



## Case study reports: Belgium CS<sub>3</sub>



AgriDemo-F2F has received funding from  
the European Union's Horizon 2020  
Research and innovation program under  
grant agreement No 728061

# 1. Background

## Programme

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

## Funding and Governance

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

Participants did not have to pay a fee.

## Actors and networks

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

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

## Event Farm and location

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

Event date: June 2018

## 2. Method

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

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of Programme (Level 1) and Farm level interviews with demonstrators/hosts (Level 2) to reveal how the functional and structural characteristics enable learning. Analysis is reported in Sections 3 and 4. Data is sourced from interviews with 1 Programme member (Programme interviewee) and the host farmer (Farmer), who were both interviewed in June 2018 (not on the same date as the event). The analysis followed 5 themes: (1) Coordinating effective recruitment of host farmers and participants, (2) Developing and coordinating appropriate interaction approaches, (3) Planning, designing and conducting appropriate demonstration processes, (4) Enabling learning appropriate to purpose, audience, context, (5) Follow-up activities.
3. Event tools and surveys (Level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 21 pre and post demonstration surveys for participants, a post demonstration host farmer interview and an event observation tool completed by an observing researcher. This data is mainly used for the analysis of learning processes and learning outcomes related to the specific event and overall comments on the effectiveness of the event.

Finally, partners reviewed the case study reports to prepare their workshops with different stakeholders related to the case studies. These workshops aimed at validating the data presented in the case study reports. For the Belgian and Dutch cases, a workshop was held on the 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 organisations involved in this case study are ILVO, Hooibeekhoeve, Boerenbond and Inagro.

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

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

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

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

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

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

The projects ask for this more and more somehow, even if it's just in the form of discussion groups beforehand... You're never completely bottom-up... (Programme interviewee)

How do you identify/select topics: For us it usually starts with the projects. The themes for this projects are already connected to what is going on in the sector. Do we ourselves also do this? Yes, because for example, we have our 'open doors day', and then we ask farmers to write down what they think we should put more time in. Then we get a lot of answers, also impossible ones. But if there are things in there that return a couple of times, then you know this 'lives' within the community. Then we have to try to fit this in somewhere. We don't want to organise things that interests nobody. (Programme interviewee)

We are a practice research centre. So our mission is researching new things in our sector and testing them at our centre. Or making sure that we organise demonstrations or something similar so farmers can learn about it from each other. So that is actually our reason of existence. (Programme interviewee)

Management: it's a practice centre, so we have a technical work group, who comes together once a year. There we present the topics we are working on. And there we also try and find out what is happening in the sector. What they think is important... (...) And further more... you hear from farmers you visit what is going on. The technical work group represents the work field in a small format.

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

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

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

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

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

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

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

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

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

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

### *Host farmer and demonstrator*

The farm has quite recently started hosting demos, a decision that was triggered by their successful participation in a yearly event (open day of agriculture days) in September 2017. Despite their limited

experience, as till the specific event they had hosted less than five events, they seem to be quite interested in engaging further into demo activities. Their recent investments on a new barn as well as the adoption and use of technical innovations offer a promising starting point and motivates them to invest in hosting demo events. It might be interesting to note that they see in demos and opportunity for peer learning among farmers, but also a promising way to attract young people, and showcase how technology can co-exist with and actually improve farming activities (Observation tool)

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

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

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

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

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

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

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

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

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

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

It's part of the family business, so I can organise the demo activities myself or in consultation with an organisation that wants to use our annex building for their own meeting and combine it with a visit to our farm. (Farmer)

How are demo topics selected? On request by the visitors and discussed with me, always related to dairy farming ...everything that is important for a modern dairy farm with the latest technologies, but I also want to emphasise the welfare and care for the cows. (Farmer)

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

We will ask contributions from everybody who wants to visit, of course depending on if it's a company visit or a school. But we can't do it for free. To the organisations I send an invoice. (Farmer)

I do this next to our everyday farming activities. Of course I don't want to do this every day, which would be too much. (Farmer).

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

Do you request feedback from participants? No. But I would want to do that, ask what they thought about it afterwards or something like that. (Farmer)

Engage participants after demos? Not relevant yet, might be the case in the future with youngsters who want to work a little bit on the farm. (Farmer)

Follow up materials? Not yet, but I want to provide something on the website or some videos. (Farmer)

### 3. Evaluation and follow-up

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

Feedback from participants: Sometimes, through a survey. Sometimes it's asked by a project. We do it ourselves sometimes for a big study day. And verbally you ask quickly something like, what did you think of it? Most of the times, we don't ask actively though. (Programme interviewee)

Overall assessment: verbally at the research gathering with all researchers. Yes, with the partners in a project it happens too, which is very interesting to notice, if for example something was way more important here than in a partner country. (Programme interviewee).

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

Not actively, but it happens that we tell them we have a newsletter where they can subscribe into if they are interested. Through the newsletter we ask for participation in discussion groups and so on. Sometimes we tell them during demos about related topics or demos. Sometimes they ask us themselves to keep them up to date and leave their contact details. (Programme interviewee)

### 4. Resources, finances and incentives

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

...and how does it get financed? This also depends from the project. Sometimes it's 100 percent subsidies. Sometimes you need co-financing... it really depends on the project if we need to look for additional financing or not. (Programme interviewee).

Incentives to host farmers: yes, we always try that. For example here we had the meeting room and the food and drinks that were provided, we obviously compensate them for that. And for the specific demo we asked a 'teachers compensation'. She puts a lot of time in that, I've already been here for the preparation for example. Often it's calculated in the project that they get something ... sometimes its money, but usually they get some form of compensation. (Programme interviewee)

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

## T2: Farm (event) level

### 5. Practice/technology demonstrated

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

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

### 6. Event Farm location and layout

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

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

### 7. Farm's infrastructure and further arrangements

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

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

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

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





## 4. Functional characteristics

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

#### 8. Incentives

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

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

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

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

#### 9. Motivations for host farmers

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

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

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

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

#### 10. Motivations for participants

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

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

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

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

## 11. Target audience

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

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

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

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

## 12. Advertising and recruitment

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

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

We have our ‘open doors day’, and then we ask farmers to write down what they think we should put more time in. Then we get a lot of answers, also impossible ones. But if there are things in there that return a couple of times, then you know this ‘lives’ within the community. Then we have to try to fit this in somewhere. We don’t want to organise things that interests nobody. (Programme Interviewee)

## T2: Appropriate demonstration and interaction approaches

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

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

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

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

Interviewer: Are farmers involved in the overall design of the demonstrations?

Farmer: Only slightly, since the content will be shortly discussed with the researchers. But if it's not for a farmer's organisation, I will choose myself what the content of the demos will be and how I will arrange them.

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

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

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

### 14. Focus and Design

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

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

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

### 15. Group size

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### T4: Effective follow-up activities

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

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

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

## 2. Assessing impact

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

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

## 5. Event analysis: effective peer learning characteristics

### Event details

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

### T1: Learning processes

#### 3. Communication initiation by participants

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

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

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

## 4. Interactive knowledge creation

### *Hands-on opportunities and other multisensorial experiences*

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

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

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

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

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



	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	0/14	4/14	8/14	1/14	1/14
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.	0/13	4/13	3/13	0/13	6/13

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, <b>there were interesting discussions</b> during the demonstration.	0	0	0	0	1
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	0	0	1

## 5. Engagement during the event

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

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

	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> If yes, how?	No				
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	1	0	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

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

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

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

	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	1	0	0
I tried to <b>surprise</b> participants with uncommon/new knowledge/new skill.	0	0	1	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	0	0	1
I have the feeling I <b>learned something new</b> during this demo (from participants, discussion...).	0	0	0	0	0
I <b>reflected on my own point of view</b> myself at some point during the demo.	0	0	0	0	0
I encouraged participants <b>to reflect on their own point of view</b> during this demo.	0	0	0	0	0
I encouraged participants <b>to reflect on their own situation</b> sometime during this demo.	0	0	0	0	0
I encouraged participants to <b>reflect on how we learn something new</b> on demonstrations.	0	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	0	0

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

#### Participants:

With an average of 4 on 5, participants rated the event overall as effective. Only 1 on 13 participants who answered the question would not recommend the demonstration. They stated as most effective

characteristics of the event: I've learned that more cow doesn't mean more income; guided walk; talking about current topics; combination/balance theory and practice; info was applicable; info on the new tool; exchange knowledge; more insight in how to work with the tool on the long term

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

*Demonstrator:*

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

*Observed main strong points of the event:*

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

*Observed main improvements:*

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