



Case study reports: France CS1



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1. Background

Programme

Innov'Action is a French national demo program which began in Brittany (West of France). Each regional chamber has the possibility to carry out, or not, the operation. The main aims of this program is to identify relevant innovations to propose and present to farmers and facilitate farmer to farmer knowledge exchanges. Every year more than 250 farms host demo activities in France. In 2018 in Brittany 32 farms host demo activities: size, innovations topics, farm types, agricultural sector and regional distribution are balanced.

Funding and Governance

Elected members of the Chambers of agriculture define the main objectives and annual topics at the regional level. For instance they want the program to be homogenous in the implementation of the operation, but also to be diversified from multiple farms to the scale of territories. At county level a steering committee composed of elected persons and advisers organise the practical side of the demo activities.

The program is funded by the Chamber of Agriculture. The budget is a mix and public funding: taxes, research program communication, local authority funding...

Actors and networks

The main actors are the host farmers and the different chamber of Agriculture employees (regional coordinator, local coordinator, advisers) and elected members. For instance in 2018, for 32 on farms demo activity 110 person took part of the program for a total of 550 working days.

There are also local partners which are involved in the demo activity: other advisers, book-keepers, cooperatives, machinery sellers...

Sometimes researchers or project managers of French institutes could present research project results.

How it works

The host farmers decide the innovation to present. The local partners are involved. During the event the host farmer presents his farm and guide the groups of visitors.

The elected members of the Chamber of agriculture decide the main aims and objectives and deal with political issues. During the event they welcome participants and speak about the Chamber of agriculture local actions.

The local coordinator organises the demo activity and connects the farmers, the demonstrator (most of the time they are advisers), the partners and the regional coordinator. During the event he leads the practical "to do's".

The adviser (most of the time employed by Chamber of agriculture) provide technical solutions and explain the different innovations. There are 4 to 5 innovations in each demo farm so 4 to 5 demonstrators. They also explain the advices and training that the Chamber of agriculture could provide to farmers.

The regional coordinator manages the program and is the facilitator of the regional group, composed by a local coordinator and an elected member.

On the farm, the local association organises a lunch for all the participants.

Event Farm and location

For the Agridemo case study we chose a Dairy Farm in the North of Brittany. The innovations presented by the farmers and advisers were:

- cows feed: technical choices to have high dairy production yield

- new barn: choices made by the farmer, labor organisation and cost
- milking robot: how to maintain a significant part of grazing with a milking robot

Event Field Lab group

150 people visited the farm on the 21st of June from 10am to 5pm. Groups of about 10 participants were formed and guided around the farm by the host farmer.

2. Method

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

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of programme/networks (level 1) and farm level interviews with demonstrators/hosts (Level 1) to reveal how the Functional and Structural characteristics enable learning. Analysis is reported in Sections 3 and 4. There is 1 Farm level interviewee and one Programme interviewee. The analysis followed 4 themes: (1) Coordinating effective recruitment of host farmers and participants, (2) Developing and coordinating appropriate interaction approaches, (3) Planning, designing and conducting appropriate demonstration processes, (4) Enabling learning appropriate to purpose, audience, context, (5) Follow-up activities.
3. Event tools and surveys (Level 3) to reveal peer-to-peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 11 pre and post demonstration surveys for participants, 2 pre and post surveys for the demonstrators, a post host farmer interview and an event observation tool completed by an observing researcher. This data is mainly used for the analysis of learning processes and learning outcomes related to the specific event and overall comments on the effectiveness of the event.

Finally, partners reviewed the case study reports to prepare their workshops with different stakeholders related to the case studies. These workshops aimed at validating the data presented in the case study reports and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the French case studies took place on the 9th of November, 2018.

3. Structural characteristics

T1: Programme/network level

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

The Innov'Action programme

Innov'Action is a French national demo program that organises events mainly on commercial farms. However in the frame of Innov'Action some demo events (open houses) are also organised on the chamber of agriculture's research stations (Programme Interviewee). More specifically, the chamber of agriculture owns some pilot/ experimental farms as well as training centres for farmers, in which different trials are set up and implemented. They also organise symposiums and many demo activities on local farmers' fields. Innov'Action has begun in Brittany (West of France). Innov'Action organises many activities at all levels (national-regional-local) through its interacted structures. Every year more than 250 farms host demo activities in France. Indicatively in 2018 in Brittany some 30 farm hosted demo activities. The size, the innovations topics, the farm types, the agricultural sector and the regional distribution are balanced. In 2018, for instance 32 on farms' demo activities, 110 people took part of the program for a total of 550 working days (Background info). The Innov'Action's open houses, are carried out by the chambers of agriculture, which have a multi-level structure with different departments and actors working in them.

Innov'Action is a well-known initiative through French farming community which has identify its work with the innovation (Farm Interviewee). The topics selected are always related with some kind of innovation in the farming sector. They aim towards a global and systemic approach of operating systems integrating innovation. The chambers rely a lot on their own accumulated work and knowledge from the field. They intent to implement all sorts of topics and innovation and not to restrict themselves to specific topics in order to meet the contemporary needs (Programme Interviewee).

How are demonstration topics selected? Yes at first, as I was saying, we were on topics, you see, but the topics are difficult to identify from one year to another, no, I think that with the... all the previous work of the chambers of agriculture, agriculture has numerous applications, we are in global approaches, Innov'Action is only every year, it's not every two months, so we can't allow ourselves to implement, to accompany agricultural development, to implicate ourselves in specific topics today, you see, I think that there we need to be more focused on global approaches, on innovations of all sorts. (Programme Interviewee)

The identification of themes in the first year, that is to say, 11 years ago, we had organised thematic days with 4 targeted thematic areas. At the time, the focus was on milking, improving milking working conditions, organic farming, no-till farming, and energy. And over the years, we realised that we had to go a little further, I think, you will contradict me if you do not agree, towards the global approach, the global approach of operating systems integrating innovation. (Programme Interviewee)

Practices, we have experience nonetheless in... we can talk about it anyway. On several occasions we have tried to communicate about our experimental farms as part of Innov'Action, or even about our training centres, (...) well... we did one year about alfalfa, we had done a lot of communication on the alfalfa culture by setting up different trials and all that, well, this requires a lot more anticipation than that, the implementation and giving new value to trials. (Programme Interviewee)

Innov'Action is a step but throughout the year we offer them a lot of things, eh, and with different levels, whether it's at our open houses at our station or at our local demos on very, very, technical subjects. It's also the symposiums that we realise for farmers and prescribers. (Programme Interviewee)

As I was saying... it's the roots of this project, you see, the roots of Innov'Action is our motto since the start, it's "farmers speak to farmers", but also speak to us... I think also that this innovation can enrich

us, in the end the field innovation can enrich us in our research for innovation, in our research stations, in our studies, you see. (Programme Interviewee)

The chamber of Agriculture

The chambers of agriculture carry out the operation of Innov'Action. The main actors involved at the Innov'Action's open houses are the host farmers and the different chamber of Agriculture employees (regional coordinator, local coordinator, advisers) and the elected members (Background info). The chambers of agriculture have a national operational range.

Okay, the connection. Already it is a national operation of the chambers of agriculture of France today, I emphasise that it's the chambers of agriculture and not APCA. So, each chamber has the possibility to carry out, or not, the operation Innov'Action. (Programme Interviewee)

The regional level of coordination of the chamber of Agriculture

Regional chamber of Agriculture

The activities of the chamber of agriculture in Brittany are managed mainly regionally. The chamber of agriculture has 4 departments. Each department takes over a number of farms and all departments are intended to be captured on the field. The objectives are defined regionally and they are diversified by territory or within the different collaborating farms. At the same time the programme is implemented in the manner across the different farms or territories (Programme interviewee). The regional coordinator manages the program and acts as the facilitator of the regional group composed by local coordinator and the elected members. The elected members of the Chambers define the main objectives and annual topics at the regional level. During the event they welcome participants and speak about the Chamber's local actions (Background info). This adaption from regional to territorial/local level on the department level is achieved through the steering committee made up of elected members and advisers (Programme Interviewee).

At the regional level there is the coordination of the technical aspects of the operations, the communication part and the departmental level of coordination. The departmental coordinator's role is to identify collaborating host farmers for the open houses of Innov'Action. S/he makes use of different networks as well as advisers and researchers to reach farmers to host a demo within a territory. Innovative farms are prioritized for some kind of collaboration. There is also a technical / supporting team with the coordinator of territorial animation of the sector, which ensures that the specifications of setting up the open houses are respected. This technical / supporting team comprises of advisers of the chamber i.e. research engineers, development advisers, technicians. The Chamber's staff, technicians and engineers, manages the open houses and supports the collaborating host farmers technically (Farm Interviewee), and they are also involved at the topic's content for a demonstration. More specifically they reinforce the topic's content with scientific data. Finally, the advisers and engineers of the chambers of agriculture prepare the open houses with the farmer (Programme Interviewee).

The advisers, mostly employed by the Chamber of agriculture, are usually the demonstrators at the events. They provide technical solutions, explain and present the different innovations (Programme Interviewee). There are 4 to 5 innovations in each demo farm so usually there are 4 to 5 demonstrators. They also present and explain the advices and training that the Chamber of agriculture could provide to farmers (Background info)

It was really sharing the field innovation, benefiting from the support of our research engineers and development advisers to highlight it during the open house. (Programme Interviewee)

Who are the main people involved in the demonstration activities and what are their roles? No one imposed anything on me, I was told "here you are calling your partners", so we are the ones who said, well, for example milk control, we still have it, we asked the milk control staff to come in, chamber of agriculture, since the building ... the building plan is made by the chamber of agriculture so we asked,

similar, that the chamber of agriculture comes, robot and grazing the robot technician and grazing technician from the chamber of agriculture must come also, uh, even if they have the same theme, that our COP technician for me it is important that the technicians of the chambers are present. (Farmer)

How is the programme/network managed? Nowadays it's managed regionally, management is ensured by 3P, so the objective is to... it's still an operation that starts on the field, we have 4 departments. We have, yes it's true, professional objectives defined at the regional level, with an organisation system that aims to be homogenous in the implementation of the operation, but also to be diversified... from multiple farms to the scale of territories, even if the territorial decision on the department level is carried out within a steering committee made up of elected persons and advisers, on the regional scale one tries to have a coherence in our choices. What is also our strength today, (is that....) at the national level today Innov'Action has become a flagship operation that everyone expects. (Programme Interviewee)

So, at the regional level, we have a regional pilot who coordinates operations technically, I who is complementary in my work on communication at the regional level; and at the level of each department, we have a departmental coordinator in charge of identifying the open houses of Innov'Action. And behind this person, there is a technical team, so a team with a coordinator of territorial animation of the sector which today ensures that the specifications of setting up the open houses is respected with the advisers and engineers of the chambers of agriculture who prepare the open houses with the farmer. (Programme Interviewee)

Q: How do you target farmers to host demonstrations? A: So, if we commence at the departmental level, we use our networks, whether it's our networks of advisers in development or of researchers. From that point we check out farms by territory, farms that seem innovative to us, and during a steering committee comprised of elected persons and advisers, we identify by priority the farms that we will engage while paying attention to repartition on the scale of the entire territory, with different types of production in the department. (Programme Interviewee)

Well... the best of the best is the farmer who takes groups in charge in order to visit his farm and present his innovation. In this case, there really is a better result, even if otherwise it is... his presentation of the farm and his project is completed by the intervention of our engineers, the ideal terms of development are still this. (Programme Interviewee)

Innov'Action is clearly identified as an activity led by the chambers of agriculture and I think that people are aware now. (Programme Interviewee)

Local/county level of coordination of the chamber of Agriculture

The local coordinator

Each host farmer is supported by advisers and a local coordinator of the Chamber of Agriculture who present during the entire day the host farmer's farm management, choices, livestock and crop technics and equipment (Background info). The local coordinator organises the demo activity and make the link between the farmers, the demonstrators, the partners and the regional coordinator. During the event he leads the practical "to do's" (Background info). On the farm local association organises a lunch for all the participants.

The Steering committee

The steering committee is comprised of elected persons and advisers. At the county level, the steering committee is practically organising the demo activities. The steering committee adapts the departmental

regional decisions/options to the territorial/local level. The regional departmental coordinators identify innovative host farmers for the open houses of Innov'Action. Thereafter, the steering committee identifies by priority the farms that they will finally engage on a territory. This process takes into account the different types of production in the entire territory (Programme interviewee).

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Further Actors/organisations out of the Chambers

There are also local partners who are involved in the demo activity: additional advisers, book-keepers, cooperatives, machinery sellers etc. Sometimes researchers or project managers of French institutes could present their research/project results (Background info). Each chamber works with different networks and/or farmers networks and institutes. With regard to the identification of relevant topics the chamber's employees, make use of the external partner's feedback during the events, on innovation and/or new topics for future activities (Programme Interviewee).

Well here in the framework of Innov'Action it will be a little similar, we have requested again the various partners ... the different partners that we had during the construction of our building, plus some that we have ... that the we asked to come, who came to support us at the technical level, for example since the launch of the robot. I take the case of feed since we take our feed with TRISCALIA, we asked that the TRISCALIA robot technician come and follow us a little... to adjust the best milk production with feed and the different components of the diet since, so be aware that they have corn in silage, a little pasture since they have only 10 acres per cow, but hey it's still time to be supported. (Programme Interviewee)

We also potentially work with farmers' networks, because on some farms, in fact, it's a group of farmers who take charge of the open houses. (Programme Interviewee)

How do you identify/select relevant topics that will interest farmers? Then, the third level anyway, since the open house of Innov'Action, the external partners who are also present, like cooperatives or others, they can also bring innovation to us, profit from the open houses to help us go further. (Programme Interviewee)

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

Host farmer

The host farmers are always involved in the development of the individual demonstration activities. First of all the farmers are involved at the topic selection processes, and they are a source of proposals during the meeting with the organisers. The farmers' proposals are further adapted and refined through the multilevel structures of the chambers of agriculture and their collaborating partners (chamber's engineers, external partners, etc.). Moreover any innovation implemented on a farmer's farm may trigger a collaboration in the frame of the open houses (Programme Interviewee). So the host farmers and the organisers jointly decide

which innovation to present. They also decide together which of the local partners they are going to involve in the whole process. During the event the host farmers present their farms and guide the groups of visitors (Background info). However, according to both Farm and Programme Interviewees, the host farmers are never involved in the development of the overall demonstration programme or at least not directly. There is always collaboration and common work through several meetings but it seems that there is nothing more than this. Finally, there does not seem to be a structured evaluation process of demo events. In this case study's event, the host farmer reported that he requests a feedback on the event's day from participants in a totally informal and intuitive way, i.e. just asking. In the same manner he assesses the possible engagement of participants in relation to the lessons of the demonstration.

How do you identify/select relevant topics that will interest farmers? Well, we are ... there are three levels. The farmer in general tells us, the farmer is a source of proposal, in general when I meet him for the first time, and he tells me about all the innovations, or all the peculiarities that there can be on the farm. (Programme Interviewee)

Q: The host farmers are always involved in the development of the individual demonstration activities? A: Always. They're farmers, you know. They are... we do not decide to have an open house because the equipment provider needs the farmer to have an open house, it's above all an open house of a farmer. (Programme Interviewee)

Q: Are host farmers involved in the development of the overall demonstration programme? A: Never. No, not directly, currently. I think that we would possibly have some work to do with regard to meetings, check-ups, capitalization, in order to give a direction to the upcoming years. (Programme Interviewee)

Q: Are you involved in the overall development of demos at the programme / network level? R: No. Hmm, for the moment I do not participate in the network yet, but I think that I will certainly start. (Farm Interviewee)

Q: Do you request feedback on the event day from participants? A: Yes, I like to know, hmm... how they perceived things, whether, well... whether they have some unanswered questions or whether... well, are disappointed somehow, because of what they've seen and they didn't think they would see that, well, we would ask them in this case "what do you think you'd see?", anyway for me, it's important to have the feedback in order to be able to improve it for the next time. (Farm Interviewee)

Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations? A: Yes. Yes, yeah, but we are able to feel this, anyway ehh... when they leave this place, I know more or less whether they're going to take the GEA [brand of milking robots] or not. And then, also from the way they ask questions about... about investing themselves in the project, you see, or whether these people are passive, you know, they just watch how stuff works, and eh... . (Farm Interviewee)

Audience / type of participants

During the open houses the audience is an entity interested in on farm innovation. Even though the farmers are always the intended audience of the events, a great variety of different stakeholders and actors attend such as students, agricultural schools, advisers from institutions, cooperatives, management centres, banks, insurance agencies, general public, i.e. families with children etc. In Brittany in 2018, 32 farms hosted a total of 6 000 visitors, mainly farmers (50%) and advisers (25%) (Poster).

The target audience, as I mentioned before, are the farmers in priority. Secondly, it's the prescribers and for 4-5 years now, we think it interesting to engage students, agricultural schools, considering that innovation is interesting for all. So, we realised that the open houses were eagerly awaited by the advisers from institutions, cooperatives, management centres, including other structures that accompany farmers like banks, insurance agencies, to identify what is done in innovation... it's also interesting. (Programme Interviewee)

No, it's very extensive, eh, it is true that the general communication is very very extensive, on the other hand it is true that at the scale of the farm we can be brought, for example if it is a pig farm,

to try to target pork producers who will be interested, you see... So, then, it's true that we can have general public, but it's not at all our target. But then it's true that the farmers appreciate presenting their profession at this occasion, and the evolution of the farming profession, that's what's important. (Programme Interviewee)

Well, they are ... the farmers but they are also members of the public completely from the external world... the agricultural world, it's open ... it's open to everyone whether it's young or old public because even the oldest, it may interest them to see, you know, what it is... So we target everyone, young, not so young, and any profession, you know. (Farm Interviewee)

The open door that I had last year, we had people from all over... farmers, uh employees, finally we had a multitude of people, although ... the thing I would say it is like last year it was ... While Innov'Action, the fact that we mark on our little flyers 'open to all', I think that there will be people who are not in the middle, who will dare to cross this door, because I still had a case this morning, I was asked if it was going to be open to all, and well I told him "yes it's open to all", and he told me "but we will have the right ... while we are there, will we see the robots?" I tell him "yes we'll see the robots". (Farm Interviewee)

3. Feedback and evaluation processes¹

In the frame of the programme a feedback is requested by the host farmers. This feedback is complemented by technical and scientific contributions of chambers employees who are present at the events. Furthermore, the overall demonstration activities are evaluated. As far as the assessment of the participant's engagement in relation to the demonstrations a totally informal way of evaluation is referred based on participants general satisfaction.

Yes. Yes, I think so. Well, there is the testimony that is easily accessible, the testimony of the farmer. It is then completed by the technical and scientific contributions of our colleagues which still allows to have a different level of appropriation and then it is true that some farmers are visual. A farmer is visual, he likes to see, see to believe, so it's also a learning technique. (Programme Interviewee)

Q: Do you evaluate the demonstration activities overall? R: Yes Yes, yes, yes, yes, anyway, we make an assessment of... in the early years, I remember that when we were at our small departmental scale, one year, we had communicated on development, for example, of photovoltaics. For several years, it had been the department that developed the most following the open house where there had been 300-400 people. So, it's true that sometimes it's very measurable, the evolution, when it's concrete like that. Overall, the effectiveness of the operation is still there. (Programme Interviewee)

Q: Do you assess if participants have engaged with/acted on the lessons of the demonstrations?

R: Yes. Yes, around the satisfaction, since they are asked if they are satisfied or not about what they saw at the open house. (Programme Interviewee)

4. Resources, finances and incentives

The program is funded by the Chamber of Agriculture. The budget of the Chamber of agriculture is divided between several domains, one for example is "communication". It pays all the leaflets, the flags, t-shirts used for Innov'Action. The communication budget comes from Agricultural Taxes. The working time of the coordinators and advisers is another other budget: agricultural taxes, research programs, local funding...

¹ There is not sufficient data to describe who is in charge of these processes, and how exactly they are implemented

(Programme Interviewee). The programme does not offer any incentives to farmers to host demonstration activities.

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? A: Financing, in terms of financing, I think that at the level of ... there is a tax on activities of this type anyway, so without the tax we would have difficulties to run the activity globally. Then it is often included ... this activity, or topics discussed, are often included in agreements with departmental councils. And then, depending on ... still themes I think, we have European funding that passes through the region. It is true that we are trying to have counselling time covered by whichever source of funding. (Programme Interviewee)

According to Farm Interviewee, funding for further arrangements on host farms is not always available. It depends on partners, and it seems that it is mainly the responsibility of farmers to invite partners to cover any additional arrangement, such as catering for instance.

So uh, it's true that I do not know, because to the best of my knowledge, at the level of Innov'Action open door, there is no partnership requested with our different partners, uh, it's up to us, operators, to solicit them if we want them to intervene, and then I give for example the evening of our Innov'Action open door, all the volunteers, we invite them to eat with us to thank them for what they did. So we will ask one of our partners to... finally, finance, I do not know if we can say that like that, but finally, if they can give us something to finance the evening meal. In fact, compared to ... compared to our open door last year, finally I allow myself to make the comparison, last year GEA had requested a participation from all our partners, precisely for, eh, finance the meals, all that. But this year it is a little different since the chamber of agriculture does not solicit the partners, it is us farmers who must ... who must ... solicit them. (Farm Interviewee)

5. Human Resources

One of the two demonstrators indicated that he has never received any training in order to become demonstrator (Pre survey demonstrator). However, he agreed that he could benefit from some extra training as a demonstrator (Post survey demonstrator). The second one did not reply to the relevant questions.

6. Goal/ objectives

An overall aim of Innov'Action is to identify relevant innovations to propose and present to farmers. The objectives are to reinforce the information sharing and feedback between innovative farmers and their colleagues. Innov'Action is a multilevel structure, which can put innovation in the field, offer technical support and reinforce knowledge sharing. (Programme Interviewee)

The aim is to identify relevant innovations to propose and present to farmers, so the target group of Innov'Action are the farmers, and then the prescribers (advisers, banks, cooperatives). So, the objectives are to benefit from the experience of farmers who have innovated in domains such as technology, practices or transversal approaches, and to make them share information with their colleagues about these innovative choices and their feedback. (Programme Interviewee)

... We circulated around innovation ... chased innovation rather and innovation was also put in place in the field. It was really sharing the field innovation, benefiting from the support of our research engineers and development advisers to highlight it during the open house. (Programme Interviewee).

T2: Farm (event) level

1. The farm, the topic and the practices demonstrated

The Innov'Action farm in Brittany is a large sized commercial dairy farm. The demonstration events organised on the farm include a barn visit with focus on several topics such as feed, robot use, welfare etc. (Post host farmer interview). The following different topics were demonstrated, i.e., cow's feed, stable building (a new barn), robot and grazing (Observation tool).

Both programme and farm interviewees stated that the demonstrations organised by their organisation or on the specific farm respectively are exemplary. However, their views concerning the most preferable demo approach are different. The farm interviewee believes that a mixture of experimental and exemplary approaches are better. The Programme interviewee argues that experimental approaches have been tried in the frame of Innov'Action, but they did not work so well.

Q: Which approach do you prefer? R: Exemplary/Practices, we have experience nonetheless in... we can talk about it anyway. On several occasions we have tried to communicate about our experimental farms as part of Innov'Action, or even about our training centres, I think in Quintenic which is where we have done beautiful things, and we see that farmers aren't there for that, it usually didn't work, and this year we had one, you will see what it gives. (Programme Interviewee)

Q: Which approach do you prefer? R: Mixture. No between the two because no experimental and not really example either. (Farm Interviewee)

2. Group size and characteristics

The total audience during the event was 150 participants (120 farmers, 20 advisers and 10 others). The 150 participants were split up over groups of 10-15 people. The event was open, so it was possible for everyone who wanted to participate to take part in the demonstration (Pre survey demonstrator). Eleven out of fifteen participants of one of the groups were interviewed so in this case we can have an indicative general overview of the participants' profile. The age of the attendees varies between 17 to 57 years old, with an average value close to 38 years old (Pre survey participant). Moreover approximately 45% were women and 55 % men. 55% of participants worked at the same area where the event occurred. Two out of three participants (64%) were dairy farmers with the rest being mainly students and teachers (Pre survey participant)

3. Event Farm design and layout

There were no field's comparisons in the field. The two interviewed demonstrators classified the specific event as a showcasing of existing practices on farm (Post survey demonstrator).

4. Actor's role

Three different topics were demonstrated (cows feed, stable building, robot and grazing). The host farmer presented and explained what he does on farm and the advisers presented technical and economic aspects of the practices. A lot of questions and exchanges occurred between the participants and the farmers as well as between the participants and the adviser on technical requests.

The host's farmer role during the specific event was to welcome the participants, to present his farm and some technical aspects of production. Moreover he explained to the participants the milking robot management with grazing (Observation tool + Poster).

At the specific event two demonstrators were interviewed: a project manager and an adviser who presented technical and economic results and best practices for each topic. Both demonstrators do not hold any elected or appointed roles on farming networks/boards, but they mentioned that many of the participants were part of the same network as them (Post survey demonstrator). There was enough time for free discussion between demonstrators and participants during the event. Finally, there was not a facilitator to guide questions and/or discussions (Observation tool).

It seems that participants were not involved at all in the overall development of the specific demonstration. They were only asked to express their ideas on the topics demonstrated (Post survey demonstrator). Finally most of the participants (9 out of 11) agree that they were actively involved during the whole demonstration process (Post participant's survey).

5. Frequency

The farmer of the specific event hosts around 5-6 demonstration events per year (Post host farmer interview).

6. Duration

The specific event was an all-day event in order to achieve a good presentation and knowledge exchange for all the topics to all the small/split out groups of visitors (Poster).

7. Farm's infrastructures / arrangements

During the demonstration event some arrangements were made for the participants like beer, sausages, coffee and some biscuits (Post host farmer interview).

8. Accessibility

According to the Programme Interviewee, the radius of the visitors attending demos in the frame of Innov'Action is approximately 25-30km around the host farm.

... even if our priority is the agricultural public, we realise that farmers after all... the radius of our visitors, it's a radius of 25-30km, so all communication networks are good, whether it's written, press, whatever the level of the press (Programme Interviewee).

The travel time of participants to reach the demo farm, ranged from 15 to 90 minutes, with an average time close to 42 minutes (Pre demonstration survey participant). Seven out of ten participants rated their travel effort to participate as little or very little effort, with the remaining rating it as quite some effort (Pre demonstration survey participant).

9. Fees for participation

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

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

Host farmers were offered no financial incentives for taking part. The Programme Interviewee did mention EU funding and a particular tax that helped fund the programme, although did not elaborate on the details of these.

Financing, in terms of financing, I think that at the level of ... there is mit tax on activities of this type anyway, so without the tax we would have difficulties to run the activity globally [...] Depending on ... still themes I think, we have European funding that passes through the region. (Programme Interviewee)

No financial incentives were offered to participants. (Farm Interviewee)

2. Motivations for host farmers

There appeared to be two distinct motivations for host farmers. The first was a practical benefit of developing networks within the industry. The second, as described by the Farmer, was a desire to share personal experience of being a farmer and express their pride for the job and way of life.

...the chamber of agriculture does not solicit the partners, it is us farmers who must ... who must ... solicit them. (Farm Interviewee)

So what motivates me, it's really to show what a farm is, how we live, how we work, and that our farm is a company that allows us to live, it is a profession that has all its honour, one may tell me other jobs too, and I really want to ... help other people experience what we experience in our profession [...] I love my job, and here I really want to make people discover what we do, indeed, there is manure, there are a lot of things ... there are a lot of things, but, there are ways to communicate positively, you know, yes, of course there is always manure, things like that, but one must be aware. (Farm Interviewee)

It is a certain recognition of his peers, and networks of agricultural development. (Programme Interviewee)

3. Motivations for participants

Participants were motivated primarily by the opportunity to learn about new innovations in farming. The Programme Interviewee observed that participants are also motivated by the chance to get feedback from the host farmer, as the host farmers had a certain amount of credibility due to their association with Innov'Action and the Chambers of Agriculture.

The desire to discover, really discover uh ... the job, the farm. (Farm Interviewee)

Innovation, that's one. Second, feedback from a farmer. The farmer feedback is given credibility thanks to our support, we, chamber of agriculture in the presentation of innovation. And three, today the tendency of chambers of agriculture, Innov'Action is clearly identified as an activity led by the chambers of agriculture and I think that people are aware now. (Programme Interviewee)

Well, just as Innov'Action is something innovative, it must be some sort of extraordinary, I would say, to attract ... to attract people. (Farm Interviewee)

Participant's main reasons to attend the demonstration were: innovation, grazing with a milking robot; barn construction project in my farm; robot and grazing; see the new barn.

4. Target audience

The primary audience was the farmers although the programme welcomed many other people, such as students and members of the public. Open house events also attracted advisers from institutions, cooperatives and management centres, such as banks and insurance agencies.

Well, they are ... the farmers but they are also members of the public completely from the external world... the agricultural world, its open.... (Farm Interviewee)

The target audience, as I mentioned before, are the farmers in priority. Secondly, it's the prescribers and for 4-5 years now, we think it interesting to engage students, agricultural schools, considering that innovation is interesting for all. [What do you mean by "prescribers"?] So, we realised that the open houses were eagerly awaited by the advisers from institutions, cooperatives, management centres, including other structures that accompany farmers like banks, insurance agencies, to identify what is done in innovation... it's also interesting. (Programme Interviewee)

5. Advertising and recruitment

The Programme Interviewee considered the most effective form of recruitment to be a combination of providing innovative content on the day, and advertising for the event through all channels (i.e. press, web, radio). All means of promotion were utilised, although the Programme Interviewee admitted that they could put more energy into social networks.

One, to have something to show, innovation. Two, one needs to use their means to reach all publics, you see, whether it be... even if our priority is the agricultural public, we realise that farmers after all... the radius of our visitors, it's a radius of 25-30km, so all communication networks are good, whether it's written, press, whatever the level of the press. Social networks, on which, it's true, we should work a little more. And the web, radio as well. We use all the means to promote this operation. (Programme Interviewee)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Farmer described the nature of interaction as 'mostly bottom-up', highlighting the importance of the exchange between farmers and the network. The Programme Interviewee agreed that interactions were 'mostly bottom-up'; this approach was born of an understanding that research and researchers could be enriched by farmer knowledge.

The roots of Innov'Action is our motto since the start, it's "farmers speak to farmers", but also speak to us... I think also that this innovation can enrich us, in the end the field innovation can enrich us in our research for innovation, in our research stations, in our studies, and you see (Programme interviewee)

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

Although the farmers are not directly involved in the network programme, the Programme Interviewee felt there could be space for farmers to be involved with meetings about the future direction and improvements for the programme. He also adds that initial meeting between farmer and programme interviewee consists of the farmer detailing 'all the innovations, or all the peculiarities' already occurring on his/her farm.

No, not directly, currently. I think that we would possibly have some work to do with regard to meetings, check-ups, capitalization, in order to give a direction to the upcoming years. It's true that this job... well, the organisation is being implemented as well, but I think that there, we have important work to do. It's already done but it could be better, you see. (Programme Interviewee)

The farmer in general tells us, the farmer is a source of proposal, in general when I meet him for the first time, and he tells me about all the innovations, or all the peculiarities that there can be on the farm. (Programme Interviewee)

The host farmers are directly involved in individual demonstrations; the Farmer felt this was central to event as the point of them was to show how the farmers were living and running their farm.

They're farmers, you know. They are... we do not decide to have an open house because the equipment provider needs the farmer to have an open house, it's above all an open house of a farmer. (Farm Interviewee)

Participating farmers were involved in the network programme but not in individual demonstrations. No further information was given as to the nature of this involvement.

3. Focus

The Farm Interviewee described the network as 'in between' whole farm and single focused, whereas the Programme Interviewee described it as 'whole farm'.

4. Design

Both the Farm Interviewee and the Programme Interviewee described the network as displaying 'exemplary' practices. The Farm Interviewee expressed a preference for 'a mixture' between exemplary and experimental, because at present there was no examples of experimental practices. The Programme Interviewee, on the other hand, expressed a preference for exemplary practices, because with exemplary practices farmers are able to speak from experiences, and added that they had tried to communicate experimental practices in the past with less success.

5. Ideal group size

The Farm Interviewee considered the optimal group size to be 10 adults, as with any more and people started to form smaller group discussions, which results in having to repeat explanations several times. The Programme Interviewee considered a similar size of 15 to be optimal. This was enough people to allow for effective exchange of ideas, but not so many that the open houses got overwhelmed.

If they have questions to ask, they will... be able to ask them, whereas when a group is too big, what happens is that there are multiple smaller groups that form themselves. (Farm Interviewee)

This is ideal, both for the open house to be structured and there can be an exchange. (Programme Interviewee)

T3: Enabling learning appropriate to purpose, audience, context

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

The structure of the day varied depending of the activity, but generally the Farm Interviewee employed a combination of theory, followed by a practical example or demonstration of the subject in question. The Programme Interviewee added that the most constructive structure for a presentation was the combining of visualisation with technical information.

Well, then, it depends on the theme that we emphasise, that's the first thing. Indeed, if we talk about crops for example, well, it's true that it's good to, if we talk about weeding for example, well I think it's good to have an aspect, I would say, theoretical, but then again, we need to talk about practical, about how it's done. For animals, it's more or less the same, I give an example where we talk about dehorning, well I don't know if we have a group that says "well, we'd like to come and see, for example, how you dehorn your animals", well, it's good to talk a little bit to what we should pay attention, why we do things this way and not another, and then it passes on to action, anyway, me, there are always those two phases, you see. But here... really, the... the practice, yeah, the practical side needs to be present. (Farm Interviewee)

It is actually the visit with the technical information, during the visit. It is not "I present what I do and then after we will see". No, no, it's ... the visit and the visualization of what is done there is constructive. (Programme Interviewee)

In terms of particular materials to aid demonstrations, the farmer cited the occasional use of a video to stimulate questions and discussion amongst participants.

Well, it's true that ... sometimes a little video like that ... it's about people, and it also allows then to have a ... a dialogue, they'll see something, they'll say "that's how you do it, why?" Well then, yeah, it's.... (Farm Interviewee)

The Farmer cited 'good quality expert advice' as the most important element of a demonstration because there is always more to learn and continuous training is important for farmers throughout their career. Conversely, the Programme Interviewee cited 'Participants ask questions and talk openly' as the most important because the point of the day is to have a discussion about the farmer's practices, not to have a monologue.

Well, the principle is that it's the testimony of the farmer so it's not a monologue, it's really, as I said earlier, defending his project, defend his choices. And discuss the practices. (Programme Interviewee)

2. Taking into account variation in learning

The Farm and Programme Interviewee expressed an attempt to accommodate different levels of prior knowledge in the presentations. The Programme Interviewee added a more nuanced understanding of different learning styles, acknowledging that farmers are generally visual learners.

Hmmm, we are obliged, eh, since anyway, eh... if we speak in the same way to a farmer, for example, as to a... an official for example, the understanding won't be the same, the farmer already knowing a certain number of things will immediately understand, while... an average person, eh... will probably ask themselves questions about relatively simple terms. (Farm Interviewee)

Yes, I think so. Well, there is the testimony that is easily accessible, the testimony of the farmer. It is then completed by the technical and scientific contributions of our colleagues which still allows to have a different level of appropriation and then it is true that some farmers are visual. A farmer is visual, he likes to see, see to believe, so it's also a learning technique. (Programme Interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

The Farmer considered there to be continued engagement between participants after events; this was drawing on personal experience. The Programme Interviewee, however, did not think there was enough engagement between the network and participants after the event.

Well yeah, not so long ago I participated in a training on aromatherapy and we were a group where... I knew the participants but I knew the topic only a bit and since we participated in this training, well, it happens that we exchange emails saying "oh you know, I tried this, it worked not bad, and you, how do you do it?" (Farm Interviewee)

No, not enough in my opinion. It would be necessary to create a group (Programme Interviewee)

The Programme Interviewee made mention to a book in which all the testimonials are compiled, as well as a new tool, "data press", for people to have a record of what's been covered in demonstrations.

Yes, well, we were doing ... well, we are already making our book which can be a support for grouping all the testimonials. Well then, it's true that this year with the tool "data press" it will be easier to extract all that has been said and capitalize on Innov'Action. (Programme Interviewee)

2. Assessing impact

There was no official protocol for assessing the impact of events amongst participants, although the Farm Interviewee felt it was generally easy to deduce from participants behaviour on the day how they would be influenced by the event. There was also no attempt to assess the impact of the events on the wider community.

...but we are able to feel this...from the way they ask questions about... about investing themselves in the project, you see, or whether these people are passive. (Farm Interviewee)

To evaluate is not obvious but to give them the information, yes. We give them the information, however, evaluate the impact I do not know. (Programme Interviewee)

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of about 15 participants and 11 of them filled in the pre and post survey.

	n° survey participants	dairy farmer	teacher	student
<i>occupations</i>	11	7	1	3
<i>working area</i>	11			
local area	5	4	1	
not local area	6	3		3
<i>gender</i>	11			
male	6	5		1
female	5	2	1	2
<i>age</i>	11			
18-30	3			3
31-40	2	2		
41-50	4	3	1	
51-60	2	2		
60+				

T1: Learning processes

1. Communication initiation by participants

There was no 'whole group' that participants could share knowledge with. When in small groups participants were rather closed and didn't share their knowledge and/or experiences related to the topic willingly. There was an open discussion after the demonstrator speech. There was a lot of time for questions. In between two different groups, demonstrators were available to discuss and answer questions of participants. This took up about 30% of the time. More than 50% of participants asked questions or discussed directly with the demonstrators. More than 50% of participants shared their own point of view.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that I could share my own knowledge as relevant information.	0	0	8/11	3/11	0
I asked at least one question during the demonstration.	9/11 yes				
I shared my own point of view at least once during the demonstration.	8/9 yes				
I felt encouraged to ask questions during the demonstration.	0	0	6/9	3/9	0
When there were any discussions, I felt comfortable sharing my opinion.	0	0	7/11	4/11	0

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I asked participants to share some of their own background knowledge during the demo.	0	1/2	1/2	0	0
I encouraged the participants to formulate their own point of view during the demonstration.	0	0	2/2	0	0
I encouraged the participants to formulate questions during the demonstration.	0	0	1/2	1/2	0

2. Interactive knowledge creation

Hands-on opportunities and other multisensorial experiences

A hands-on activity was demonstrated, but only very shortly and participants could take part in a hands-on activity, but didn't get any feedback on their doing. More specifically, participants could use the milking robot computer, and they could touch the robot computer briefly.

Discussion opportunities and negotiating conflicting points of view

There was no facilitator available. Open discussions are stimulated and given a lot of time. Most participants are involved. This was mainly with the demonstrator or participants had a drink and open discussions after the farm tour. Shared critical points of view were clarified/rephrased so more people could understand. This was mostly on the financial investments regarding the economic trend in dairy.

participant answers					
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, there were interesting discussions during the demonstration.	0	0	8/11	3/11	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) tried to reach a consensus between them.	0	0	3/3	0	0

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

3. Engagement during the event

Participants act more distant then open. In the group followed by the AgriDemo researcher, farmers came from different places and didn't know each other before the demo. The demonstrator acts more distant then open. He (demonstrator/adviser) saw the participants for the first time but the host farmer knew some of them and acted more friendly.

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

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were participants (farmers, advisers, researchers etc.) involved in the overall development of this demonstration?	yes, they were asked to express their idea on the topic				
Most of the participants were well known to me.	1/2	1/2	0	0	0
A lot of the participants are part of the same network as me.	0	0	2/2	0	0
The demonstration felt like an informal activity to me.	0	0	1/2	1/2	0
I think the host farm was well suited for this demo.	0	1/2	1/2	0	0
I got along well with the participants.	2/2	0	0	0	0

T2: Learning outcomes

Explained knowledge was sufficiently understandable. The event didn't have the aim to develop participants' skills.

	participant answers				
What would you ideally like to learn today?	Grazing; New barn and robot cost; manage grazing with a robot				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The demonstration met my expectations regarding what I wanted to learn.	0	0	2/11	9/11	0
The demonstration exceeded my expectations.	3/3	0	0	0	0
I felt surprised at some point(s) during the demonstration.	0	4/8	2/8	2/8	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	2/11	6/11	3/11	0
I have the feeling I learned something new (knowledge, skill, practice, etc.).	0	0	4/9	5/9	0
I thought about how I could implement some of the ideas and practices on my own farm.	0	0	5/8	3/8	0
I reflected on my own point of view at some point during the demonstration.	0	0	3/8	5/8	0
I learnt about the principles underlying a practice.	0	3/5	1/5	1/5	0
I thought about how we learn something new on demonstrations (e.g.: teaching methods).	0	2/4	1/4	1/4	0
I thought about why I want to learn about the topic(s) of this demonstration.	0	2/3	0	1/3	0

	demonstrator answers				
what do you intend for the participants to learn today?	Show that it's possible to maintain grazing with a milking robot, provide answers to the participants questions				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think participants have learnt what I intended them to learn.	0	0	2/2	0	0
I tried to surprise participants with uncommon/new knowledge/new skill.	0	1/2	1/2	0	0
I felt surprised at some point(s) myself during the demonstration (e.g. by a question or discussion).	0	1/2	1/2	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	2/2	0	0
I have the feeling I learned something new during this demo (from participants, discussion...).	0	0	2/2	0	0
I reflected on my own point of view myself at some point during the demo.	0	1/2	1/2	0	0
I encouraged participants to reflect on their own point of view during this demo.	0	0	2/2	0	0
I encouraged participants to reflect on their own situation sometime during this demo.	0	0	2/2	0	0
I encouraged participants to reflect on how we learn something new on demonstrations.	0	1/2	1/2	0	0
I encouraged participants to reflect on why we are trying to learn about the topic of this demonstration	0	1/2	1/2	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,8 on 5, participants rated the event overall as effective. 11 on 11 of the participants who answered the questions would recommend the demonstration.

Participants didn't mention any specific effective characteristics of the demo or suggestion on how to improve the demo.

Demonstrators:

Demonstrators mentioned as effective characteristics of the demo: several topics, concrete example with new barn robot and grazing, good affluence of participant and right group size to have discussion.

They didn't mention any suggestion for improvement.