. As far as the topic selection is concerned, the farmers in working groups propose some topics of their interest. Delphy and ZLTO jointly make a concept program and after consultation they make the final program (Programme interviewee).

How are demonstration topics selected? First, the organisation asks some farmers for ideas. We, ZLTO and Delphy, make a concept program. Other people such as strawberry farmers can respond to this and suggest some change. In the end, ZLTO and Delphy make the final program (Programme interviewee)

In addition, a test location 'BerryPlaza' is also established on our farm. Because I host BerryPlaza, Delphy is contact for experiment. (Farmer)

The organisers do all the organisation related work, I take care of representative state of the farm. The overview of demonstration activities are managed by Delphy. The individual demonstration are managed by the individual demonstrators. The organisation ask me to host this demonstration. (Farmer)

## ZLTO

ZLTO is partner of the strawberry demo day network and one of the main organisers of the demonstrations (Farm level interviewee + Programme interviewee). ZLTO was mainly responsible for the organisational part/ basis of the demonstration programme (Programme interviewee). They are involved in the targeting and selection of potential strawberry growers together with Delphy. As far as the topic selection is concerns, the farmers in working groups propose some topics of interest. ZLTO has the expertise and knowledge from the strawberry field and, taking into account farmers' input, they select the topics with Delphy (Programme interviewee). So to be clear, the organisation makes the decision about the overall topic of the day. The farm level interviewee refers to the topics of the exhibitions. During the exhibition there are suppliers who have a (information) stand. In their stand, the suppliers can choose their own topic. After the topic selection, a further consultation and feedback by farmers took place. During these processes there is always coordination and consultation with the farmers for the overall demonstration programme. The growers and the organisation are both responsible for the goals and the implementation of the demonstration programme (Programme interviewee). ZLTO is also involved in the promotion of the day as well as in the evaluation of the overall demonstration activities is achieved. By making use their contacts at the national and local level ZLTO continues to engage participants after the demonstrations (Programme interviewee).

The main people involved the demonstrations are the employees of the different companies who have a stand. Their role is to inform the participants on their products. There are around 60 exhibitors. My role is to keep an eye of the whole day and the process. The host farmer only host the demonstration. (Programme interviewee)

The organisation partners ZLTO and Delphy make a selection of potential strawberry growers. The growers are asked to be the host farmer of the strawberry demo day. At the end, Delphy and ZLTO make the decision. Sometimes a few growers are interested, sometimes no one is interested. (Programme interviewee)

In coordination with the growers the relevant topics are selected. As organisation, of course, we have knowledge of the sector. With this knowledge we make a selection and ask the growers for feedback. (Programme interviewee)

Q: Are host farmers involved in the development of the overall demonstration programme? R: Always. We involved the host farmers to contribute ideas for the overall demonstration programme. With the ideas, as organisation, we invite different parties and ask for relevant questions. (Programme interviewee)

First, the organisation asks some farmers for ideas. We, ZLTO and Delphy (=the organisation), make a concept program. Other people can respond to this and suggest some change. In the end, ZLTO and Delphy make the final program. (Programme interviewee)

The growers and organisation are both responsible for the goals and the implementation of the demonstration activities. This is a good mix of achieving and monitoring the goals. (Programme interviewee)

Yes. During the demonstration day, I ask participants for feedback. This is verbal feedback, face to face. (Programme interviewee)

Q: Do you evaluate the demonstration activities overall? R: Yes. In the local working groups we ask the participants feedback of the strawberry demo day. And during visits of individual growers we ask them feedback. This is a personal approach. (Programme interviewee)

Q: Do you - at the programme level - continue to engage participants after the demonstrations? R: Yes, as said before there is a continue connection with the growers in the local and national working groups. (Programme interviewee)

### Companies

During strawberry demo days different companies are involved at the development of the individual demonstration activities. They display and demonstrate their innovation or new machines and they inform the participants on their products. They are the main demonstrators and they are responsible for the content of their demonstration activity. In that way demonstrations are managed by the individual demonstrators. The suppliers have also an important role in advertise the event through their own journals and website (Farmer). Moreover, according to the Farmer, the suppliers make the final decision on the topics selected of the exhibitions.

The main people involved in the demonstrations are the employees of the different companies who have a stand. For example they tell about their innovation or new machine. Their role is to inform the participants on their products. There are around 60 exhibitors. (Programme interviewee + Farm Level Interviewee)

The host farmer is not involved in the development of the individual demonstration activities. The demonstrators (suppliers etc.) are responsible for the content of their demonstration activity. (Programme interviewee)

The individual demonstration are managed by the individual demonstrators. (Farmer)

Also the exhibitors have an important role in advertise the event. They could advertise in their own journals and website to reach the customers/strawberry growers. (Farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: No. Some of the participants are part of different working groups. The working groups have effect of the program during the strawberry day. The working group can suggest different topics and interesting developments. But in the end, the suppliers make the decision. They have to pay the demonstration activity, not the participants. (Farmer)

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

### *Host farmer /working/operational groups members*

During strawberry demo days, the host farmer just hosts the demonstration (Programme interviewee). Although the specific farm hosted this event for the first time, at the local level the farmer and colleagues have experience with demonstrations (Background info). As already mentioned farmers through their working groups have a strong contribution to the demonstration topics. There is also some contribution to the overall demonstration programme as these farmers propose some topics and offer input and feedback to the demonstration activities as they know well what the interesting developments for their farms would be. The farmers' input is taken into account for the selection of topics by the organisers (Programme interviewee). Although they are not responsible for the final decision, there is an intense consultation and interaction with the organisers (Programme + Farm Level Interviewee). A further consultation and feedback by farmers also take place after the final topic selection. Thereafter host farmers are not involved neither in the development of the individual demonstration activities nor on the content of each topic (Programme interviewee). In that way, the overall demo approach is considered as mostly bottom-up as farmers are involved in the composition of the demo day. (Farmer + Programme interviewee). Farmers also contribute through feedback and some evaluation processes after the demo day (Programme interviewee).

As mentioned earlier the specific host farmer was not involved in the overall development of demos at the programme / network level, as he is not part of the national or regional committee. He did not have any contribution in advertising the event and inform potential participants (Farmer). Before the demo event he prepared the crops, the soil and the glasshouse (ZLTO personal contact).

Q: Who are the main people involved in the demonstration activities and what are their roles? R: The main people involved the demonstrations are the employees of the different companies who have a stand. There are around 60 exhibitors. My role is to keep an eye of the whole day and the process. The host farmer only host the demonstration. (Programme interviewee)

Always. We involved the host farmers to contribute ideas for the overall demonstration programme. With the ideas, as organisation, we invite different parties and ask for relevant questions. (Programme interviewee)

The farmer is also involved in the composition of the day. (Programme interviewee)

In coordination with the growers the relevant topics are selected. As organisation, of course, we have knowledge of the sector. With this knowledge we make a selection and ask the growers for feedback. (Programme interviewee)

Q: Are host farmers involved in the development of the individual demonstration activities? R: Always. The host farmer is not involved in the development of the individual demonstration activities. The demonstrators (suppliers etc.) are responsible for the content of their demonstration activity. (Programme interviewee)

Q: As an organisation, how would you describe your general approach to providing demonstration activities? R: Mostly bottom-up. We asked the growers in working groups for input in the demonstration activities. They know what interesting developments for their farm are. (Programme interviewee)

First, the organisation asks some farmers for ideas. We, ZLTO and Delphy, make a concept program. Other people can respond to this and suggest some change. In the end, ZLTO and Delphy make the final program. (Programme interviewee)

The growers and organisation are both responsible for the goals and the implementation of the demonstration activities. This is a good mix of achieving and monitoring the goals. (Programme interviewee)

Q: How are the demo activities on the farm managed? R: The organisers do all the organisation related work, I take care of representative state of the farm. The overview of demonstration activities are managed by Delphy. The individual demonstration are managed by the individual demonstrators. The organisation asks me for host this demonstration. (Farmer)

It is not really my task to reach participants for this demonstration. (Farmer)

Mostly bottom-up. We are steered by a programme. But in the regional working groups/commissions we could give input for the demonstration activities. And of course, in the end the financial part of the demonstrations are decisive. (Farmer)

Q: Are you involved in the overall development of demos at the programme / network level? R: No. I'm not part of the national or regional commission. But I'm part of an operational group. In this group we discuss different innovations and share knowledge. (Farmer)

In this case I'm the facilitator and not a demonstrator. For me, a good location and interest and contributions to the network are important... I'm mainly the facilitator, not a demonstrator. (Farmer)

After the event the organisers visit me and we do an evaluation of the whole demonstration day. We also talk over the individual demonstration activities. (Farmer)

### *Audience / type of participants*

The intended audience of these demo days is mainly growers and stakeholders like advisers and suppliers related to the strawberry sector. The strawberry growers meet different stakeholders on this demonstration day such as advisers, researcher, suppliers etc. In general, participants are not involved in the overall development of the demonstrations. However, through their participation to the different working groups they can contribute to demo days.

Our intended audience are growers and stakeholders of the strawberry sector. (Programme interviewee)

I think that the intended audience are growers and people like advisers and suppliers related to the strawberry sector from the Netherlands. (Farmer)

The strawberry growers meet different stakeholders on this demonstration day. The adviser and researcher wants to learn the farmer something new and, of course, hope they sell them their product. (Programme interviewee)

Attendees are normally strawberry growers looking for information. There also suppliers, they looking for strawberry growers. (Farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: No. Some of the participants are part of different working groups. The working groups have effect of the program during the strawberry day. The working group can suggest different topics and interesting developments (Farmer)

### **3. Networks**

Aardbeiendemodag is a yearly event where strawberry growers and their suppliers gather on a commercial strawberry farm. Aardbeiendemodag is organised by a foundation, with a board of strawberry growers, linked to ZLTO. The network around the strawberry demo day consists of Delphy and ZLTO, with a small team of Delphy and ZLTO employees acting as the organisation team (Programme interviewee). The wide network behind the specific demonstration is the national strawberry commission (Farmer). Only farmers-members of the network can host demonstrations.

The connection between national, regional commissions and working groups is kind of a pyramid. It starts with the national commission, the next step are the regional commissions and regional commissions take care of the working groups. This 'line' is always connected with each other (ZLTO employee).

The specific farm in this case study is connected with the commercial organisation Delphy, which has set a test location at the farm (Farmer). The farmer is not involved in the overall development of demos at the programme / network level (Farmer).

The network around the strawberry demo day consists of Delphy and ZLTO. Delphy take care about the test field. ZLTO takes the organisational part of the demonstration. From this two organisations, a few people are the organisation. (Programme interviewee)

My farm is connected with the commercial organisation Delphy. Delphy created a test location BerryPlaza at my farm. (Farmer)

Q: Are you involved in the overall development of demos at the programme / network level? R: No. I'm not part of the national or regional commission. But I'm part of an operational group. In this group we discuss different innovations and share knowledge. (Farmer)

Q: Is your demonstration farm part of a programme or wider network? R: No. The wide network behind the demonstration is the national strawberry commission. (Farmer)

Q: To what extent is the network/programme connected to other networks/programmes in your country or even internationally? R: The strawberry demo day has a strong connection with the strawberry day. The strawberry day is a yearly event in January. Beside this, there is a national strawberry commission with some regional strawberry commissions. Apart from this, there are a few comparable demo days, for example the 'pear' day. The organisations talk together about the different days and exchange the good and the best things. (Programme interviewee)

Q: Do you - at the programme level - continue to engage participants after the demonstrations? R: Yes. Yes, as said before there is a continue connection with the growers in the local and national working groups. (Programme interviewee)

Q: Do you evaluate the demonstration activities overall? R: Yes. In the local working groups we ask the participants feedback of the strawberry demo day. And during visits of individual growers we ask them feedback. This is a personal approach. (Programme interviewee)

Q: What are the most important characteristics of a demonstrator (host or facilitator)? R: For a demonstration host it is important to be part of the network. Every year we have the choice about approximately 10 strawberry growers. (Programme interviewee)

#### 4. Resources, finances and incentives

The network is funded by exhibitors and sponsors. In these demo days small incentives/compensations are usually offered to farmers in order to host demonstration activities (Programme interviewee). At the specific event the host farmer got €2000-€3000 for renting the location to exhibitors and support from some of his employees (Farmer). The wider network of strawberry growers is also funded by the growers themselves and a subsidy from RDP (Programme interviewee + Background info).

The network of the demonstration day is funded by exhibitors and sponsors. The exhibitors pay €750,- for a stand. The main sponsor pays €5000,-. Smaller sponsors pay between €2500- and €3500. The bigger network of strawberry growers is also funded by the growers himself and subsidy. (Programme interviewee)

Q: Do you offer any incentives to farmers to host demonstration activities? R: Yes. Growers can get a small financial compensation but they are also involved to help with the organisation of the day (Programme interviewee)

For the strawberry demonstration day I get a small compensation between the €2000,- and €3000,-. That is for rent of the location and employees. (Farmer)

#### 5. Goals and objectives

The goal of the Strawberry Demo Day is to create a network among strawberry growers. Through this network new developments and innovations are shown and thus triggers for change are given in the sector. The growers and the organisation are both responsible for setting the goals and the implementation of the demonstration activities (Programme + Farm Level Interviewee).

The overall goal of the network is to show new developments and create a network for strawberry growers. The network asks the growers for relevant subjects. In consultation between the network and the growers, a good program is created. (Programme interviewee)



Everyone is orientating for new chances, the Strawberry Demo Day could give triggers for change in your business. The goal of this day is not to give the growers an 'Eureka-moment'. (Farmer)

## T2: Farm (event) level

### 1. Event Farm location, size and layout

The Lemmen strawberry farm is an average sized strawberry farm. It is a commercial, family, farm which has a test location 'Berry Plaza' in collaboration with Delphy. (Post host farmer interview). The farm has greenhouses with strawberries and trays outside. It has an average of 14 employees, along with some 25 young students who work at the farm on Saturdays. It started growing strawberries in 2001 (Poster). Before that it was a pig farm. The event of 7 September 2018 was the first one that the farmer hosted under a strawberry demo day (Post host farmer interview).

The two interviewees have made some general comments on the size and the location of the demos. The adequate size (>1 ha) and a good location of a demo farm is pointed out as parameters for effective demo activities.

The most effective size and type is a representative, up to date farm. The size doesn't really matter, but <1 ha is too small. (Programme interviewee)

According to the Programme interviewee, the demonstrations are a mixture of exemplary and experimental approaches, indicating also that these mixed approaches are more preferable according to their knowledge, network and experience. On the other hand, the Farmer considers that the demo is mainly exemplary. Although he believes that the exemplary approaches are more preferable, at the same time he argued that mixed approaches can mitigate risks.

Q: Which approach do you prefer? Exemplary. It's not really 'my' demonstration, I host Berry Plaza and the Strawberry Demo Day. But a mixture between new knowledge and proven techniques is a good combination to minimize risks. (Farmer)

Such yearly events take place in different farms each year. The demo day includes different activities as presentations, field trials, exhibitions, free walk. Knowledge exchange, discussions and networking between sector's stakeholders is reinforced through these demo activities (Programme +Farm Level Interviewee +Poster).

The strawberry demo day is a yearly event where all the different topics of the strawberry sector come together. During this day there are different activities as presentations and field trials. (Programme interviewee)

On the location there are different demonstration techniques. There are presentations, exhibitors, field walk etc. Everyone can go where he wants. (Farmer)

### 2. Actor's role during the event

The demo was held at the farm's glasshouse and field. There was a tent in the field and an exhibition place. During the demo the host farmer acted more as a facilitator, trouble shooter and presenter rather than as a demonstrator (ZLTO personal contact). ZLTO supervised the whole day and the process, and an A-ZLTO employee acted as a demonstrator/presenter. They also requested feedback from participants on the demo. The different companies displayed/ demonstrated their innovation or new machines and they informed participants on their products. The suppliers and advisers had booths at a central place. In that event there were around 400 visitors; 60 of them followed the tour, while 25



participants attended the ventilation demo in the glasshouse. The visitors were strawberry growers, researchers, students, advisers, and suppliers (Background info).

### 3. Frequency

As already mentioned Strawberry demo days are a yearly event (first Friday of September) in the southern of the Netherlands. They take place on several different farms alternated every two/or one year (Farmer) Finally the amount of events the specific demo farmers hosts at his farm are between 0-5 per year (Post host farmer interview).

This demonstration is a yearly event and not every year on my farm. It changes every two years, so one year it's on my farm while the next year it's at another farm. But in my opinion, attendees are normally strawberry growers looking for information. There also suppliers, they looking for strawberry growers. (Farmer)

The strawberry demo day is a yearly event in the southern of the Netherlands. I don't know exactly why yearly timespan. But the first Friday of September is a good date because it is after a busy period for strawberry growers. (Farmer)

### 4. 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 is difficult for farmers to attend, due to heavy workload. For this reason the specific event has always a fixed date, the first Friday in September which is an off-peak period for strawberry growers (Programme interviewee).

After that, this demo day is a good moment to talk to other strawberry growers. Early September is right after a busy period. (Programme interviewee)

We use magazine, mailing and I think the most important one. We use a fixed date. The demonstration day is the first Friday in September. (Programme interviewee)

But the first Friday of September is a good date because it is after a busy period for strawberry growers (Farmer)

### 5. Farm's infrastructures and/or arrangements

The demo day organisers make some arrangements when organising an event. They take care for the good looking of the farm, tents for shading and a mini-bus for attendees' transportation (Farmer). At the background info catering arrangements are also mentioned. It seems that the host farmer was not engaged in all these arrangements and his sole responsibility was the preparation of his farm for the event.

Q: Did you make specific arrangements to host the event (accommodation, catering, etc.)? Which ones? R: No. (Post host farmer interview) It is not really my task to reach participants for this demonstration. But an option could be; the exhibitors organise a mini-bus retour for growers who find it too far for a car drive (long distance area). (Farmer)

The main people who are involved in the demonstrations activities are the employees of the different companies who have a stand. For example they tell about their innovation or new machine. Their role is to inform the participants on their products. I have not a specific role during the demonstration day. Before the day I take care of a spic and span farm. (Farmer)

## 6. Accessibility

The farm's accessibility is also pointed out as an important parameter that influences the demo attendance. More specifically according to both farm and Programme interviewees, a very long distance (<70-100km) is considered discouraging for participants' attendance.

I think the distance could be a reason for people. In my vision a distance over 70 kilometres is too far for them. Another reason is no interest (they live on an island) in this demonstration day. (Programme interviewee)

Maybe people don't take the time to visit the strawberry demo day. Also the distance could be an issue. Maybe the growers from the western part of the province find it too far (<100 km). (Farmer)

## 7. Fees for participation

The demo days are free of charge for the participants (Poster). The demo costs are funded by exhibitors and sponsors.

## 4. Functional characteristics

### T1: Coordinating effective recruitment of host farmers and participants

#### 1. Incentives

The demonstration day consisted of exhibitors, who help to fund the day by paying a fee for their exhibition stand. There were also several sponsors to help finance the event. Host farmers did not receive payment, but they were offered compensation to cover rent for the venue and employee wages for the day.

For the strawberry demonstration day I get a small compensation between the €2000 - and €3000. That is for rent of the location and employees. (Farmer)

The network of the demonstration day is funded by exhibitors and sponsors. The exhibitors pay €750 - for a stand. The main sponsor pays €5000 - smaller sponsors pay between €2500 - and €3500. The bigger network of strawberry growers is also funded by the growers himself and subsidy. (Programme Interviewee)

Growers can get a small financial compensation but they also involved to help with the organisation of the day. (Programme Interviewee)

#### 2. Motivations for host farmers

The Farmer and the Programme Interviewee both acknowledged that hosting demonstrations and test sites was a good way to 'stay up to date' within the industry. Demonstrations attract a variety of interesting people from within the industry, and it is a place for new developments to be exhibited. On top of this, the farm in question was hosting a test site for Delphy ('BerryPlaza') as part of the programme. This gave the Farmer contact with an international organisation, as well as the latest insights into the BerryPlaza research.

The Programme Interviewee speculated that another motivation for host farmers is to expand the customer base through publicity on the demonstration days. In line with this, the Farmer told us that his overall goal on the farm is to 'grow strawberries and make profit.'

The overall goal of the demo farm is to grow strawberries and make profit. In addition, a test location 'BerryPlaza' is also established on our farm. Because I host BerryPlaza, Delphy is contact for experiment. My goal with BerryPlaza is to stay up to date. (Farmer)

My motivation to host this demonstration is to stay up to date in new developments. The organisation asked me for host this demonstration. (Farmer)

I think that the biggest motivation to host a demonstration is a good way to stay up to date. During the day and the preparation the farmer can talk to a lot of interesting people and see a lot of interesting developments. The farmer is also involved in the composition of the day. Another reason could be a commercial interest. You can show your farm to a lot of people and potential customers. (Programme Interviewee)

#### 3. Motivations for participants

The main motivations for participants consisted of networking with suppliers and other growers, as well as sharing knowledge and experience with colleagues. In addition the event was a place where lots of new developments in research and in the industry were being exhibited.

I think that motivations could be a nice day with a lot of information on a practising strawberry farm. There are suppliers and other strawberry growers to share experience and knowledge. Another reason for the participants is to stay up to date. (Farmer)

I think that there are more motivation reasons for participants to attend demonstrations. First of all, is networking. But also contact with suppliers and research results of the demonstration fields. After that, this demo day is a good moment to talk to other strawberry growers. Early September is right after a busy period. (Farmer)

Participants themselves stated as main motivators to attend the demonstration: working for a company who present this day; internship at the greenery company; interested in strawberry cultivation in a greenhouse; interest in new technology; networking; gaining knowledge; interested in business of our neighbours; invited; as cultivation leader of Provincial Test Centre for Small Fruit.

#### 4. Target audience

The intended audience for the event was growers and stakeholders (such as advisers and suppliers) of the strawberry sector.

I think that the intended audience are growers and people like advisers and suppliers related to the strawberry sector from the Netherlands. (Farmer)

Our intended audience are growers and stakeholders of the strawberry sector. (Programme Interviewee)

#### 5. Advertising and recruitment

Participants for the event were targeted by the organisation, which has a list of all strawberry growers in the country; invitations were then sent out via a magazine or in the post.

Whilst recruitment was not the responsibility of the host farmer, our interviewee did reflect that the organisation could do more to recruit farmers from hard to reach areas. The Farmer added that it was in the interest of the suppliers for more farmers to attend, as the day was a good opportunity to form loyal relationships with growers.

Invite people is task for the organisation. (Farmer)

This demonstration is focused on strawberry production, so all the strawberry growers are invited. As organisation, we have a list with all the strawberry growers. We send them an invitation as part of a magazine. (Programme Interviewee)

We use magazine, mailing and I think the most important one. (Programme Interviewee)

The Farmer talked about extending their reach to 'harder to reach groups'.

It is not really my task to reach participants for this demonstration. But an option could be; the exhibitors organise a mini-bus retour for growers who find it too far for a car drive (long distance area). For the exhibitors/suppliers it is a good moment to create some loyalty to the growers. (Farmer)

## T2: Appropriate demonstration and interaction approaches

### 1. The nature of interaction

Both the Farmer and the Programme Interviewee described the nature of interactions within the network as 'mostly bottom-up'. Overall direction for the project came from the programme, but there were regional working groups of farmers who gave input to the development of the demonstration day, as well as to financial proceedings.

We are steered by a programme. But in the regional working groups/commissions we could give input for the demonstration activities. And of course, in the end the financial part of the demonstrations are decisive. Every demo cost money and someone have to pay. (Farmer)

We asked the growers in working groups for input in the demonstration activities. They know what interesting developments for their farm are. (Programme Interviewee)

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

Host Farmers are involved in the developments of overall themes and ideas for the demonstration day, however it appears to be the institutions involved (Delphy and ZLTO) who have the final say.

We involved the host farmers to contribute ideas for the overall demonstration programme. With the ideas, as organisation, we invite different parties and ask for relevant questions. (Programme Interviewee)

First, the organisation asks some farmers for ideas. We, ZLTO and Delphy, make a concept program. Other people can respond to this and suggest some change. In the end, ZLTO and Delphy make the final program. (Programme Interviewee)

On the day each stall holder delivered their own activity, and as such each had sole responsibility for developing their own content.

The host farmer is not involved in the development of the individual demonstration activities. The demonstrators (suppliers etc.) are responsible for the content of their demonstration activity. (Programme Interviewee)

Some of the participants are part of different working groups. The working groups has effect of the program during the strawberry day. The working group can suggest different topics and interesting developments. But in the end, the suppliers make the decision. They have to pay the demonstration activity, not the participants. (Farmer)

### 3. Focus

The Farmer described the network as 'Single focussed', whereas the Programme Interviewee described the network as 'In between' single focussed and whole farm.

### 4. Design

The Farmer described the network as 'a mixture' between experimental and exemplary practices. A preference was expressed for this approach as it was considered a reflection of good practice on the farm: 'a mixture between new knowledge and proven techniques is a good combination for [minimising] risks'.

The Programme Interviewee agreed that the network took a mixed approach, adding that this decision was based on 'own knowledge, network and experience'.

## 5. Ideal group size

The Farmer indicated that there was no optimal group size for the day, and that it should be as big as it needed to be in order to represent the whole strawberry sector.

The group must be representative for the whole strawberry sector. (Farmer)

### T3: Enabling learning appropriate to purpose, audience, context

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

Both Farmer and Programme Interviewee considered field tours with a specialist to be the most effective presentation technique. The Programme Interviewee added that videos and other forms of presenting information can be effective, providing they are not too lengthy.

I think the most effective way are demonstrations in the field with an oral presentation of a specialist. (Farmer)

The most effective way to structure a demonstration activity is a presentation by field trials. No long readings but short and powerful. After that, something like a video always works. For example it is possible to explain a field trial with a short video. (Programme Interviewee)

In regards to supplementary material, there were flyers provided for the suppliers to distribute, but predominantly it was the responsibility of participants to make their own notes.

The farmer cited 'participants ask questions and talk openly' as the most important factor for a good demonstration, as it allows participants to learn from each other. Conversely, the Programme Interviewee put the emphasis on those delivering the activities, citing 'visualisation techniques, or other multi-sensorial experiences' as the most important factor, adding that without this, 'good quality expert advice' will not be delivered.

An important element during the day is talk with and learn from each other. When the participants can talk openly, the day is more effective. (Farmer)

It is a cycle. When the first one (visualization techniques) is not good enough, you will never go to the second step (good quality advice). (Programme Interviewee)

#### 2. Taking into account variation in learning

The Programme Interviewee saw no examples of the organisation taking into account different learning styles. The Farmer however, observed that on the day there are lots of different demonstration activities taking place, all with varying presentation styles, and so the participant is free to go to which demonstration suits them best.

On the location there are different demonstration techniques. There are presentations, exhibitors, field walk etc. Everyone can go where he wants. (Programme Interviewee)

## T4: Effective follow-up activities

### 1. Follow-up activities and materials

There is little in the way of follow-up activities. The Programme Leader did point to the 'continued connection' with grower in the working group, but this does not appear to be a formal procedure. There are no materials available to participants after the event.

Yes, as said before there is a continue connection with the growers in the local and national working groups. (Programme Interviewee)

### 2. Assessing impact

There was no attempt to assess impact of the event, either amongst participants or the wider growing community. This could be a priority for the programme/network to develop in the future.

## 5. Event analysis: effective peer learning characteristics

### Event details

The group consisted of about 25 participants, of which 13 filled in the pre survey and 13 the post survey.

	n° survey participants	adviser	board secretary researcher	consultant integrated crop protection	strawberry business	Horticulturist	maintenance engineer	Unknown
<i>occupations</i>	13	2	1	1	3	2	1	3
<i>working area</i>	13							
local area	8	2	1		2	2		1
not local area	5			1	1		1	2
<i>gender</i>	13							
male	12	2	1	1	3	2	1	2
female	1							1
<i>age</i>	13							
18-30	5	1	1		1	1		1
31-40	4			1		1	1	1
41-50	2				2			
51-60	2	1						1
60+								

### T1: Learning processes

#### 1. Communication initiation by participants

In the whole group (25 people), there was not a lot of space for sharing information. This was discussed in smaller groups, in which more than 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. During the demonstration in small groups, the participants shared their own point of view on the system. They also talked about their own system. There was a lot of time for questions, about 50% of the time. There was a lot of time but not all of the time was used, only some (5-10) questions were asked. There were only a few participants trying to formulate their own points of view regarding the topic and share this with the demonstrator.



	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	4/13	7/13	1/13	1/13
I asked at least one question during the demonstration .	7/12 yes				
I shared my own point of view at least once during the demonstration.	5/12 yes				
I felt encouraged to ask questions during the demonstration.	0	4/13	6/13	2/13	1/13
When there were any discussions, I felt comfortable sharing my opinion.	0	4/12	5/12	2/12	1/12

	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	0	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*

A hands-on activity was demonstrated taking enough time, so it was clear to every participant. The machine 'nivolator' was installed in the glasshouse. To show the effectiveness of the nivolator the advisers did a smoking test. They create smoke and shows the air circulation (Description nivolator: <https://nivola.nl/en/tuinbouw/kasnivolator/>).

The Nivolator consisted of nine raised blades producing a special conical concentrically directed air stream. The under pressure at the fan causes the air to stream from bottom to top, thus creating two air streams, represented by an inner and an outer cone. In this way an ideal air circulation is produced. The participants could smell and see the smoke. Overall the strawberry demoday is a multisensorial day. No hands-on activity was carried out by participants though. Participants could only look and listen to the adviser.

### *Discussion opportunities and negotiating conflicting points of view*

There was no facilitator. The researcher/adviser received and answers questions. There was time for an open discussion and this was not forced by the demonstrator. Nobody really engaged. The topic was illustrated well, which didn't lead to any conflict or critical points of view being shared.