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NEFERTITI FARMDEMO

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Abstract

This document provides an extensive overview of good practices for people involved in the organisation of farm demonstrations. Part A of the document deals with on-farm demonstrations, Part B goes into detail on virtual demonstrations. The good practices are structured according the logic of the steps involved in organising a demonstrations: prepare, carry out, follow-up and evaluate.

This document served as one of the background documents for the very accessible and user-friendly FarmDemo Design Guide (available at: https://trainingkit.farmdemo.eu/), that was jointly developed by the FarmDemo partners (AgriDemo-F2F, PLAID and NEFERTITI projects). The website https://trainingkit.farmdemo.eu/ will be further extended with the good practices for virtual demonstrations, and with tools, guidelines, inspirational videos for the organisation of demonstrations.

Table of contents

Abstract 1-2
Table of contents 1-3
1 INTRODUCTION 1-7
1.1 How to read this document 1-8
1.2 What is a demonstration event? 1-9
2 DEFINING THE OBJECTIVE OF ON-FARM EVENTS 2-12
2.1 Why do you want to organize this demo event? 2-13
2.2 What do you want to demonstrate? 2-15
2.3 Who do you target? 2-17
3 PREPARING AN ON-FARM DEMO EVENT 3-20
3.1 The demo host site 3-21
3.1.1 Choosing a host site 3-21
3.1.1.1 Farmers can associate with the location 3-21
3.1.1.2 Central geographical location 3-21
3.1.1.3 Good access 3-22
3.1.1.4 Suitable facilities 3-22
3.1.1.5 Respected host farmer 3-23
3.1.2 Logistics 3-23
3.1.2.1 Food and drinks 3-23
3.1.2.2 Registration and welcome 3-24
3.1.2.3 Security measures 3-24
3.2 The demo set-up 3-24
3.2.1 Linking the event to an overarching program or network 3-24
3.2.2 The benefits of a series of demos compared to a one-off demo 3-25
3.2.3 Choosing who should be involved in the organization 3-26
3.2.4 Choosing a suitable period (timing and season) 3-28
3.2.5 Deciding on the group size 3-29
3.2.6 Available time and a balanced program of the demo 3-29
3.2.7 Available budget 3-30
3.2.8 Variation in content of the demo 3-30
3.2.9 Group connectedness 3-31
3.3 Roles in the organisation team 3-31

3.3.1 The host farmer 3-32
3.3.1.1 Host farmers roles 3-32
3.3.1.2 Characteristics of a good host farmer 3-33
3.3.1.3 Finding a good host 3-33
3.3.1.4 Compensation for host farmers 3-34
3.3.2 The demonstrator(s)/ main speaker(s) 3-34
3.3.3 Facilitator 3-35
3.3.4 Logistic manager 3-36
3.4 Effective Recruitment 3-36
3.4.1 Clear Invitation adapted to the target audience 3-36
3.4.2 Offer incentives for the farmers to come 3-38
3.4.3 Communication channels (press, social media, journals, …) 3-38
3.4.4 Interaction with participants before the demo 3-39
4 CARRYING OUT AN ON-FARM DEMO EVENT 4-40
4.1 Time management 4-41
4.2 General learning/demonstration approach 4-41
4.3 Learning methods 4-46
4.3.1 Stimulating interaction 4-49
4.3.2 Educational tools 4-51
4.3.3 Overview of different learning methods and their potential use (increasing order of interaction) 4-53
4.4 Networking and business relations 4-61
4.5 Trouble shooting 4-61
4.6 Participant feedback 4-61
5 FOLLOW UP AND EVALUATION OF AN ON-FARM EVENT 5-63
5.1 Follow-up activities for participants and farming community 5-64
5.2 Evaluation of the set-up 5-66
5.3 Evaluation of the demo impact 5-66
5.3.1 Evaluating outcomes 5-66
5.3.2 Evaluating anchoring 5-67
5.3.3 Evaluating scaling 5-67
6 DEFINING THE OBJECTIVE FOR VIRTUAL DEMOS 6-71
6.1 Why are you planning a virtual demo? 6-72
6.2 What do you want to achieve and demonstrate? 6-72

6.3 Who do you target? ... 6-75
6.3.1 Peer-to-Peer ... 6-75
6.3.2 Policy ... 6-76
6.3.3 Research ... 6-76
6.3.4 General Public ... 6-76
6.3.5 Children ... 6-77
7 PREPARING A VIDEO FOR VIRTUAL DEMOS ... 7-78
7.1 Choose a production team ... 7-79
7.2 Structuring the content ... 7-79
7.3 Speaker, presenter or text inserts ... 7-80
7.4 Planning A-Roll and B-Roll ... 7-81
7.5 Equipment ... 7-84
7.5.1 Camera ... 7-84
7.5.2 Additional types of cameras suited for agriculture ... 7-84
7.5.3 Microphone ... 7-87
7.5.4 Tripod ... 7-88
7.5.5 Potential barriers ... 7-89
7.5.5.1 Budget ... 7-89
7.5.5.2 Editing Hardware ... 7-89
7.5.5.3 Editing Software ... 7-89
7.5.5.4 Licences ... 7-89
7.5.5.5 Language ... 7-89
7.5.5.6 Time ... 7-89
7.5.5.7 Skills ... 7-90
7.5.5.8 File size ... 7-90
7.5.5.9 Clip size ... 7-90
7.5.5.10 Ethics (consent) ... 7-90
8 PRODUCING A VIDEO FOR VIRTUAL DEMOS ... 8-92
8.1 Shooting the images ... 8-93
8.1.1 Shooting of A- and B-Roll ... 8-93
8.1.2 A-Roll: 10 tips for conducting interviews ... 8-93
8.1.3 B-Roll: Ensure varied image settings ... 8-95
8.1.4 Recommendations ... 8-95
8.1.4.1 Approaches and tools ... 8-95

8.1.4.2 Presenters 8-96
8.1.4.3 Skills and knowledge 8-96
8.2 Editing the video 8-96
9 DISSEMINATION AND EVALUATION OF VIRTUAL DEMOS 9-98
9.1 Dissemination of virtual demos 9-99
9.1.1 Social Media 9-99
9.1.2 YouTube Channels 9-99
9.1.3 Networks 9-99
9.1.4 The virtual farm 9-100
9.2 Evaluation by using video metrics 9-102
9.2.1 View count 9-102
9.2.2 Play rate 9-102
9.2.3 Engagement 9-103
9.2.4 Social sharing 9-103
9.2.5 Click-through rate 9-104
9.2.6 Conversion rate 9-104
9.2.7 Feedback 9-105
10 FURTHER READING AND REFERENCES 10-106

1 INTRODUCTION

1.1 How to read this document

This document should be read as an overview of good practices for on-farm demonstrations. It describes all steps and issues that should be taken into account in the course of the organisation of a demonstration event. It is based on the cases, results and deliverables from the H2020 FarmDemo projects PLAID and Agridemo-F2F. These results are tuned to the logic of the annual campaign plan of the NEFERTITI project (Prepare, Carry Out and Evaluate), and complemented with online sources and videos referring to good practices. It is a background document for practical tools that will be developed within the FarmDemo training kit (including for example a demo design guide, presentation on interactive knowledge exchange, training exercises, etc.)

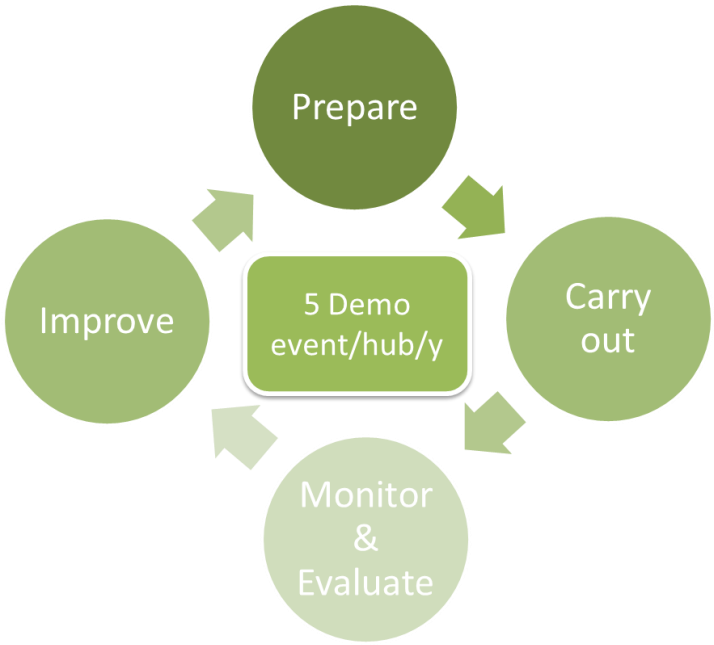

Figure 1. Structure of the Hub Campaign Plan

As explained in section 1.2 demonstrations can be very diverse. However, because of their very distinctive nature we decided to make separate guidelines for on-farm demonstrations in which participants physically visit the farm (Part A) and for virtual demonstrations in which videos are used (Part B).

For both on-farm and virtual demos, we follow the same logic to explain the best practiced. We start with a description on how to consciously decide on the demo objective (respectively, section 2 for on-farm demonstrations and section 6 for virtual demonstrations). More specifically, we urge organisers to question why they are organising a demo event, what they want to achieve and demonstrate during the event, and who their target group is. The answers to those three questions will define all further steps and decisions in the course of the organisation of the demonstration event. The following chapters are structured to the 3 main phases in the organisation of a demonstration event:

(i) **Preparing** the demonstration event or virtual demo. This includes all choices that have to be made regarding the location, logistics, and set-up of the programme for on-farm demonstration events (section 3) or deciding on the content, preparing the A- and B-roll and choosing the equipment for virtual demonstrations (section 7)

(ii) **Carrying out** the demonstration event. This involves the specific learning methods and approaches that can or should be used during the activities of on-farm demonstration events (section 4) and the directions on to shoot and edit a video for virtual demonstrations (section 8)

(iii) **Follow-up and evaluation** of the demonstration event. This includes all activities that can be performed after the demo event is ended to extent its impact and improve future on-farm demonstrations event (section 5) and activities to create impact with a video and how to evaluate the impact of a virtual demonstration (section 9).

Throughout the document, different types of boxes will be inserted:

Case study examples, referring to case studies of AgriDemo-F2F and PLAID in which the described good practices were used

Videos, in which the good practices are visualised

Highlights, in which key aspects of the text are summarized.

1.2 What is a demonstration event?

Demonstration events, or in short ‘demo events’, focus on showing and understanding innovation within a working farm context or within a local setting. There are many different types of demo events, but they all have in common that they are based on a certain kind of knowledge exchanges: farmer-to-farmer and farmer- to-innovations actors (advisers, researchers, input providers…). These exchanges can have multiple forms, e.g. dissemination of knowledge, provision of advice and solutions, co-design of tools and conduction of research. This shows that demo events can be composed of multiple activities depending on their objectives.

Examples of demo events include those:

- Hosted on commercial farms,
- Hosted on experimental stations
- Organised inside : conference, workshop, training session on concept and theory or farms’ results analysis
- Organised outside: field trip, demonstration (machinery, tools, practices), practice training sessions...
- Targeting a small groups of farmers (e.g. only innovator or forerunner farmers), large group of farmers (‘average farmers’) or different kinds of participants (farmers, advisers, suppliers or farm produce buyers, consumers, students…)
- Focussing on peer-to-peer learning between farmers or focussing on knowledge and innovation transfer to farmers and others participants.
- Organised online: virtual meeting, webinar, video tutorial, chat and forum…

Because of their very different nature, we decided to address different parts of this deliverable to on-farm demo events (Part A) and virtual demonstrations (Part B).

Figure 1. Drone demonstration at La Maremmana (Principa Terra, Toscane)

PART A.
GOOD PRACTICES FOR ON-FARM DEMONSTRATIONS

2 DEFINING THE OBJECTIVE OF ON-FARM EVENTS

Defining clear objectives of the demo is key, because they determine all the other decisions an organiser makes during the preparation and organisation of the demo event. Having a clear objective and key message aids to the success of the demo. However, case studies showed that the specific objectives of a demo event were rarely made explicit.

The demo objective should specify what the organisers seek to achieve with the demo. It should start by addressing the 'why' (why are we organising this demo), then the 'what' (what do we want to demonstrate), and also the 'who' (the targeted audience for the demo and the actors you want to involve in the organisation). These three aspects together have a big influence on the 'how' (how will the demo set-up and learning methods be organised).

2.1 Why do you want to organize this demo event?

In this first question, organisers should question their motivation to organize a demo event. Which impact do they want to achieve or to which need do they want to respond to by organization the demo event or series of demo events. For example, when demonstration events respond to the regional agricultural developments and challenges, farmers in that specific region tend to find them more interesting and relevant. It also increases the potential impact of the demo on the regional agricultural context.

Case study example

A successful demo event in Croatia (PLAID) was closely linked with the regional developments in the agricultural sector. The demo event gathered all important stakeholders and reflected the main achievements of scientific research and innovations. In this way this event set the scene for future trends and developments in plant science and agricultural production.

(Source: ILVO)

The impact can be envisioned on both short term (what do the visitors take home from the demo) and on longer term (expected changes in farming practices).

> "*The value of a demonstration event goes far beyond the benefits of direct learning on the primary topic of the event, as an important self-perceived personal benefit for the visitors of demo events, aside from the knowledge gains, lies in the possibility to meet and exchange views with their peers/acquaintances, and establish new contacts. Demonstrations can also be treated as a way for farmers to be updated on the developments in their farming area rather than a place for learning on the subtleties of specific practices with an aim of introducing those on one's own farm. Thus, the demonstration event provides room for a mix of knowledge gains with regards to "know-what", "know-why", "know-how", and "know-who*" (Quote from PLAID)

Some of the main targeted effects are listed here (AgriDemo F2F- Deliverable 4.3:

1. Problem solving. Demos are a great platform to link extension to the needs of local farmers. They can be used to demonstrate solutions to farmers' problems, for example related to reducing farm labour or improving plant health, or they can be used to validate conducted research and innovations under local conditions and tailor them to the farmers' needs.

2. Knowledge creation. Demos can have the aim to create (new) knowledge, by profiting from the knowledge pool of the participants that attend the demo event.

3. *Innovation adoption*. Demos give the opportunity to transfer new opportunities, novelties or practical knowledge that can be used directly on farms or to let the farmers experience them themselves. These innovations can emerge from research, business (related to product sales), pioneer farmers and gives farmers the confidence to make a grounded decision on the usefulness of the demonstrated practices or innovations for their own farm.

4. Research implementation. Demo events can act as a platform to transfer knowledge on applied research results to agricultural practice. Innovations and practices can be trailed, compared or validated on the 'real' farm conditions of demo farms (Kiełbasa and Kania, 2015). Longer term impact of the demo events, can rarely be seen as solely being induced by one single demo event. Demos are only one of the many knowledge sources of farmers. It requires repetition and perhaps also activities than demo events to change the mind sets and behaviour of farmers.

> *"On theme-days like this, we learn about what people are thinking. They ask questions all the time and they can see what exists and what methods there are. And they plan, but that often takes a long time. We see that repetitions are important. It takes time. It requires patience, it does not happen overnight. We might see an effect among those participating now in three – four years. It requires a lot of investments and adjustments of the situation they are in now, so it simply requires time* "
> (Quote from PLAID)

5. Creating awareness. Demos can help to create awareness on topics that participants are not aware of and correspond to their needs. Afterwards, farmers may seek more information about a technology if they wish to try it. Or to create awareness on social demands, for example, sustainability topics are often not addressed very explicit, but are often part of the demonstration to create awareness with the participants.

> *"They aim to help farmers see at first hand new ways of working and to increase their knowledge base which in turn will improve skill sets, inspiring and encouraging them to implement new ways of working."* (Quote from AgriDemo-F2F)

6. Training. Demos serve as a platform for training and education on, for example, sustainable agriculture, enabling practical implementation of innovative practices on the ground and the dissemination of knowledge on best practices.

7. Networking. Demo events can act as "meeting place" for participants. Regular (e.g. yearly) demo events can be used as network event to gather all people involved in the programme, network or project. They foster discussions among local producers and allow to strengthen the links between producers and their markets, the food chain industry, local communities, local authorities, consultants and national agencies, advisors and consumers (Bailey et al., 2006, EISA, 2010). They can contribute to the strengthening and development of collaboration and boost possible partnership for cooperative problem solutions (Kiełbasa and Kania, 2015). Further, farmers are able to meet the people who offer courses on specific topics and to know whom to address when questions arise. At last, also the social aspect of networking, being able to meet farmers from the region, is very attractive to some participants.

Case study example

The goal of the Strawberry Demo Day in the Netherlands was to create a network among strawberry growers. Through this network, new developments and innovations are shown, which can trigger change in the sector. The growers and the organisation are both responsible for setting the goals and the implementation of the demonstration activities. (AgriDemo-F2F)

8. Policy implementation. Demos are an opportunity to inform farmers on new legislation and policy regulations and to provide specific practices and examples on how they are able to implement them on their farms.

This video addresses the network of organic demo farms in Germany, the motivation of the member farmers, their visitors and the success factors of the network.

https://www.youtube.com/watch?v=CttvHetKzFo&feature=youtu.be

2.2 What do you want to demonstrate?

The **choice of the demo topic** can be made in different ways, for example, top-down by the organiser(s), by farmer representatives, bottom-up with farmer involvement, or by participants on a previous demo event when it involves a series of demo events. The network (e.g. EURAF, operational groups, network of organic farmers, advisory services) or the project (e.g. trials on farms) in which the demo is embedded, often (co-) determines the topic of the demo event. On the other hand, participants of a demo event often have concrete ideas and suggestions for the topics of future events. Either way, a thorough consideration beforehand is necessary to select a good and relevant topic. To do so, networks or projects should also address regional farmer needs and take note of requests and interests for future topics with their members or partners.

Inspiration from case studies

In Latvia, within a network of demonstration farms in animal husbandry, the topic of demonstrations and field trials were **identified by the board of the Competence Centre in Animal Husbandry in cooperation with researchers, advisors and other professionals**. The choice of trial areas is based on an economic analysis of the sector, forecasts of the future development of the various segments of this sector, existing legal requirements, as well as feedback from participants of trials and demonstrations. The main identified problems include the quality of animal feed, inappropriate feed rations, quality of calves, unproductive animals, mortality of young animals, quality of milk, etc. (PLAID)

In Switzerland, the topic for the *Arenenberg Ackerautreff* are generally strongly determined by the regional farmers' needs. To select the topics, the organisation is in **frequent exchange with farmers and with the subsections of the regional farmers' association.** (PLAID)

In Serbia, a **circular request to submit a list of topics** is send at the end of the production season to members of the network, so gather what they are interested in or would like to hear (AgriDemo-F2F)

For a farm walk on an organic arable farm in Ireland, topics were decided upon using **a farmer-led approach. The decision is steered by the farm profile and in liaison with the host farmer**. The intended aim of this farm walk was to showcase farming and milling and packaging processes which have been implemented on the Workman's farm following its conversion to organic farming. (AgriDemo-F2F)

Figure 2. Invitation for a farm walk at the Workman's farm in Ireland (source: Teagasc)

Demo topics can be very diverse; for example, it can entail the demonstration of a product, a machine, a process, organisation, management or marketing. Either way, the demo topic should be relevant for farmers' needs and possible project/network/programme objectives. Farmers are highly motivated to attend demo events when their needs are directly and specifically addressed (Franz et al., 2009; Kemp and Michalk,

2011). Organisers should avoid to choose topics whose outcomes are predictable and have little or no impact, or deal with complex, unmanageable or untestable problems (Bailey et al., 2006, Hancock, 1997). Often the strength of a demo event lies in its simplicity. It is therefore advisable to limit the amount of topics addressed during one event.

A lot of demos seem to address multiple topics under a core theme, because they want to give participants a rich learning experience. However, there might be a trade-off between simplicity and perceived attractiveness of demos for the success of a demo. We suggest that if the organisers want to address multiple topics to organise a series of demo events, without being to repetitive A series of demos also allows, for example, to cover a variety of farm enterprises in organic farming as was organised in Ireland.

Further, also the **characteristics of the topic** demonstrated can influence how the demo should be set up and which target groups can potentially be reached. First, a distinction can be made by the degree of **"novelty" of the topic**. Is it an innovation not at all known by the farming community with no real life implementation examples, is it already implemented by a minority of farmers, or is it a widespread practices that could be optimized and refined by farmers? Second, the topic demonstrated can involve **different levels of complexity** (Casey et al., 2015):

- Simple topics: There are few interactions with other factors, outcomes are known, and the practices are easy to implement.
- Complicated topics: There are many interactions with other factors or farming practices, but there are clearly defined inputs or practices, and predictable outcomes. These practices/technologies may be easy to use, but require application in a systematic or structured way.
- Complex topics: There are interactions in many different and possibly unknown ways, there can be unintended consequences, and it is difficult for participants to grasp the situation. These more complex topics can lead to greater inertia in adoption as it requires more skills and understanding to apply the practice/technology properly, which makes them difficult to demonstrate in just one event (Casey et al., 2015).

	SIMPLE TOPIC	COMPLICATED TOPIC	COMPLEX TOPIC
Description	Smaller change or refinement = new single farming practice with no impact on other practices	Medium change = new farming practice with impact on a number of other practices, but known impact on farming systems in terms on yield, income etc.	Radical change = new (whole) farming practice with (unpredictable) impact on farming system in terms of yield, income etc.
Example	New seed machinery with limited impact on the soil New tool on old tractor	Precision agriculture tool Milking robot New crop in rotation	New extensive breed Converting to organic

2.3 Who do you target?

The organisers of the demo event should specify their target audience. A proper selection of the audience is reported as one of the success factors for demo events. By determining the target group, it makes clear for organisers which communication channels they can or should use to contact and inform these audiences. The selection of the target group depends on what the organisers aim to achieve with the demo. For

example, if intensive knowledge exchange or knowledge co-creation on a very specific topic is envisioned, organisers might choose to target a small group of farmers who "speak a similar language" to assure qualitative and intense interactions.

First, the type of farmers targeted can be specified in relation to:

- Specific sectors (e.g. dairy farmers, sugar beet producers),
- Specific networks, projects or programmes
- A specific region (e.g. a specific province, nationwide, or international). Targeting local, regional, national or international participants can influence the groups dynamics to a great extent.
- Their experience with a specific technique, e.g., novice or expert. Depending on the goal, organisers could opt for experienced farmers only (e.g. for improving a practice or innovation) or the combination of both (when you want exchange). Expert farmers can help to start discussions during the demo event and encourage other to ask questions.
- Specific "types" of farmers (e.g. innovative farmers for topics that need further development, the "average farmers" for ready to use demo topics, young farmers or new entries, women)
- Gender. The presence of the farmer couple seems to encourage the participation of both male and female participants.

Further, having insights in the participants' motives and motivation to attend a demo, can help to build the set-up and content of the demo. Participants can have multiple motives. Some examples are:

- See how something works in practice
- Search for confirmation of the methods they use
- Gain inspiration, see the possibilities of new practices
- Obtain facts and figures
- Receiving certifications for skills and knowledge if they are provided during the demo event
- Learn from the experiences from others
- Networking.

Often, but depending on what you what to achieve, it is beneficial to invite other actors to contribute to the demo event:

- Farm advisors, as they can act as potential "multipliers" of the key messages of the demo. They can stimulate the anchoring and scaling of the demo content, because they can spread and increase the demo content to non-participating farmers and they can connect farmers who applied a practice or innovation to those who are interested.
- Actors from the agri-food chain (suppliers, food processors, consumers, …), as they are important partners in cooperative problem solutions and their presence can strengthen the links between producers and their markets.
- Policy makers, as they can raise awareness on policy barriers and incentives which might increase the anchoring and scaling of the demo content on the one hand, but also learn themselves on the practical problems or barriers farmers are confronted with to improve policy regulation. On the other hand, farmers are often reluctant to participate and share experiences in a group when there are a lot of authorities present in the group. This should be taken into account.
- Schools, as they can bring in research innovations, they can question the farmers on their way of producing while learning about farming practices.
- General public, as they are crucial to improve the link between farmers and society. Farmers get feedback on societal demands and civilians learn about the farming system and the value of food.

Case study example

During a demo event on energy in Belgium, also a lot of policy makers participated to find out the latest evolutions on sustainable energy use and production in agriculture. Their attendance can highly influence the adoption and spread of demonstrated energy techniques, as they could provide financial and regulatory incentives. (PLAID)

(source: ILVO)

3 PREPARING AN ON-FARM DEMO EVENT

"*good planning is a precondition for a successful field day*"

A good preparation and planning is key for a successful demon-event. We advise to start well in advance, to make sure the right people can be involved in the organisation and/or can be well informed about how to actually carry out the demo. Communication between all people involved during the preparation and the demo event itself is crucial for a smooth organisation.

3.1 The demo host site

3.1.1 Choosing a host site

Demonstration events can be hosted on different types of sites, ranging from farms owned by a commercial farmer to publicly owned field leased by a university, research centre or extension site. The criteria described in this section are important when one wants to select a good host site for the demo.

3.1.1.1 Farmers can associate with the location

When farmers can associate with the location, a demo might have more impact. This means that the demo is hosted on **a commercial working farm, and preferably at field scale**. Then, innovations are demonstrated within the boundaries of a farmer's everyday experience, instead of demonstrating it on a research farm in an academic environment on plot level. The most effective peer-to-peer learning occurs when the demonstration farm operates under the same "real life" conditions as average commercial farms. This means that the farm has similar regulatory constraints and uses similar production systems or agricultural practices/technologies. Collaborations between commercial companies and commercial farms could be beneficial here (e.g., Forward Farms of Bayer). It allows participants to see the newest innovations on a real working farm. However, it is recognised that there are particular situations where demonstration on a research station is necessary, for example, to demonstrate very novel techniques of which the impact on the environment is not yet sure.

However, in some cases, **an atypical farm can provide inspiration** to the farmers and increase reflection on current practices. For example, in Belgium, a demo was organised on a "Ferme de Froidefontaine" (http://www.froidefontaine.be/), which is a cooperation of different types of enterprises (farmers, processors, chefs, craftsmen, …), who work together on 45 ha and together make ecological products within the agro-ecological and organic philosophy. They offer administrative services, a commercial identity, and access to markets (AgriDemo).

Organizers should also check whether the host farmers' **agricultural activities and practices coincide with the purpose of the demo**. For example, for a demo on maize, a criterion to select a host can be the timing of the maize sowing, so there will be definitely something to see on the field at the time of the demo event, even in bad meteorological circumstances.

3.1.1.2 Central geographical location

The demonstration site should have good and easy access for the targeted audience. Long travel distances or **travel time** proved to discourage participants to attend the demo. This might have an influence on the adoption of practices that are spread through demonstrations for more remote regions to the demo event. If you want to attract more farmers, it is advisable to organise the event in a region where a lot the target farmers live or are active. However, some specialist demonstrations with attractive or unique topics proved to be able to attract people who live further away or even abroad.

To reach a wider group of people, organisers might want to organise the same demo spread over a wider region or country. In Belgium, a big demo event on energy was spread over 22 farms in the region of Flanders (PLAID). Participants received **a "menu of demonstration locations"** beforehand, from which they could choose based on location or specific energy technique. For series or recurrent demo events, often a rotation system between a couple of host sites is used, so in the course of a period a whole region is covered. However, increased frequency of demos on a farm that was already host before could reduce the attendance in case of longer distances.

3.1.1.3 Good access

The demo site should be easily accessible and easy to find. Such locations are preferably located near roads or footpaths or on the immediate outskirts of a village. The ability to find a location can be increased by providing **road signs** from the bigger roads towards the final location of the demo-event, or by providing directions for satellite navigation. Also at the location of the demo, signs or banners can be provided to indicate what is being done and who can be contacted for further information (Rice Knowledge Bank, n.d.; Gibbons and Schroeder, 1983). Further, sufficient **parking space** nearby is beneficial.

Further, the **access road** should be (made) suitable for all types of vehicle in all weather conditions, e.g., during winter snow, ice and all year flooding and mud.

To ease the access for the participants, one can organise **group transport** by bus from a central location to visit a more remote host farm. Also when multiple demonstration sites are visited during an event, transportation facilities to move participants between the sites is recommendable.

3.1.1.4 Suitable facilities

Several conditions regarding the facilities, such as furniture, toilets, audio, etc. should be taken into account. These might already be there on the location, or can be provided through hiring companies.

First, there should be rooms or spaces that provide sufficient **room and furniture** for the participants to easily see and hear the demonstration and discussions. If the farm does not own such spaces, organisers can search for a nearby restaurant, pub or community building to gather the participants. When discussions and long talks are organised on the fields, it is good to provide **shaded areas or shelter**. Overall, the organisers should anticipate weather conditions by providing shelter (e.g., tents, a barn) for rain, wind or extreme temperatures. Often, hosts provide 2 types of rooms: a room for formal demo activities like lectures or discussions, and a room for informal activities such as eating, drinking, and networking. Specifically for the informal activities, **nice views on the surroundings** are appreciated.

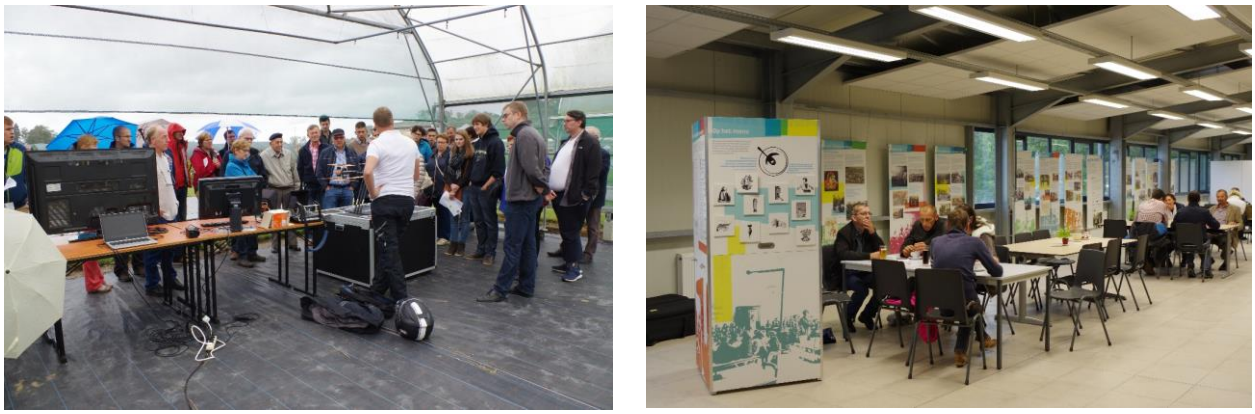

Figure 3. Provide shelter to anticipate on weather conditions (left). And provide room to consume food and drinks (right).

Second, the farm should have an added value for the demonstration. For example, some farms are devoted to demonstration activities and trials like the comparison of corn varieties. Further, a tidy barn where equipment relevant to the demo is being showcased can support the demo message.

Third, other equipment and furniture, such as **toilets** (specifically for women), tables, chairs and disability facilities should be provided (specifically when people with disabilities are expected, such as elderly people). Depending on the size of the demo and the time spend in the field, chairs and toilets may be appropriate.

Fourth, **clear audio and visuals** should be guaranteed, also for bigger groups. Lectures and discussions should be held away from noisy installations or machinery. Further, for bigger groups, screens, (portable) microphones and loudspeakers need to be provided. When people don't hear what is being told, the effectiveness of the demo is going down to zero. This support material should be checked in advance to guarantee they function well. To improve visibility, the demo objects can be placed in a way that they can be easily approached by visitors from several sides.

Fifth, organisers should think about whether **logo's and banners of sponsors** should be provided on the location of the demo.

3.1.1.5 Respected host farmer

The public perception of the host also plays a role in the attractiveness of the event to the potential participants (see also 3.4.1). Often the host is known as **a dedicated farmer**, or a "good" farmer who is an expert is his field, with opinions that are highly respected by his/her peers. A host farmer that is recognised for being both innovative and productive can increase the potential number of participants. Further, farmers known for their ability to experiment or being a pioneer in a specific field can contribute to the attractiveness of the demo.

The host farmer can be chosen by the organisers because they already know him/her from previous collaborations or projects or because of his/her involvement in other demo events. Often demonstration farms are appointed by organisations for several years, during which trials are tested on the farm. This can be a "safe" option as the demo events often require a lot of efforts from the hosts to prepare their farm for the visitors (see also 3.3.1).

3.1.2 Logistics

A well-structured demo event adds to the effectiveness of the demo, but also supports the social side of the event. It relates to feeling welcome and being well treated.

3.1.2.1 Food and drinks

Food and drinks play a very important role in the effectiveness of a demo, as it provides the opportunity to talk to people in an informal way. Also here, when people are thirsty and no drinks are available, the effectiveness of the demo might go down very fast. Furthermore, refreshments promote the social aspects related to a demo event. It relaxes people, contributes to a good atmosphere and often facilitates discussion and peer-to-peer learning that can stimulate the uptake of an innovation. The organisers should adapt the catering to the target farmers. For example, when dairy farmers are invited, dairy products should be offered (cream butter, real milk for the coffee, …). Catering can be offered in different ways, for example:

- Provide a breakfast or lunch (depending when the demo is taking place), during which introductory speeches are held.

- Provide pastries and beers in a shed after the “formal” part of the demo event, so people can discuss what they have seen.
- Provide a meeting in a restaurant nearby if it is too difficult to organise catering facilities at the host location.
- Provide home-made goods, using ingredients of the farm.
- Provide refreshments and snacks as a break in between different parts of the demo-event.
- Provide food from food processors who are program partners, co-organisers or sponsors or prepared by the local community.
- Organise a barbecue meeting for wider public (families) after the formal part of the demo-event.

3.1.2.2 Registration and welcome

Registration for the demo event should be easy and fluid. Also, take into account that some participants might arrive late.

In some regions, the use of **name tags** is very much valued, as it can increase the opportunity to expand your network and ease discussions while in other regions, it is not done. As such, one should take local culture into account. Alternatively, participant lists can be divided amongst the participants at the start of the event (in compliance with the GDPR regulations). This facilitates contact between participants and experts afterwards if they have questions or wish to discuss matters further. These lists can also be used when organisers want provide further information the participants as a follow-up activity of the demo event.

Further, a **welcome by the host farmers** is also very much appreciated by participants. Either way, a word of welcome by one of the organisers is a good way to guide the participants in a convivial atmosphere and to ease and boost interaction between participants (see also 4.1).

Payment of **an attendance fee** can be part of the registration. It can be either payed in advance (e.g., through online registration) or payed at the start of the event. In most demonstrations participation seems to be free of charge. The absence of an attendance fee is often mentioned as a success factor for the demo event, because it lowers thresholds for farmers to attend the demo. However, depending on the objective, it might be favourable to ask an attendance fee for participation, when you want to reach a smaller amount of motivated individuals to increase the quality of learning opportunities. Further, sometimes only a fee is asked for additional catering. In some rare cases, participants are paid to attend a meeting. These payments can also be part or linked to the registration.

3.1.2.3 Security measures

When organising a demo event some overall **security measures** have to be taken care of, such as insurances, risk assessments, the provision of first aid help when necessary. Further, when demos are organised on animal farms, also biosecurity measures should be taken to guard biosafety.

3.2 The demo set-up

3.2.1 Linking the event to an overarching program or network

There are several benefits related to having a demo framed within an overarching programme/ network/ project:

- When farmers are involved in these networks/projects, farmers can help in the organisation of the demo, by defining a good topic and drafting the demo programme.

- A demo can benefit from the good reputation of an overarching programme/network/project. It can add to the visibility and scale of the demo, but it can also support the search for host farms, organisers, demonstrators and funders.
- Linking a demo event to a programme/network/project that is situated in a wider region or is even nationwide, has the advantage of organising a series of demos in different parts of the region. This enables to reach a wider audience, and travel time can be reduced.
- They create the opportunity to exchange experiences on demonstrations and innovations within the overarching programmes/networks/projects.
- It fosters anchoring and scaling, as it allows organisers to organise follow-up activities.

Case study example

The access to the Monitoring Farms Programme in the United Kingdom is supported by a network of regional options to visit farms. This helps in reducing travel time and increasing the potential for attendees to identify a demonstration appropriate to their individual needs. (PLAID)

(source: https://www.qmscotland.co.uk/monitorfarms)

3.2.2 The benefits of a series of demos compared to a one-off demo

A first choice in deciding on the set-up of a demo, depends on whether it will be a one-off demo, a series of demos on the same topic, or a reoccurring (network) event organised by the same organisers.

Series of demos are often mentioned as being more effective. Following characteristics add to this:

- Multiple events on the same topic, contribute to the anchoring of the demo content. It allows people to gradually take up the information over a longer period of time, with period of reflection and thinking between the different events.
- Participants get to know and trust each other better, which makes them more open to share information.
- A series of demos on the same location can also show evolution through time, for example in cropping patterns, soil compaction, … .
- By organising a series of demos, organisers have the opportunity to reach a larger number of farmers if they would like to.
- The organisation and set-up of a following demo can be improved by taking into account comments and experiences of previous demos using evaluation and feedback procedures (this also counts for reoccurring demos).
- A demo can rely on the good reputation of previous demos, to attain a high attendance rate and attract multiple stakeholder types (this also counts for reoccurring demos; see also 3.4.1 on branding of a series of demos).

This video on the Organic Field Days (Öko-Feldtage) at the Hessian State Domain Frankenhausen in Germany shows how well organised demo events can create a good reputation and motivate farmers and commercial actors to participate next time.

https://www.youtube.com/watch?v=tt6GyhrGLog&feature=youtu.be

3.2.3 Choosing who should be involved in the organization

The organizing actors can constitute **a diversity of actors**, such as universities, scientific and research institutes, extension services, private companies farmer organisations or public services. A good organization team ensures that:

- The farmers' needs are addressed during the demo event (in many cases farmers are not directly involved in the organising team, but farmers' representatives and organisation are)
- Make sure that some members are trained in organising and facilitating demo events
- They are easily accessible to host farmers, demonstrators and other important collaborators on the demo event
- Adequate follow up is provided.
- The team is suitable to deal with the preparation work
- The team clearly splits the different roles needed between the team members

Case study example

A recurrent potato and onion festival in Poland, started as a private initiative from a farmer couple in 2003. This event was very successful and grew bigger and bigger every year. As a result, the organisation of this event became more burdensome for the farmers, as it took a lot of (family) time and effort without financial gains. The farmers now think about how to constitute an organisation team to professionalise the organisation and make the event profitable, as the organization of the event is too much work for just the farmers couple (PLAID)

Case study example

The American Farm School (AFS) in Thessaloniki, Greece, is a private, non-profit organisation that was founded in 1904. The AFS is active in formal agricultural education (secondary school) and offers training programmes to farmers. It runs a fully operational farm with both plant and animal production. AFS has a long tradition and experience in hands-on learning and has been engaged in demonstration activities since many decades. It hosts demos on its premises, while it also organises demo events on farmers' farms. They thus make a good organising partner for the organisation of a demo event.

(Source: ILVO)

This video on a project for knowledge exchange between practitioners and researchers shows how farmers decide on the topic of demo event.

https://www.youtube.com/watch?v=BfkkuhbJ9OI&feature=youtu.be

The collaboration between a diversity of actors, such as farmers, advisors and scientists can be challenging because of their different professional backgrounds, skills, knowledge bases, priorities, work routines, and motivations. To help this endeavour succeed, it is important to define clear terms of reference and a mutually agreed upon topic, content organisation and division of labour.

The regional Agricultural Knowledge and Innovation System (AKIS) system comprises the whole agricultural knowledge exchange system within a region and is defined by the way that people and organisations such advisory services, researchers, policy, farmer organisation, … interact and work together. The way in which the **regional AKIS** is constituted, can define the context in which demo events are organised. A good collaboration of AKIS actors might make it easier to organise or to create a strategy for demos, adjust the topic to the specific region and benefit from the available social capital to find the right profiles and competences to organise the demo. The success of a demo is often also related to the perception of the organising team in the local community. So organising teams can benefit from a collaboration with respected local organisations who have a lot of contact with farmers. Furthermore, collaboration between AKIS actors can also prevent competition between demo events on the same topic which are organised by different actors. Such a cooperation can aid to gain more impact on the farmers as resources can be combined.

Further, also the collaboration with **commercial partners** can realise very effective demo events. However, organisers should be make good agreements with those commercial companies to avoid that they make the demo event a solely a sales pitch, but also contribute in terms of knowledge and information provision. This can be avoided by involving more than one commercial company or by involving 'neutral' parties like non-commercial advisory services or researchers. This can also increase the credibility of the demo event, as some participants might otherwise be a bit suspicious about the objectivity of the information provided.

Further, experience shows that organisers should be careful to involve **authorities** in their demo events, as it might repel farmers from participating.

Another important issue is the funding of the demo event. A demo event can be funded (jointly) by the overarching project, network or programme, the organising organisations, the host farmer, sponsors,

subsidies, participants through entrance fees. The organising team should be aware that funding actors can also try to influence or restrict the freedom on the topic and content of the demo event. In a lot of cases participation is free of charge (specifically for members of a network) and in some regions it is difficult to ask an entrance fee from participants as they are used to free advice.

Inspiration from case studies

- In a case in Ireland, funding was provided in terms of **services** (free food & drinks for demonstrator, facilitator) instead of money (AgriDemo-F2F)
- A case in Spain shows how the equipment for the demo event can be financed by **paid leisure visits** for schools and families, which enables to keep the visits for professional farmers free (AgriDemo-F2F).
- In Ireland, **sponsors** were attracted with the promise of being mentioned on the local and national advertisement of the demo event (AgriDemo-F2F).
- In the Netherlands, a demonstration farm was funded by the EU Rural Development, the Dutch government and province Noord-Brabant, which allowed them to ask smaller amounts of entrance fees to the visitors. Schools pay €150 per group visit of 3 hours, groups of 15 persons pay €300, groups bigger than 15 pay €400. For research and preparation of demos there is a more precise pricelist. Part of the costs are covered by project funding.

3.2.4 Choosing a suitable period (timing and season)

The timing of the demo in a suitable period is a key factor for the attendance rate of the demo. Although the organisers cannot always plan this precisely (e.g., when it accidently happens to be the first warm week of the season), they can make an estimation on the periods when farmers have less work on the farm. Further, also the timing during the day impacts the demo set-up. For example, when the demo event is scheduled at 6 pm, the demonstrator might have to start with the outside activities to have good day light and then when it gets dark start inside activities. Often, choosing the right time will be a trade-off between multiple aspects, for example, a period when there is a lot to see on the field, is often also a period when there is a lot of work on the farm.

Following aspects should be taken into account when choosing the time:

- Will the demonstrator be able to show specific issues or management activities in this time of the year?
  Sometimes organisers do not have any option. For example, in the UK a demo was cancelled because the trial did not grow due to the hot summer. However, demonstrating unsuccessful trials can also be very interesting for participants, and shift the focus towards how things could have been done differently. These demos are often better remembered by the participants.
- Will the potential participants themselves be busy on their farm or with family?
  Winter meetings might be favourable, as during winter there is often less work to do on the farm, but often then there is also less to show. Further, when multiple types of farmers (breeders, vegetable growers, arable farmers, …) are targeted, the chance is bigger that the period is always busy for at least one of them. Further, taking into account busy hours during the day (e.g., milking times, finishing of school and day care) also contributes to the participants' ability to attend the demo event.

- Will there be other competing events in the area for this specific target group around this time?

For recurrent demo events, organisers might choose a fixed date. For example, every first Saturday of September.

It is a good idea for organisers to include target participants in the decision on when to organise the demo. For series of demo events, the decision on when to organise the next demo can be made during a previous one together with the participants.

3.2.5 Deciding on the group size

The group size has a major impact on the format of the demo event. Therefore the target group size should be clearly thought through, depending on the objective of the demo. This thus means that a high number of participants cannot alone count as an indicator for success.

Smaller groups (a minimum of 8 - a maximum of 25 people) are recognized to be more effective for knowledge exchange, reflection and deeper learning, as it allows for increased interaction between the participants and the participants and the demonstrator in discussions and for asking questions. In big groups, often only few participants share their own opinions on the topic. Smaller groups are also more easy to manage (e.g., time management) in activities. Specifically, when a small closed group of farmers meets regularly and trust is being build, good and effective discussions can be facilitated.

This video explains the working of so called working groups in Switzerland, in which small groups of farmers exchange knowledge based on peer-to-peer interactions.

https://www.youtube.com/watch?v=Td4oOCYXLLM&feature=youtu.be

On the contrary, bigger groups might be interesting when the objective of the demo is raising awareness and wide knowledge transfer. Often, targeting a large number of participants also helps to attract sponsors and farm supplying companies to support the event. When larger groups of participants are expected, organisers should guarantee good sight and audio (see also 3.1.1.4). A practical solution to create the same advantages with bigger groups is to divide bigger groups in smaller groups to improve the exchanges between the participants and the demonstrator. For example, during a demo in France (AgriDemo-F2F), participants were invited to visit the farm at three times: 9.30 am, 10.30 am and 2.30 pm. Each group of participants (between 20 to 40 participants) was led by the host farmers or an adviser. Or the group might be divided over different sites. The latter also diminishes the burden for the hosts regarding the preparation of the accommodation and logistics, and regarding the control for unguided movement of people around the farm. This might have some financial implications and/or require some more staff and should thus be taken into account.

3.2.6 Available time and a balanced program of the demo

The available time for the demo is determining the decisions on the demo content and the learning methods to be used. The available time could range from one hour to half a day, to a full day or even multiple days.

Overall it is stated that enough room for discussion and Q&A, but also for networking and social interactions should be provided.

A good program of the demo event provides sufficient variation. It should at least entail:

- A welcome/introduction,

- The actual demonstration of the innovation either or not in combination with a lecture/presentation by the demonstrator(s) on the topic of the demonstration (either on the field or in a room),
- A facilitated discussion or interactive Q&A,
- An evaluation of the demo by the participants,
- An official closing of the event with clear conclusions and take-home messages,
- Time for informal talks, discussions and networking, preferably with food and drinks.

Farmers clearly also appreciate a walk around the farm.

In series of demos, it might be interesting to involve the participants of previous demo events to decide on the program for the next demo event.

3.2.7 Available budget

The budget should cover all expenses as, for example, inputs, transportation costs, organisation expenses, publicity expenses as well as compensating any shortfall in yields or direct payments to host farmers.

The available budget, is highly related to the funding partners in the organisation team (see section 3.2.3) and can have a big impact on the set-up of the demo and might steer some decisions, e.g., regarding the target group size, or the demonstrators invited. However, less budget should not necessarily impact the effectiveness of the demo. Less expensive methods can be as effective as more expensive methods, but might need a more considered approach during the planning phase of the demo.

Specifically smaller demo events, with a small group of well-acquainted peers requires very few financial assistance. For bigger events, additional help (e.g. in human resources or materials) can be asked by sponsors, or allied organisations.

3.2.8 Variation in content of the demo

Depending on the goal of the demo, the focus could be on one or multiple topics. This influences the planning of the day such as the learning methods, but also the target audience.

The advantage of focussing on only one topic, is that it is easier to generate and transfer a clear message towards the participants of the demo event. This highly adds to the effectiveness of the demo.

On the other hand, some participants tend to like a diversity of topics being touched, specifically during bigger events, because of its “value for money” or “value for time spent”. The participants are offered a wide variety of information and services that ask limited efforts from them. However, one should be careful which topics and contents are combined. For example, on an event in the Netherlands (PLAID) where a business market was combined with demonstration of machinery, the people following the guided tour on business market were constantly distracted by the activities performed during the demonstration of the machinery. When multiple sessions/groups are performed simultaneously, organisers should be aware of participants moving around while sessions are not finished yet. This might cause disturbance and agitation, specifically in smaller groups.

Bigger events often combine several topics by providing multiple stands on the host location. Each stand should then be manned by a demonstrator who can explain what is shown and be able to answer questions.

This video shows how farmers are attracted by the diversity of topics addressed during a big event 'Le salon Tech&Bio 2017' in France

https://www.youtube.com/watch?v=tNN_6t9e2Lk&feature=youtu.be (in French)

https://youtu.be/ViQiggVrjp0 (in German)

3.2.9 Group connectedness

The group of participants at an on-farm demo can differ regarding age, gender, occupations, expertise, interest, commitment, openness, etc. This might be on purpose (see section 2.3 on target audience), by purposefully targeting diversity or homogeneity in the target group of participants, or by accident.

Group characteristics that seem to favour trust amongst participants are like-minded participants, participants that perceive each other as equal, and similar interest in the topic. On the other hand, the combination of different types of actors can be beneficial to spark discussions and networking, to become familiar with other opinions and to be able to look at the same problems together but from different angels.

The extent of familiarity between the participants can have a big impact on the dynamics in the group. This can influence the appropriateness of some learning methods over others. Participants who don't know each other are, for example, more likely to be reluctant to take part in discussions, especially when one deals with sensitive topics as finances, investments and income. These types of groups might need more organised facilitation methods to stimulate sharing and discussions. This favours series of demos, in which the same participants participate and thus recurrently meet each other. The sensitive topics can then be addressed when trust is achieved between the participants. The number of meetings necessary to achieve the necessary level of trust is strongly related to local culture.

For groups who are less familiar with each other, some energizing exercises (see also section 4.3) might be used to loosen up people to exchange experiences. On the other hand, very familiar and close groups might need to think about how to open up to other and new experiences, thereby improving their access to information and learning.

3.3 Roles in the organisation team

The preparation and structure of the demo is key to have an effective demo event. A clear definition of roles and sufficient personnel (both in expertise and number) can support this. Four important roles should be fulfilled during a demo event: the host farmer, the demonstrator, the logistic manager/coordinator, the facilitator. Some roles can be performed by a single person, others need several people. It is beneficial if the different organisational roles are clearly appointed to someone. Thereby it is important that frequent interaction and communication between the different people is foreseen, so tasks can be aligned to the overall objective.

Case study example

During the organisation of the Organic Cattle Day 2018, labour was divided as follows: Bio Suisse (the Swiss organic farmers' association) and FiBL (a research institute) mostly focused on the general organisation and administration of the event, the agricultural centre brought in technical competence and contributed to the focus and conception of the event, the regional organic farmers' association helped setting up the event (providing tents etc), and the host farmer provided the infrastructure and catering services. During the event, there were 14 thematic sessions that were each led by one or several speakers who were supported by a moderator. The moderator's task was to support the speaker in terms of time keeping, taking notes, moderating discussions, etc. (PLAID)

(Source: ILVO)

3.3.1 The host farmer

3.3.1.1 Host farmers roles

The host farmer can contribute highly to the success of a demo event, specifically when his role goes beyond that of merely providing the demo site. A host farmer can be involved to different degrees in the preparation and the demo event. The host farmer can be involved in the following activities:

- Providing the demo site and infrastructure,
- Providing catering,
- Contributing to the overall management of the demo,
- (Co-)deciding on the demo topic,
- Providing content by acting as a real-time case study for the demo topic, by performing trials on their farm (with or without technical or scientific support), or by providing data,
- Providing the introduction and word of welcome of the demo event,
- Assisting in or performing the demonstration. Participants seem to appreciate the involvement of the host farmer in the demonstration activities,
- Providing answers during Q&A sessions,
- Guiding a farm walk,
- Acting as facilitator and trouble shooter,
- Contributing to the recruitment through his network.

Some cases report the phenomenon of joint-hosting, in which multiple farmers together take up the role as host. The reported advantages are that this can provide a mutually-supportive relationship in which they can assist each other with practicalities and they can share emotional burden of having their farms and persons in the spotlight.

Case study example

During a demo event on arable crops and livestock in Poland, the host farmer acted as demonstrator. At the start of the event, he shared the farm's background with the participants, and then, he guided the trip on the farm, including the animal production, the machinery, the building and the experimental sites (AgriDemo-F2F)

(Source: AgriDemo-F2F)

3.3.1.2 Characteristics of a good host farmer

Specifically when the host farmers' involvement in the demo event is that of a facilitator and/or demonstrator, a good host should have the following characteristics:

- Acknowledged by the community as a "good farmer",
- Well connected to other farmers, advisers and/or organisations,
- Well informed on the topic of the demo event,
- Be open-minded, honest, willing to learn,
- Opinion leader with well-considered approach on his farm development.

Further, the attendance of the farmer couple, seems to encourage the participation of both male and female participants.

3.3.1.3 Finding a good host

Finding a good host can be a challenge, as organisers must try to avoid the already over asked, tested and acknowledged hosts and try to identify new potential host farmers. Some farmers might not participate in the demo event because they have already visited a similar demo on that specific farm before. The search for good host farmers can be guided by the nomination of potential candidates by peer farmers.

Farmers reported **different motives** to perform their role as host. These can be used as an argument by organisers to convince "new" potential host farmers to take up this role. Examples are:

- by telling what they do to others, they also start to reflect on their own practices,
- they receive valuable information,
- it creates the opportunity to extend their network,
- they are able to meet interesting people,
- it creates the opportunity to promote and sell their own products,
- it creates the opportunity to expand their customer base through publicity,
- they can gain social recognition.
- they might receive compensation for being a host. Some farmers request a financial compensation themselves for being a host.
- offer the trainings, equipment and labour for tests on the farm being paid by the organisation,
- provide certificates for knowledge and skills.

3.3.1.4 Compensation for host farmers

Organisers might also think about if and how they will compensate the host farmers for their effort. Examples of compensations are:

- small financial support,
- financial compensation for using fields and equipment,
- financial compensation of expenditure and time,
- full compensation for the labour and time invested in the demo,
- A simple gift as sign of appreciation,
- Offer project partnership and access to project results.

3.3.2 The demonstrator(s)/ main speaker(s)

The demonstrator(s) or main speaker(s) are the people who provide information and content to the demo event. They can give presentations, demonstrate machinery or practices, demonstrate the results of field experiments, but can also be involved in the preparation of infographics, information panels and booklets.

The characteristics of the demonstrator(s) can have a big impact on the perceived effectiveness of the demo event by the participants. In general, participants refer to a demonstrator as someone being:

- Experts in their field, preferably with some good knowledge on the regional/local context, so they are able to link to specificities of the region and to participants' working situations. This adds to the credibility of the demonstrator.
- Someone with soft skills, to have an open attitude and communication skills, to increase participant involvement and to manage groups. Organisers might think about providing some training for demonstrators when they are not experienced in this regard.
- A good speaker, who uses anecdotes, jokes, and stimulates curiosity, because people tend to remember content best when it is well-structured and argued.
- Trust, participants tend to take up information better from demonstrators they trust. When the demonstrator is someone known and trusted by the target audience, this can be used as a trigger during the recruitment period to attract more participants.
- Known by the local farming community (e.g., being involved in networks), because it might trigger farmers to participate in the demo event and might increase trust.

Different types of actors can perform the role of demonstrators, e.g. farmers, advisors, researchers. Peer farmers, the host farmers or other farmers, are preferred as demonstrators because farmers tend to be most influenced by proof of successful farming methods by their peers (Kilpatrick and Johns, 2003; Warner, 2007; Schneider et al., 2009; Hamunen et al., 2015). Farmers telling from their own experiences tend to be very successful. When farmers share their experiences, their language is also already adapted to the other farmer participants.

Also skilled advisers and researchers can be adequate to take on the job of trusted demonstrator. The advantage of advisors and researchers is that they can provide some more in-depth, background or analytical or academic information on the topic. This is something that farmer demonstrators might lack. On this regard, the combination of both a farmer and researcher/advisor as demonstrators was often perceived as successful.

In some cases, also representatives from commercial companies (from the whole agri-food chain) act as demonstrator(s). However, this might impact the trust participants have in the demo content, as they are not perceived as 'independent' demonstrators.

Inspiration from case studies

- In a case in Spain, the host farmer has formed a **dedicated team of demonstrators** that is responsible for all events on his farm. The farmer organised an internal evaluation for the selection of the 3 demonstrators who deliver all events (AgriDemo-F2F)
- In a case in Switzerland, the organisers provided a **guideline to the speakers** on how to structure and organize their sessions and asked them to send a copy of their preparations prior to the event. (PLAID)
- During workshops in Belgium, The Netherlands and Austria, the idea arose to provide training for demonstrators, in which they can also train each other (peer learning). (AgriDemo)

3.3.3 Facilitator

Besides the demonstrator, the presence of someone performing the role of a neutral facilitator is crucial. His/her role is to facilitate the group processes, to promote the discussions, to articulate questions and comments from visitors, to reword and summarize the main issues and to keep the focus on the topic of the demo event.

Facilitators can be specialist facilitators, researchers, farmers or advisors, but they should foster active listening, learning and questioning by providing (confrontational) feedback, raising questions, stimulating people to talk, as well as translating and structuring information (Leeuwis, 2004).

In this video, facilitators (called moderators in this video) talk about their role in small discussion groups in Switzerland

https://www.youtube.com/watch?v=Td4oOCYXLLM&feature=youtu.be

This video gives some tips on how to be a great facilitator

https://www.youtube.com/watch?v=qgbc-uCSRaw

This video shows some tips on how to cut off people who are talking too long, when to put in a new question in the groups discussion, and what to do when people go of topic.

https://www.youtube.com/watch?v=LlOzt4pR9_w

Case study example

During a demo event in the Netherlands, the plan was that groups of 10 to 15 people would walk from demo to demo, accompanied by one supervising facilitator provided by the organisation. The facilitators were supposed to guard the time and the route. However, this worked out poorly, because it was not clear who the facilitators were, the group composition was difficult and most visitors just hopped from demo to demo as they pleased. Some visitors went to the field before or during the lecture. This thus shows the importance on defining the roles, also for the participants. (PLAID)

(Source: ILVO)

3.3.4 Logistic manager

The role of logistic manager refers to the person who has close contact with the hosting farm in the run-up of the event taking care of administrational and organisational issues, taking care of a good follow-up of the program and monitor time during the event, be the contact for trouble shooting. When all organisers are also involved as demonstrators, there is nobody left for dealing with practical arrangements of the event (e.g., making sure the catering knows when to serve or the participants who are late know where to go).

In some cases neighbours, family or friends take up this role or help with logistics when the host farmer is the main organiser of the event.

3.4 Effective Recruitment

3.4.1 Clear Invitation adapted to the target audience

It is essential to adapt the invitation to the target group. A first prerequisite is to adapt the language (jargon) to the target audience.

There are four major questions related to your target audience, where you should think on when designing an invitation (see https://thefloorisyours.be/en/pitchinghandson/):

1) Who is your target audience?
    - Each target audience has a unique set of expectations and problems. If possible, focus on one single target audience at a time.
    - Specify your target group in the invitation (e.g. only organic farmers, or both organic and non-organic farmers). This can prevent a demo to turn out as a family event, when you rather wanted to organise an event targeted at professional farmers.
2) What is your main message? What is your call for action?
    - State very clear it is an invitation to join the demo event
    - Choose a good name for the demo event that also reflects the key message (Over the fence, p.24)

3) What is the problem your target audience is struggling with and how will you solve it?
    - Clearly mention the goals and objectives of the demo, because it contributes to the demo's effectiveness .
    - If you have knowledgeable demonstrators, skilled facilitators or host farms, clearly mention it on your invitation as they might attract farmers.
4) What advantage will your target audience get out of it?
    - Specify what will be the added value for the participants of the demo. Specifically farmers are attracted by the practical orientation of a demonstration. If relevant, you could also highlight the uniqueness of the demo.

Further, following aspects should be taken into account regarding the invitation:

- Think about how you will mention the organisers on the invitation. Be transparent on who is involved in the organisation and will be present on the demonstration event.
- Mention the admission fee. If participation to the event is free, more farmers might be inclined to come.
- The invitation should also be visually attractive, and search for the right balance in information. You can use software such as https://www.lucidpress.com/pages/examples/online-invitation-maker and https://spark.adobe.com/make/invitation-maker.
  A way to increase the visibility and recognition of an invitation for a series of demo events with a similar logic and format is to clearly brand them by using a fixed template. This "branding" should then also be reflected in the name of the event. This helps with the recognition of the demo event, and when they have developed a good reputation, they will be more successful in attracting participants.

(Source:https://www.iowalearningfarms.org/files/page/files/Field%20Day%20Marketing%20Toolkit2018-180524-forprint.pdf;)

(Source: https://www.lucidpress.com/pages/templates/invitations/heartland-company-event-invitation-template)

Figure 4. Examples of clear invitations for demo events

Further, besides static invitations, also teaser videos can be produced to attract participants.

Teaser video for a demo-event in Scotland

https://www.youtube.com/watch?v=ODXzeR1UL3s&feature=youtu.be

3.4.2 Offer incentives for the farmers to come

Incentives can be used to lure the farmers to the demo event, when it is clearly mentioned on the invitation. Examples are a national championship in an agricultural discipline, a show, a party afterwards, prices to win (e.g. bottles of wine), goodies (caps, t-shirts, …), test samples, free soil analysis, or machine demonstrations (Machine demonstrations always get attention in the agricultural sector), …

3.4.3 Communication channels (press, social media, journals, …)

Multiple communication channels can be used for recruitment of participants. Invitations can be spread using flyers, letters, e-mails, posters, newspaper articles, websites, social media, mouth-to-mouth or radio and television promotions. To spread the invitation one might make use of meetings, personal contacts, own networks or mailing lists, networks of other organisations (e.g., farmer unions, advisor networks), announcements in schools.

A stepwise combination of communication channels in time can strongly determine the outreach and the eventual participant composition. The choice in communication channels should therefore be adapted to the goal and target audience. For example, younger farmers might be more inclined towards social media, whilst older farmers might be easier reached through letters, phone calls or their advisor. Often multiple communication channels will have to be used to reach the target group of participants.

Inspiration from case studies

- When you want to organize a demo event for a smaller group, you can decide to **recruit participants from local work groups** (as done in Switzerland) or through the network of the host farmer as done in France. (AgriDemo-F2F)
- In a case in the Netherlands, often **personal invitations** are send if a contact list is available. These are often highly appreciated. (PLAID)
- In Bulgaria, for bigger events, publicity through **public media** was often valued. (PLAID)
- In Belgium and The Netherlands, they pointed the importance to think about **who will spread the invitation**. They noticed that invitations spread by scientists, consultants or the authorities could have a less big impact, than those sent by farmers' organisations, although it is probably closely linked to the topic and goal of the event. (AgriDemo-F2F)

Additional efforts might have to be made to also reach the farmers that are otherwise not so easy to mobilize. Good practices are to use local networks with close relationship to those farmers or to use personalized invitations to target specific persons.

3.4.4 Interaction with participants before the demo

A good practice is to already organize some kind of interaction between the organizers and the expected participants. This can be organized in different ways. For example, participants can be asked to complete a registration form online, in which they also are asked to give some additional information on who they are and what their specific interests are. This information can help to target the demo content to the expected participants. Further, also specific problems or negative experiences of the expected participants with the innovation or practice of the topic can be harvested in advance. This will reflect the possible barriers for implementing an innovation or practice. So addressing how to deal with those barriers during the demo event can stimulate the anchoring of the innovation or practices afterwards.

Further, if relevant, subscribed participants can be sent some additional information on the host farm or the demo content. Or they can be asked to prepare some "homework" or reflective questions in advance.

Another way to reach participants (but also people who will not be able to attend) is by involving public or specialized media. They can provide information before the demo event, but also communicate afterwards on the conclusions of the demo event, a technical note or interesting web links. This contributes to the spreading and anchoring of the main messages of the demo.

4 CARRYING OUT AN ON-FARM DEMO EVENT

4.1 Time management

During a demo event, it is very important to stick to the communicated time schedule. Nothing is as frustrating as having to leave when the programme is not yet finished, or having the feeling that the programme has come to an abrupt close. For example, during events when the time schedule is not preserved, there can often be insufficient time remaining for questions and discussions. Some good practices are to:

- Appoint a time keeper during the event who helps to keep to the time schedule. This might be someone from the organisation or facilitation team. In smaller groups this could also be a participant.
- Incorporate sufficient time for questions, discussions, and exchange of experiences within the different sessions of the programme, and do not keep the discussion and Q&A session until the end of the programme.

4.2 General learning/demonstration approach

It is important that the agenda of the demo event contains well considered and well balanced activities. The consecutive activities carried out during the demo event should create good learning conditions. In this section, a set of recommendations is described that need to be taken into account when organising and carrying out the programme activities during the demonstration event:

1. Address the impact on the whole farm of the demonstrated practice or innovation. There are different ways to address a topic. Firstly, a single practice can be demonstrated, such as the effect of a new variety of species, fertilizer, irrigation technology or pesticide, etc. applied to one crop. Secondly, where the topic relates to the whole farm system, new practices can be demonstrated within the whole farm operation. Such 'whole farm' demonstrations serve as examples in developing successful farm businesses. Thirdly, package (i.e. complete or all-practice) demonstrations are used to show the effects of the implementation of multiple products or technology solutions. The objective of this type of demonstration is to bring together all the recommended practices to be used for a particular crop. Anyhow, we advise that participants are provided with information on the effects of a practice or innovation on the whole farming system, as it can be very informative for farmers in deciding whether or not to adopt a practice or innovation. In addition, presenting the economic aspects and possible maintenance costs and requirements of a specific practice or innovation can enhance this offering. In this vein, additional insights on aspects related to the central topic might 'complete the picture' for the participants (i.e. ensuring a 'package demonstration'). Alternatively, a demo topic may be broadly defined, which then allows the presentation of different aspects related to this topic.

Case study example

The overall topic of a demonstration event in Poland was new developments in maize production and a decision support system for plant protection. Computer, GPS control of the tractor, drone filming of the field, pest traps and agricultural machinery were all key sub-topics addressed. Some oral presentations were given while showing maize plants and techniques (PLAID)

(Source: ILVO)

2. *Link the demo content to the host farm.* The learning content should be linked to/framed in the setting or context of the host farm as much as possible. This is because the opportunity to visit another farm is often one of the main motivations of farmers to attend a demo (Gonczi, 2004). Linking the demo content to real problems and actual farm management conditions on the host farm can increase the effectiveness of the demo. Providing many practical examples also can increase the effectiveness, including for example, effectively linking research experiments with real farming conditions, as described in following quotes:

> "*We worked with and calibrated "real" (one of the farmers') equipment, which had its problems, so we worked on real problems and discussed solutions."* (AgriDemo-F2F)

> *"Participants do not always consider the information they receive as "ready to use", but much more as a general update on the topic. Many would appreciate more precise and accurate information about the application of the tool, concrete solutions for their concrete problems, and… the specific information regarding costs of technology applied to different farm size."* (PLAID)

This video on Low stress stockmanship nicely demonstrates how the demonstrator make use of real farming conditions to explain the technique, rather than for example by using a ppt presentation.

https://www.youtube.com/watch?v=_vAcn7WlOcE&feature=youtu.be

3. *Set the demonstration in the larger context*. Contextual information, such as the broader market context and developments, current political discussions, or legal requirements, can improve the effectiveness of the demo event, because they deepen insights into the demonstrated practices. Furthermore, providing the rational underpinning what they have learned, and why it is important to learn, increases the chance of change.

Case study example

Ferme de Froidefontaine in Belgium organised a demo event on care and treatment of orchards. During this event was often referred to the broader context of organic cultivation and an alternative way of producing apples by using traditional/indigenous varieties and which moves away from monoculture. Although the focus was on orchards, the demonstrators talked a lot about the wider context by mentioning biodiversity and spoke at length about genetic resources in terms of varieties, seed and grafting. (AgriDemo-F2F)

(Source: ILVO)

4. *Compare different practices in the field*. A comparison of different practices can be established, for example: field trials, test strips, and comparing between different host farmers/farms. An additional example could be the visualisation of old, long-straw wheat varieties, which are flattened during heavy rain, against modern short-straw varieties that remain erect under the same weather conditions. A comparative design can also be created by referring to previous demo events (for example, when the event is part of a series of demos, or by referring to demos held by other organisations).

Case study example

A demo event on the production of high quality dairy products at Casa Grande de Xanceda in Spain, had the benefit that the 20 participants had previously visited another demo farm, which gave the demonstrator the opportunity to refer to their prior visit in order to highlight better the processes at Casa Grande de Xanceda. (AgriDemo-F2F)

This video shows how during a demo event different techniques to destroy alfalfa without herbicides and without a plough are compared.

https://www.youtube.com/watch?v=ON3wnhzMDpQ&feature=youtu.be

5. ***Address problems, failures, mistakes or the negative side effects of a practice.*** Sharing what went wrong can create a substantive learning opportunity for both the participants and the host farmers, as participants might be triggered to share their experiences with similar problems on their farm. These problems often reflect the barriers for adopting practices. So when they are addressed and explained how they could be dealt with, they might contribute to the adoption of practices and innovations by the participants.

Case study example

The Arenenberg Arable Day in Switzerland showed that it might be difficult to decide on the right timing for a demo event because the crops' growth depends on external factors such as weather and climate. However, demonstrating the unsuccessful trials proved very interesting because it led to discussions about how the unsuccessful results could be prevented. These discussion were very well remembered by the participants afterwards. (PLAID)

6. ***Offer opportunities for peer-to-peer knowledge exchange*****.** This can be formally organised or happen informally. Formal exchange of peer knowledge can be organised by increasing participation in presentations and demonstrations, for example, by actively giving participants the opportunity to share their experiences with the audience, by organising group discussions in smaller groups, or by organising workshops in which active knowledge exchange is stimulated. This provides participants with an overall impression regarding how many farmers attending the demo event are already implementing an innovation and what are their practical experiences. Further, also the importance of informal peer-to-peer knowledge exchange should not be underestimated. This can be stimulated by providing enough time for farmers to chat to each other, for example during lunch, drinks, or workshops.

7. *Adapt the demonstration activities to the varying knowledge levels of the audience*. This can be provided by combining a diversity of information sources, shared by advisors, scientists, representatives of the supply or value chain, and the experienced (host) farmers. There are often differences in presentation style depending on professional background. The combination of researcher and advisor knowledge, in addition to peer knowledge, enhances the level of trust in the knowledge exchanged. In most cases, the sharing of high technical quality and expert skills will add to the effectiveness of the demo event. Examples of how demo content can be adjusted to the audience include:

- To evaluate participants' knowledge in advance and adapt the learning methods and language used to participant profiles and needs,
- Adapt the content to the skills and background of the participants. Start with basic information for newcomers in the field,
- If the demonstrator does not have insights in the knowledge level of the participants, take into account the lowest level of experience of the participants,
- Provide written brochures so participants are able to read the information demonstrated at their own pace,
- Consider different priorities in accordance with the age of the farmers. for example, those aged 20-30 years tend to be income/profit focussed, whilst those aged 50-60yrs need to prepare for farm succession.

Case study example

During a demo event in Austria on the advantages of the roller crimper and vermicomposting, the farmer demonstrator adapted his presentations according to the participants' skills and backgrounds. He started at a low knowledge baseline, so everybody was able to follow the explanation. The breaks in between the presentations as well as the discussions after the event were used for questions of those participants who had less background knowledge on the topic. (PLAID)

8. *Communicate and highlight a few clear and concise key messages of the demo*. Provide key messages that are repeated throughout the demo event and are also summarized at the end, as 'take home' messages for the participants. A good practice here is to bear in mind the "rule of three". This technique is often used in advertising campaigns and public information slogans to create a catchy, memorable way of transferring information. The rule of three is a principle that suggests that formulating three key messages is more effective than other numbers. The audience will also more likely remember the information (Source: Wikipedia).

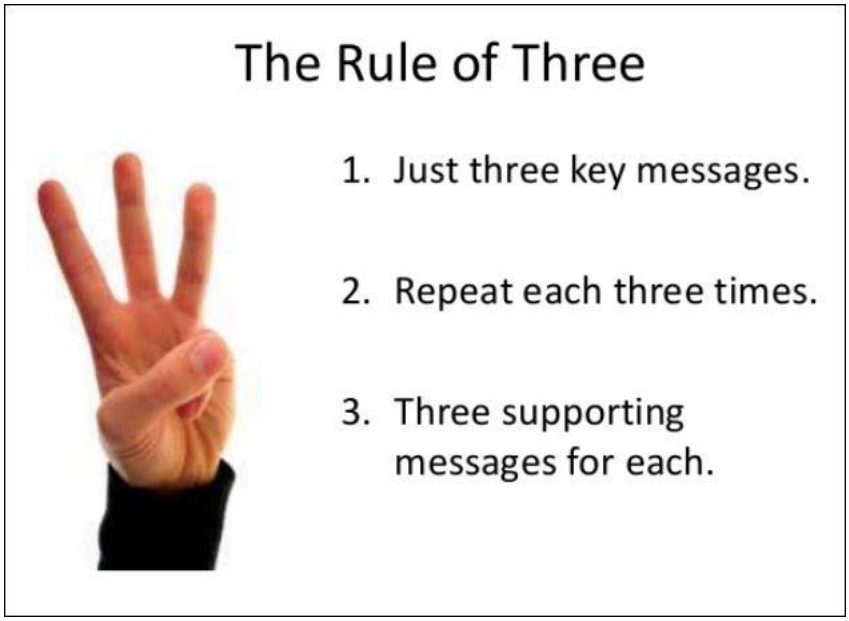

Figure 5. Use the rule of three to convey your key messages.

9. *Combine different types of learning methods*. To increase the effectiveness of the demo, it is very important to link the theory with everyday practice on a farm. Overall a combination of activities focused on both theoretical or practical learning is very popular, e.g., a technical presentation combined with a field walk, or other activities on the field. For example, during an event in Ireland the demonstrator created an environment that allowed people to listen, read or discuss, depending on how they most prefer to learn and engage.

10. *Integrate activities that support experiential learning.* Examples may be field walks including multi-sensorial experiences (e.g. touching real plants, smelling, tasting, walking, etc.), observing practical demonstrations carried out by a demonstrator, and carrying out hands-on activities. An added value of a demo event is that they provide the opportunity for participants to experience and apply practices. Such practical activities enhance learning and understanding, and also the interactions between participants.

11. *Surprise the participants with the innovations presented or with methods used*. By adding a surprise effect to the demonstration activities, participants will more likely remember the information for a longer time. This surprise effect can be generated in different ways, for example, by skilful storytelling techniques, using an original engaging activity for participants, or by revealing a product/innovation during the demo event.

Figure 6. Pictures of the Soil my Pants test, as an example of a surprising and simple test for soil health. (sources: https://cereals-blog.ahdb.org.uk/when-i-soiled-my-undies/ (left); ILVO (right))

This video shows the 'Soil my Pants' test, as a surprizing and simple test to test the soil health based on buried cotton underwear.

https://cereals-blog.ahdb.org.uk/when-i-soiled-my-undies/

12. *Avoid competition between parallel programme activities*. For example, a demonstration of large-scale farm machinery may divert many participants from attending presentations or lectures during a demo event that involves parallel sessions.

4.3 Learning methods

Many different learning methods can be employed during demo events with the aim of transferring knowledge to farmers or to develop certain skills, e.g., posters, presentations, experiments, discussions, workshops (Kiełbasa and Kania, 2015). It should be noted that learning can also take place spontaneously, without the particular intervention of a demonstrator or "teacher", but through mere exchange between the other participants of the demo event.

The main difference between learning methods is the degree of social interaction between the demonstrator and participants and the active engagement required by the farmers. In some cases, a demonstrator is not necessary to be present. These different learning methods include:

a) Learning with the demonstrator(s) present

- Social interaction is directed one way from the demonstrator to the participants, for example when oral presentations are given.
- Social interaction is two ways between the demonstrator and the participants, e.g. when a Q&A session is included.
- Social interaction works in multiple ways between the demonstrator and the participants; the demonstrator acts mostly as a facilitator of a discussion in the whole group (participants and demonstrator).

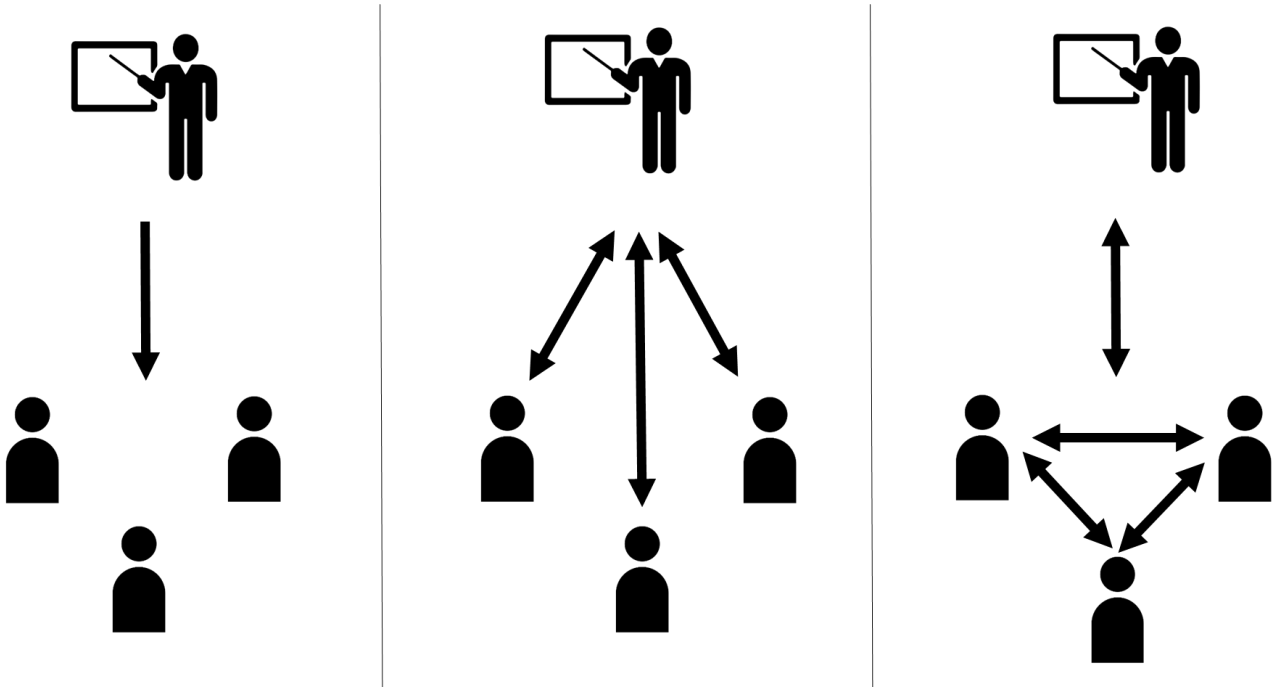

Figure 7.Learning methods with demonstrator present

b) Learning with the demonstrator(s) absent

- Social interaction is absent, for example when unmanned posters are providing information.
- Social interaction is mainly taking place between participants, for example during informal talks or facilitated group discussions.

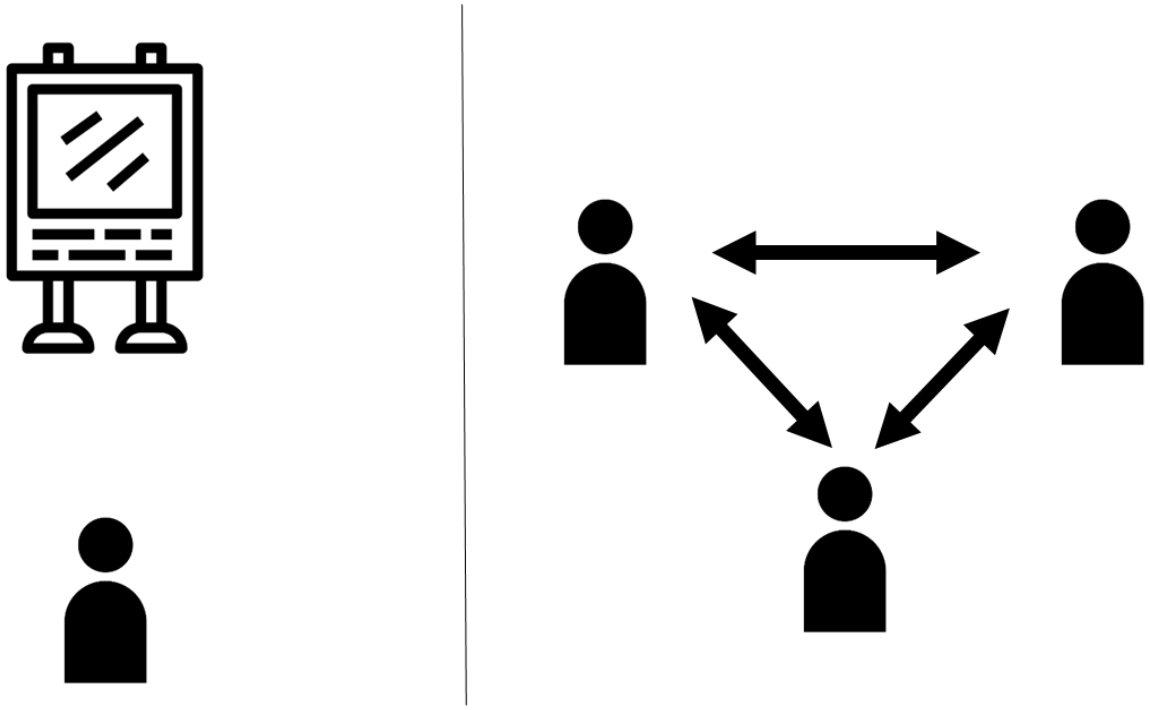

Figure 8.Learning methods with demonstrator absent

Examples of one-way communication activities that can trigger learning include a farmer expressing their own story during the demo event, using a visual presentation or posters (often on stands). Two-way communication activities include discussion set-ups and question and answer time. Regarding learning outcomes, two-way communication activities encourage the attendee to take part in an active form of learning. In many demo events the participation by participants in activities is limited to Q&A sessions. Ensuring the active participation of the participants can be stimulated through the demonstrator (or his/her assistant) adopting the role of a facilitator, and inviting the participants to actively engage in the discussion, for example through sharing their experiences, or through exchange in small groups. In particular, this final approach is often considered more stimulating compared to one-way activities. Each of these approaches vary in usefulness according to different situations and different purposes, which will be explained in the following sections.

It is important to find a good combination of and balance between learning methods, because participants can have different preferred learning methods, and it can add to the increased uptake of information by the participants. Specifically, the combination of oral presentations and more experiential activities, such as field walks, has proven successful in earlier demo activities on farms. Of course, the chosen learning method also depends on what you aim to communicate[1], but an easy way to make sure a variety of learning methods is taken into account in the demo activities is, is to account for the following four learning styles

[1] https://blog.slideshare.net/2015/11/16/why-learning-styles-dont-matter-in-presentations-its-about-experiences

(https://blog.prezi.com/the-four-different-types-of-learners-and-what-they-mean-to-your-presentations-infographic/):

- *Auditory learners* prefer to hear the information. They often talk to themselves while they are studying or thinking. This can be supported by stimulating the audience to repeat the key messages out loud, e.g., by asking them questions.
- *Visual learners* prefer to see information and visualize the relationships between ideas, for example in infographics, charts, schemes and colours.
- *Reading/writing learners* prefer to read or write down information, in booklets or handouts.
- *Kinesthetic (Physical) learners* prefer to actually perform hands-on exercises and experiments.

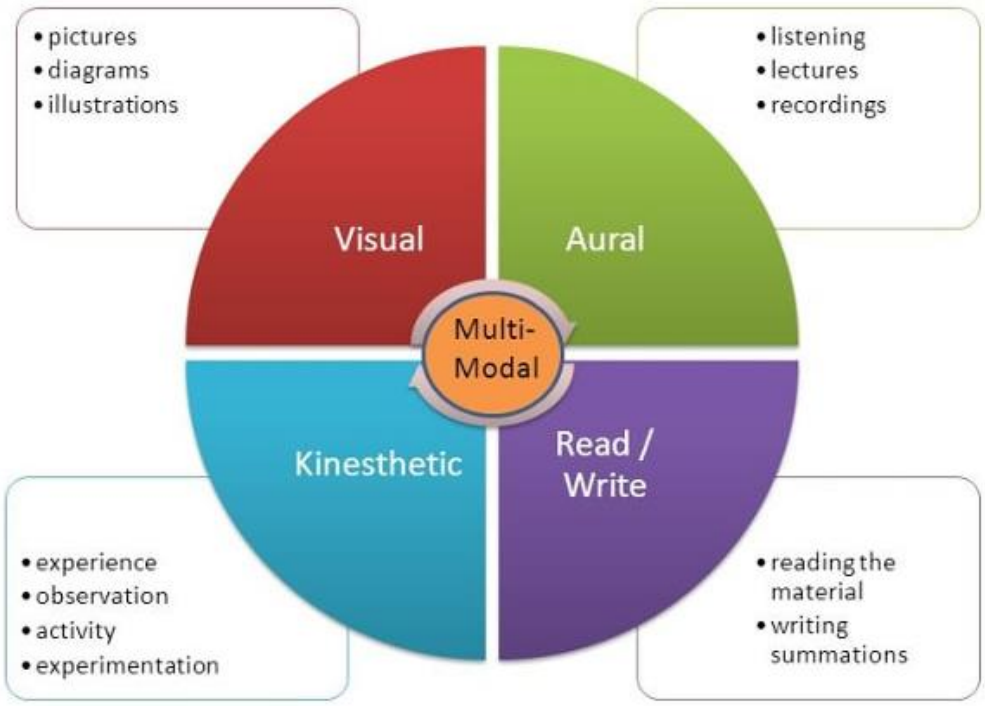

Figure 9. Learning styles and how to take them into account during a demo. (Source: https://tutoringwithatwist.ca/vark-learning-styles/)

4.3.1 Stimulating interaction

The purposeful stimulation of active participation is often neglected during demos, most probably because of the lacking facilitation skills of demonstrators or the lack of facilitators during an event. Two main aspects are relevant to stimulate interaction: (i) creating the right setting to improve the purposeful two-way communication activities, and (ii) finding ways to increase interaction within predominantly one-way communication activities. The first good practice to stimulate interaction is critical, because two-way communication requires careful preparation. Secondly, time constraints, group size, available resources, etc. can steer the choice for using intrinsically one-way communication methods, therefore stimulating interaction via other methods is important.

To enable interactive learning, the space in which the interaction will happen should be considered profoundly, and thus create a stimulating setting:

- To arrange the meeting room/space in such a way that everybody can comfortably listen to and understand the speaker(s) and other participants. Some ideas are:
    - Use microphones so that each participant can hear the speaker (in particular, when outside)
    - Use visual material that each participant can see (i.e. do not use posters with small font size, which may be only visible to the front row)
    - If indoors: put chairs in a circle/half circle, so everybody has clear sight of the other participants.
    - Organise a “market” with different stands/presenters so people can walk around in smaller groups.
    - Provide enough room to organise break-out sessions in which people can discuss in more depth the plenary presentations.
- To make sure that the language and any jargon that demonstrators and facilitators use is understandable for all participants. This is specifically relevant if you expect foreign participants.
- To split up larger groups into smaller groups each with a facilitator, favours active participation and engaged discussions.
    - Bigger mixed audiences could be split up into thematic groups, according to their expertise or interest.
    - Allocating different parts of the day to specific topics/themes according to farm type (e.g. arable focus during the morning of a demo event, and livestock during the afternoon). This approach can encourage farmers to attend arable and/or livestock topics as they choose.
- Create a familiar atmosphere. This can be done by:
    - Creating space in the programme for informal exchanges, including allowing sufficient time for breaks and lunch.
    - Thinking about where you will hold discussions, considering that farmers tend to be more at ease in the field or barn, than in scholarly classrooms.
    - Provide some funny icebreakers at the beginning of the event. Inspiration can be found on the internet, for example: https://www.thebalancecareers.com/top-ice-breakers-1918426 or https://www.icebreakers.ws/large-group

Figure 10. Think about how you will create a space that supports peer interactions. (sources: https://pixabay.com/photos/classroom-school-education-learning-2093744/; https://ro.uow.edu.au/apcei4/6/

- Provide good (trained) facilitators who encourage (or even provoke) the participants to contribute to the discussions.
- Ensure that speakers/demonstrators introduce themselves, and clearly state that participants can interrupt the presentation with questions or remarks. Take this into account in the timing, as this flexibility requires more time than a one-way presentation. Presenters/demonstrators could also pose some questions to the audience during the presentation, for example, beginning their presentation by asking questions to the participants. Additional suggestions can be found at: https://virtualspeech.com/blog/ways-to-make-your-presentation-more-interactive
- Make sure demonstrators/presenters locate themselves next to information panels or stands during the demo event, to provide explanations to participants and answer their questions.
- Use materials to increase the interactions during presentations for bigger groups of farmers. Examples are:
    - Coloured cards that people can show if they agree or not with statements.
    - If indoors: the use of voting systems (e.g., https://www.mentimeter.com/ provides free software to make people vote using their mobile phones when WIFI or 4G is available).

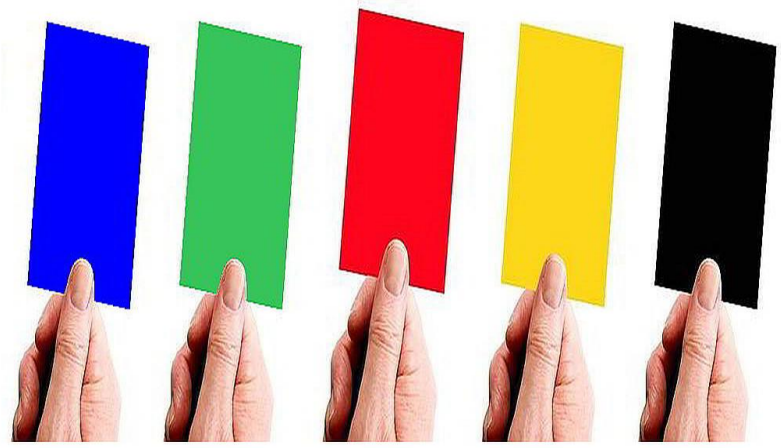

Figure 11. You can use coloured cards to increase interaction in bigger groups. (source: http://www.plays-in-business.com/coloured-cards-voting/)

4.3.2 Educational tools

Educational tools are all sorts of materials used during a demo to facilitate learning. This includes posters, hand-outs, booklets, videos, equipment used to show an experiment, interactive electronic voting systems to improve engagement of attendees and so on. Clear visualisation is fundamentally what an on-farm demonstration is about. Visualisation tools are not the end in itself, but can help to put issues on the agenda for further discussion and debate. They should thus be combined with further discussion and debate.

Organisers should think about how best to distribute materials during the demo event, because when they are distributed during presentations it might distract participants. Some of this information can be send in advance to the participants. Examples are:

- A booklet of information about the farm and its history. For example, the “farm walk booklets” published by Teagasc (https://www.teagasc.ie/rural-economy/organics/farm-walks/)

- Leaflets and information packs of organic certification bodies on demo events targeting adoption of organic farming,
- Printed field guidebooks, including explanations and results, references for downloads.

These materials can have multiple purposes, such as to:

- Increase interaction, for example, the use of voting systems or interactive apps (e.g., https://www.mentimeter.com/; https://kahoot.com/)
- Visualise content; e.g. show equipment used on the farm, posters with engaging infographics (free online infographic makers on https://www.canva.com/create/infographics/), videos to show good or 'bad' practices.
- Provide supporting information for the demo event, that can be used during the activities; e.g., booklets with additional information on the host farm that can be used during farm walks or a list of attendees to make contact with others easier.
- To provide information to take home, e.g. booklets with practical information on the demonstrated innovation (see also section 5.1). This is of particular importance, since during demos participants tend not to take many notes.

Inspiration: how to increase the use of the demo content by the participants

- Provide a variety of learning methods and demonstrators per topic that delivers a variety of information
- Organise 'hands-on' demonstrations
- Repeat key messages
- Provide clear conclusions and take-home messages at the end of the sessions
- Demonstrate pitfalls and what might go wrong
- Stimulate active participation of the participants
- Provide information on the long term effects of the demonstrated innovation or practices
- Provide follow-up materials (hand-outs, manuals, etc.)
- Indicate contact information and concrete steps for follow-up

4.3.3 Overview of different learning methods and their potential use (increasing order of interaction)

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
Webinar	- To reach a broad range of people who are not able to physically attend the demo event.	- Carefully consider the objective and target audience - Look into tutorials for webinars.	https://www.wiley.com/network/researchers/promoting-your-article/so-you-want-to-create-a-webinar-six-tips-for-success https://issuu.com/smartlearningeu/docs/w2l_manual_en_final_www See also the best practice manual on virtual demonstrations  How to make a webinar with Powerpoint: https://www.youtube.com/watch?v=Atzswy5VhFI Free training on how to make webinars: https://webinarsthatwork.net/free-webinar/ https://www.youtube.com/watch?v=xsXe5upL_d8

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
Information panel, stands, signposts	- Visitors can self-direct their information gathering, through independently reading all the information stands at their own pace - At multiple test strips a signpost can outline each treatment and mention who to contact for more information - Signs and/or posters can be also used to direct farmers to the demonstration location.	- Limited information can be conveyed to visitors - No possibilities for interaction - Make signpost simple, attractive and easy to read - Need to meet the visual literacy levels of the farmers observing the demonstration - Provide guidance and explanation at the information panels or stands.	 https://www.youtube.com/watch?v=AwMFhyH7_5g
Lecture or classroom presentation	- To introduce the topic and the context to a bigger group that it is possible to easily host on farm. - To present clear conclusions and take-home messages. - To show pictures/videos when live presentation is not possible	- Theoretical or top down presentations risk the participants remaining distant from the topic and not involved - Lack of farmers' engagement and interactivity - Link to practice and demo farm during presentation - Keep presentations short (max. 20 minutes) - Think from the perspective of your target audience when preparing the presentation - Recycling the latest presentation you gave at a (scientific) conference won't do!	https://thefloorisyours.be/en/ https://blog.polleverywhere.com/presentation-advice/ https://www.iowalearningfarms.org/content/field-day-toolkit, p.30-31
Storytelling	- Allows participants to better remember the main messages	- The story teller has to be gifted to tell a lively story and to be understood.	

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
	- When you have an enthusiastic user or performer of the practice you want to demonstrate - Links the theory with practice - The exchange with practitioners who have already implemented a certain technique or innovative approach is often very engaging and thought-provoking - Anecdotes support remembering content	- Think carefully where to place storytelling in the demo; e.g. at the beginning to raise interest or in the middle to give an example	https://www.youtube.com/watch?v=yhQxwnT11Tw https://www.youtube.com/watch?v=i68a6M5FFBc
Q&A	- Important to timetable following one-way communication slots - To help digesting information received	- Encouraging and mediating questions, allowing everyone the chance to speak (role of the facilitator) - Plan sufficient time - Repeat questions using a microphone to ensure all participants can hear - Be clear how many questions can be taken / how much time there is - Keep answers short and precise, to have time for several questions - Ask participants to prepare questions in advance	- Examples of activating questions: https://www.iowalearningfarms.org/content/field-day-toolkit, p. 20-21 https://www.youtube.com/watch?v=P2lgW_SXnEQ
Interactive facilitated discussions between demonstrators and participants or among participants	- To help to digest the information received - Triggers reflection by the visiting farmers on how the demonstrated innovations would apply to their own farm. - can be used to reflect on and link with earlier presentations - To deepen knowledge and understanding on a particular topic	- Look into facilitation guides - Prepare activating questions to the group in advance - Activate discussion by starting with a simple question, e.g. a poll that can be answered by all - Ask participants to introduce themselves - Participants who are already familiar with the topic or innovation can start the discussion and encourage unexperienced participants to also	- Examples of activating questions: https://www.iowalearningfarms.org/content/field-day-toolkit, p. 20-21

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
	- Works well with both small or large groups	become involved in the discussion. It may be interesting/necessary to make sure some experienced farmers are present - Good listening and facilitation skills needed: rephrasing, summarizing main issues - Divide large groups into smaller ones	
Field/Farm walk	- To learn about real farm management conditions and the farming practices applied - Time to walk in between stops can be used for questions and informal conversations between peers (see above)	- Some hosts don't like participants to walk freely around the farm. - May be inaccessible for and prevent disabled or immobile participants from engaging. - Presence of the hosts throughout field walk to provide guidance, explanation and answers on the questions - Allow sufficient time to change between posts - Consider all health and safety aspects of a farm walk/transport (by trailer), and undertake a risk assessment prior to the demo event	- Move people around on a trailer, when field or parts of the farm are difficultly accessible for disabled participants.
Practical example showed by the demonstrator	- To illustrate the learning content and topic - To make the presentation entertaining and attract attention - Works well when combined with a field walk and other forms of presentations	- Use easy but surprising ways to explain your message - Make sure to involve the whole group - Consider the size of the group: everybody must be able to see the practical example.	- Simple tools to test the soil quality: https://www.youtube.com/watch?v=9VWMoDiJDm4&feature=youtu.be - Slake test to visualize the structural stability of the soil (French spoken); https://www.youtube.com/w

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
Multi sensorial experiences	- Supports remembering of the practice and anchoring the learning - Works well when combined with a field walk and other forms of presentations	- Ensure sufficient time is allowed - Include the experience into your presentation, e.g. by inquiring about it: “How does it smell to you?” “How would you describe the feeling of…?”	atch?v=pRaN6SLUPuk&feature=youtu.be - Examples: - See and hear about the machines in practice on a real field - Touch and investigate the ground after the weeding machines have passed by - Smell the compost and feel it with your hands - Silently listen to the bees in a buffer zone on a field, - Taste bread baked using the flour produced by the farm, to allow participants to gain an appreciation of the quality of the produce  - Demonstration of the spade test for analysing soil quality: https://www.youtube.com/watch?v=f-kigHj3vbw - Demonstration on the cultivation of legumes explains how the farmer demonstrator included experience in his demonstration:

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
			https://www.youtube.com/watch?v=10E_13d85-I&feature=youtu.be
Hands-on experiences	- Action learning allows participants to come up with the solution themselves - Supports remembering of the practice and anchoring the learning - supports the mastery of skills by participants	- It is not feasible for each topic, for example, when licences are required to use equipment, or because of biosafety measures - Ensure sufficient time is planned within the timetable of the demo event.	- Try on protection clothes during pest control applications - Bring your own spraying machines to calibrate them Demonstration of the spade test for analysing soil quality https://www.youtube.com/watch?v=f-kigHj3vbw
Workshops	- For in-depth discussion and a focus on a specific topic - To apply the presented experience to own farm situation - Output can be used for documentation	- Requires at least one hour in a room or around a table outside - Requires facilities to note down the key points of discussion / results of a focussed inquiry (E.g., provide templates). - Carefully formulate goal of workshop (must be feasible in time available) and what outcome is expected - Visitors expecting a field visit might not be open to a workshop involving paper and writing (avoid this by announcing it in the invitation)	Examples - - The workshops were discussing on how to redesign the farm: turn the farm into an organic one, adapt the old buildings, and use a contention corridor to avoid pain. Possible workshop facilitation guide:

Method	Useful for the purpose of / in the demonstration situation	Points to consider / prerequisites	Good practice example
		- Consider different preferences of visitors for methods applied - Group needs to split into small groups around 3-7 people - Look into workshop and facilitation guides	https://www.seedsforchange.org.uk/shortfacilitatingworkshops
(Informal) exchange between participants	- Possibility to speak freely regarding any failures or concerns in the innovative farming practices demonstrated, to allow for productive experience-based mutual learning - During the informal (food and drinks) part of the demo event, or when moving between posts - To reflect on earlier presentations given - To digest the presented information	- Allow for sufficient space and time so that informal exchange can take place	Takes place anyway if there is time; encourage by set-up of the demo event and lunch/breakfast.

Field Day Presenter Tips

For farmer outreach events with one or more outdoor "field" components

1. Understand your audience

Over 83% of attendees are farmers and landowners. Average age of farmer/operators = 55. Average age of landowners = 64. Average distance traveled = 25.

2. Speak loudly, slowly and clearly

Use the PA microphone, even if you think you have a loud voice. Repeat the questions asked prior to answering. You want your message heard – all the way on the back!

3. Be aware of time

Since 2004, ILF has used feedback from attendees to develop an effective field day with about 90 minutes of program and 30 minutes for a meal. To end on time, each speaker needs to stick to their allotted time. For example: if you are allotted 20 minutes – plan for 15 minutes of content and 5 minutes for questions and discussion. ILF staff moderates the program and will be sure to let you know when your time is up to keep the program running on time.

4. Practice, practice, practice!

Getting familiar with your presentation is key to a successful delivery. We need to stay on time (without rushing through presentations) and knowing specific points you want to cover in the time allowed helps us keep the entire field day on schedule.

5. Be relatable

Using humor is a great way to break barriers between presenters and the audience or making your presentation conversational and taking questions throughout the presentation. Use on-farm examples when appropriate, so they know you're connected to farmers.

6. Go old school - ditch the PowerPoint

PowerPoint does not work for field days – the lighting doesn't cooperate, the screen is too small for the space, etc. Instead consider using a one-page (2-sided) handout to convey the most important points you want them to remember or provide photos.

7. Speaking of handouts

If speaking outdoors, save the handouts for when we return inside so they can actually take it home with them. Giving them too many handouts or copies of presentation slides = information overload. Keep it simple – one-page (front and back)! We can print any handouts you wish to use if they are provided 2-3 days in advance.

8. Read your audience

It has been estimated that more than three quarters of communication is non-verbal. Your audience will provide feedback without having to say a word – at best leaning in or nodding in agreement to show engagement and at worst falling asleep. To keep the audience engaged, moderation is key! It's better to have ample time for discussion, questions, and clarification to ensure that participants are going home with your key points versus trying to pack in too much content.

Figure 12. Tips for demonstrators (source: Iowa Learning Farms Field Day Toolkit)

4.4 Networking and business relations

One of the motivations of farmers to attend a demo event is to foster and expand their network and business relations. They might have a range of objectives for networking, for example, exchange of technical experiences when they work with similar techniques or in the same area, exchange of ideas, approaches or opinions, or to build commercial relationships. Farmers can also be attracted by companies presenting or even selling their products during the demo event, or by different types of people from the agri-food chain or AKIS being present.

Some demo events are specifically organised with the aim to foster networking between participants. During these events substantial time should be dedicated to social contact and informal conversations (e.g. when providing catering). It is also advisable to provide a list of participant with contact information that is shared at the start of the event. This facilitates contact between participants. Organisers should make sure that all participants agree to share contact information in line with the GDPR requirements.

Networking and commercial aspects can also be the motivation of the host farmer to invite or organise a demo event on his/her farm. For example, the host farmer can provide catering to promote their own products.

4.5 Trouble shooting

Some unforeseen circumstances can always happen, and it is advisable to think in advance and be prepared for the unexpected. Examples are bad weather forecast, groups size is too big or too small, group composition differs from what was expected (e.g. few active farmers), problems with equipment, problems with field trials, etc. . For example, when bad weather is forecasted the demo can be postponed, or indoor presentations, videos, demonstration or discussion set-up could be planned as an alternative.

4.6 Participant feedback

In order to learn how to organise a good demo event, it is important to evaluate experiences from previous events (see also section 5). An important aspect of evaluation is to gain insights from the participant feedback on the demo event and their ideas for future events. Participant feedback during the demo event can be gathered through evaluation forms to be completed by all participants after the demo and by taking some time to organise a feedback discussion as part of the demo event programme. The gathering of feedback is preferably scheduled at the end of the demo event, because people tend to ignore emails and questionnaires send afterwards. It is advisable to dedicate some time in the programme to gather the feedback of participants, so that they feel more obliged to complete the forms, or to provide input.

Feedback can be gathered on the set-up (programme, locations, facilities, topic, …) and organisation of the demo, but also on what they have learned, and consider applicable for their farm.

Case study example

During a Greek demo event on crop protection, the perspective of several demo events in the future were discussed with the participants and the organiser. More specifically, some logistical aspects were discussed, for example, where and when (before or after harvesting and the time of the day) to organise the next meeting In that way farmers/participants had a good input concerning these arrangements and had the opportunity to shape or change the programme. (AgriDemo)

(Source: ILVO)

This video shows how evaluation of the event by the participants is included in the program of the demo event.

https://www.youtube.com/watch?v=BfkkuhbJ9OI&feature=youtu.be

5 FOLLOW UP AND EVALUATION OF AN ON-FARM EVENT

This section discusses all types of activities that can or should take place after the demo event. We distinguish between follow-up activities that are beneficial for the participants of the demo event and the broader farming community, and monitoring and evaluation activities which aim for improvement of future demo events or other follow up activities.

5.1 Follow-up activities for participants and farming community

'Follow-up' refers to the continuation of the development and distribution of the content of the demo, after the demo event is finished. These activities can increase both the anchoring and scaling effects of the demo event. Anchoring is about the application of the demo content by the participants of the demo event. Scaling refers to the impact of the demo on the wider farming community, including not only those who participated in the demo event. Follow-up activities can, therefore, make an important contribution to achieving the demo objectives set at the beginning.

Although, follow-up activities take place after the event, it is important that they are announced or discussed with the participants during the demo event. Follow-up activities could be formal, such as organised follow-up demo events, or informal, such as unplanned telephone contact between participants, and the demonstrator or participating farmers talking to their neighbours after the demo. Although the organisation has most impact on the formal follow-up activities, they can also stimulate informal activities, for example by providing contact lists to the participants (in line with the GDPR requirements). Some of the follow-up activities might be time consuming and expensive, so this should be taken into account from the start. For example, in Greece, they incorporated an 'after-demo-service' in the organisation in which they responded to requests from participants.

Good follow-up activities to stimulate anchoring of the demo content by the participants include to:

- Share contact lists of all participants of the demo event, with consent provided by the participants (in accordance with GDPR).
- Share contact information for advice for those participants who are interested to learn more or to implement a practice on their farm.
- Provide information leaflets to the participants, advisors and other possible multipliers of information.
- Invite participants to ask specific questions to or contact the demonstrator afterwards.
- Farmers rarely contact the demonstrator after the demo without clear incentives, therefore encourage the demonstrators to call the farmers themselves.
- Create an online platform, social media groups (e.g., WhatsApp), blogs or physical networks in which practitioners can report their experiences with other interested farmers.
- Provide a newsletter or create a website in which participants are informed about further insights and developments on the demo topic.
- Provide (group) support for those interested participants who plan to implement the practices or innovations.

This video shows the benefits of a platform for knowledge exchange on organic varieties, and the role demo events can play in this.

https://www.youtube.com/watch?v=oQMa_m6-eKI&feature=youtu.be

Good follow-up activities to stimulate the scaling of the demo content to people who did not participate in the demo event include to:

- Provide a report or video online of the demo event (see also Part B of this document on 'best practices for virtual demos'). If the video is attractive, it might also attract other farmers to participate in future demo events.
- Organise other demos, workshops, study groups or education programmes that address the same topic or the specific implementation of the practices or innovations for those who are. When multiple activities are organised on the same topic, farmers will recognise the importance of the topic.
- Release press articles for farmers in farmer-focussed newspapers and magazines, and provide brochures that can be distributed amongst farmers and advisors. It is advisable to dedicate a specific session to journalists, to make sure they spread the right message in their articles or news items. Organisers can ask beforehand for media participants to agree to attend the demo event. Furthermore, organisers can also decide to write a press release themselves, to make sure the right information is picked up by journalists who did not attend the demo event.
- For longer term trials on the host farm, the trials could be made publicly accessible, so local farmers are free to come and see the progress of the trial without the demo events.
- Make a call for new host farmers for demos amongst those who attended the demo event.

Inspiration from case studies

- During a demo event on Grounded Maize Cropping in The Netherlands (PLAID) an article was posted in the newspaper 'Boerderij' about the demo event, including a picture (Boerderij no. 37, 12 June 2018). **The article not only described the event, but provided more profound content to inform the reader**. The article mentioned that the demo event was visited by about 80 visitors and that it was therefore a successful event. It also mentioned that by 2019, a catch crop must be sown (via under sowing, in spring, or after the harvest, in combination with an early maize variety). Furthermore, it gave some advice on the best decisions for the Northern region (province of Drenthe), i.e., the under sowing of maize with grass with Italian ryegrass. (PLAID)
- During the The Arenenberg Arable Day in Switzerland, the participants were given **the possibility to visit the trials throughout the year** after the demo event. Some farmers living close went back to the trials several times to observe the development. (PLAID)
- The IFM Field Event in the United Kingdom **used video, social media, internet and media to increase impact.** To achieve this, a short video was created on the IFM Field Event which was used on social media to share the event and to post event materials such as a LEAF blog post. Local newspapers covered the event with articles featured in one newspaper with a reach of 51,000 people. Several online articles and resources were produced about the event on the LEAF website as well as signposting to resources with more information and guidance on the demonstrated approaches. (PLAID)

5.2 Evaluation of the set-up

Evaluation of the demo event afterwards is often not done explicitly. In the best case, an informal 'looking back' is performed. However, a planned activity to reflect on what happened according to the demo event plan, and what can be learned for future events, is often lacking. We advise that an evaluation exercise is explicitly planned with the organisation team, to learn from the experiences during the demo event.

Multiple sources can be used to evaluate the set-up (programme, locations, facilities, topic, …), such as:

- Facilitated participant feedback during the demo event, using forms or based on discussions (see section 4.6)
- Exit polls or evaluation forms send to the participants afterwards. The risk with those types of forms is that they are often very quickly completed (specifically, after the event, when people are in a hurry to talk to other people or to go home) and it often does not provide a lot of rich information.
- Informal talks with participants during the demo event
- Telephone calls with the participants after the demo event
- Monitoring templates used by someone who has the specific task to monitor the demo set-up during the demo event.

5.3 Evaluation of the demo impact

In addition to evaluating the demo set-up, also evaluating the learning outcomes of the demo provides valuable information.

The general objective of the demo event is to inspire and inform farmers regarding innovations and farming practices. This should enable them to take better decisions on their farming practices. During a decision-making process, a farmer typically proceeds through three key steps:

1. A farmer needs to become aware that a practice requires change ('know-that').
2. A farmer needs to be motivated to change the practices ('know-why').
3. A farmer must be informed on what might be changed ('know-what'), and how the change can be achieved ('know-how').

Demo events can thus result in a farmer's higher level of awareness, stronger motivation to change practices and/or better information. Which of these outcomes applies will vary across the visiting farmers depending on their starting point. Some may require greater awareness raising, whilst others may need to be motivated, and others may already be inclined towards change and may require more specific information on how to realise that change. To reach as many farmers as possible, all abilities and stages of change need to be addressed.

Organisers often find it difficult to evaluate the anchoring and scaling of the learning during demo events. In many cases, it is only performed in an informal way, for example, during a subsequent visit to the farm of one of the participants.

5.3.1 Evaluating outcomes

Outcomes can be related to learning or to other aspects, such as an increased confidence of participants on their own farming practices, or newly established relations. Learning outcomes can range from very concrete (i.e. 'X is very useful for me') to rather abstract (gaining more insights on specific topics). A problem is that the impact of demo events can often only become visible after a number of years, which makes it hard to evaluate the impact during the lifespan of a programme or project.

Deciding how organisers will evaluate the outcome therefore also depends on the demo objective set at the start of the event preparation (see section 2). If the objective was networking, it is useful to focus on whether participants were able to expand their network. If the objective was innovation adoption, organisers need to monitor the participant's inclination to adopt the demonstrated innovation.

Outcomes of the demo event can be evaluated using the same information sources as the evaluation of the set up (see section 5.2). For example, evaluation forms or groups discussions during the event, exit polls, follow-up emails or telephone calls.

The advantage of organising follow-up emails or telephone calls, is the opportunity to ask whether participants have changed their practices or mind set after the demo event. To monitor the impact of a (series of) demo events, organisers can run two surveys: a baseline survey before the event (or series of events) and a survey measuring progress after the (series of) events.

In the case of a series of events, in which the same people participate, it is possible to discuss the impact of one event at the start of the next event.

5.3.2 Evaluating anchoring

Anchoring is about the application of demo key messages by participants. Statements from participants on whether they will apply what they have learned can vary considerably. Some are very explicit or outspoken, whilst other have only vague ideas. Participants tend to be more outspoken when they face specific challenges on their farm related to the topic of the demo event (e.g. potato diseases).

After a demo event, participants often go through a period of reflection in which the possibilities change and the practices on their farm are re-considered. Deciding on the actual change of practice can take time as it might require financial investments, new skills and knowledge, and a readjustment in the farmer's usual routine and mind-set. Generally, less investment-intensive, and less radical practices and incremental changes, are more easily introduced.

Furthermore, a demo event should not be seen as a standalone source of information. It should instead be viewed as part of a range of learning activities for farmers on a specific topic. Other sources of information might involve publications in press, follow-up demo events, workshops, newsletters, specific advice for interested participants, etc. Repetitions of the information provided on a specific topic are important for innovation adoption.

Evaluating anchoring is often easier for technical innovations, such as new machinery, as questions can be asked as to whether a machine has been bought/used or not. As changes in practices might be more incremental and sometimes even happen unconsciously, it may be more difficult to evaluate those. Further learning outcomes might also not be visible, for example, when they result in the conscious non-adoption of initially planned innovations.

Different indicators can be used to evaluate anchoring. Examples include questions being asked by participants after the demo event, or the creation of awareness by policy makers on policy barriers for the implementation of specific practices.

5.3.3 Evaluating scaling

Scaling is about the impact of the demo on the wider farming community, so not only those who participated in the demo event. Scaling is much more difficult to evaluate as it is a scattered process. Scaling might occur through advisors disseminating the demo content to farmers who did not participate in the event, or through peer- to -peer interaction between farmers and their neighbours.

Inspiration: how to stimulate the impact of the demo content to the farming community

- Invite farm advisers and policy makers to the demo event
- Create free to access follow-up material, hand-outs and manuals
- Live stream the demo event on social media to increase the audience
- Provide articles in farm press and other media

PART B. GOOD PRACTICES FOR VIRTUAL DEMONSTRATIONS[2]

[2] This part is mainly based on: Hardy Claire, Vanev Dimitar, Alföldi Thomas, Tippin Laura. 2017. Good Practice guidelines for Virtual Demonstration. Deliverable 4.3 of PLAID. https://www.plaid-h2020.eu/sites/www.plaid-h2020.eu/files/PLAID_WP4_HUT_DV_Good%20Practice%20guidelines%20for%20Virtual%20Demonstrations%2027_2_19%20(003).pdf

Virtual demonstration activities are not physically existing but can be done or seen using computers or the internet instead of going to a place, meeting people in person, etc. Virtual demonstrations through the use of videos and other audio-visual tools are a great way to share knowledge and support innovation uptake across the farming sector. With today's smartphones, a video camera is always present and filming has become very simple. Many researchers, advisors and farmers shoot video clips to capture their observations in the field. In research projects, videos are becoming more frequently used as part of project dissemination activities. With regard to demonstration activities, videos help to supplement on-farm demonstration activities, increasing access to farm demonstrations to all stakeholders.

Figure 13. Example of making videos (source: Deliverable 4.3-PLAID)

6 DEFINING THE OBJECTIVE FOR VIRTUAL DEMOS

Making explicit the objectives of the virtual demonstration is key because they determine all the other decisions an organiser makes during the preparation and organisation of the virtual demo. Having a clear objective and key message aids to the success of the virtual demo.

The demo objective should specify what the organisers seek to achieve with the virtual demo. It should start by addressing the 'why' (why are you planning this virtual demo?), then the 'what' (what do we want to demonstrate?), and then the 'who' (Who is the target audience for the virtual demonstration?). These three aspects together then define the 'how' (how will the virtual demo be set-up?).

6.1 Why are you planning a virtual demo?

Videos can significantly increase the reach and multiply the impact of demonstration activities. For example, an on-farm demo event will only be attended by a limited number of farmers, but a video can go viral on the internet and reach a much bigger audience. Box 1 lists the most important reasons for producing agricultural videos by yourself.

The use of videos has some advantages. First, it can be used to advise on problems common to a large number of farmers. Second, it allows for repetition of information and advice, so it can be remembered easier by the audience. Information heard at a meeting or passed on by an extension agent can soon be forgotten. Third, the audience can be brought into contact with successful farmers or agricultural experts from all over the world

Inspiration: Reasons to produce demo videos for agriculture.

- Many agricultural activities are linked to the time of year, such as tillage or harvesting. A video captures the current moment and the content becomes accessible to a wider audience.
- Agricultural videos are popular with farmers. Many farmers even run their own YouTube channels.
- Videos are an excellent way to show the experience of practitioners.
- Demo activities, such as machine demonstrations, have a high priority in agricultural knowledge transfer. The reach of such events can be significantly extended with videos.
- Like most people, farmers prefer videos over written resources to inform them about a specific topic or approach.
- After Google, YouTube is the second largest search engine in the world.
- Video equipment and editing software are now inexpensive and easy to use.

6.2 What do you want to achieve and demonstrate?

The contents of a virtual demo should be selected carefully according to what you want to achieve with it. For example, organizers of demo events, might want to use them to promote future event by giving a general overview of what will be demonstrated. Advisors might want to explain how to perform a specific practice on the farm.

Agriculture offers a wide range of topics suitable for videos, including (Figure 14):

1. ***Machine demonstrations***. These are among the most popular demonstration activities and achieve the highest number of views on YouTube.

2. ***Training Videos*** which are shot on site, i.e. in the field, in the stable or at a machine.

3. ***Tutorials*** on more complex topics are preferably realized in a simple studio in front of a so-called green screen (primarily filmed indoors vs. training videos which are out door based).

4. ***Practical innovations*** and individual solutions from farmers.

5. ***Event Videos*** to convey selected conference contributions or impressions of conferences.

6. ***Results of research*** communicated to various stakeholders. These are in less detail and often supplement written articles or papers.

7. ***Teaser videos*** can be used, for example, to announce a new handbook or events.

8. ***Short video clips*** on agricultural advisory websites are a valuable addition to online texts.

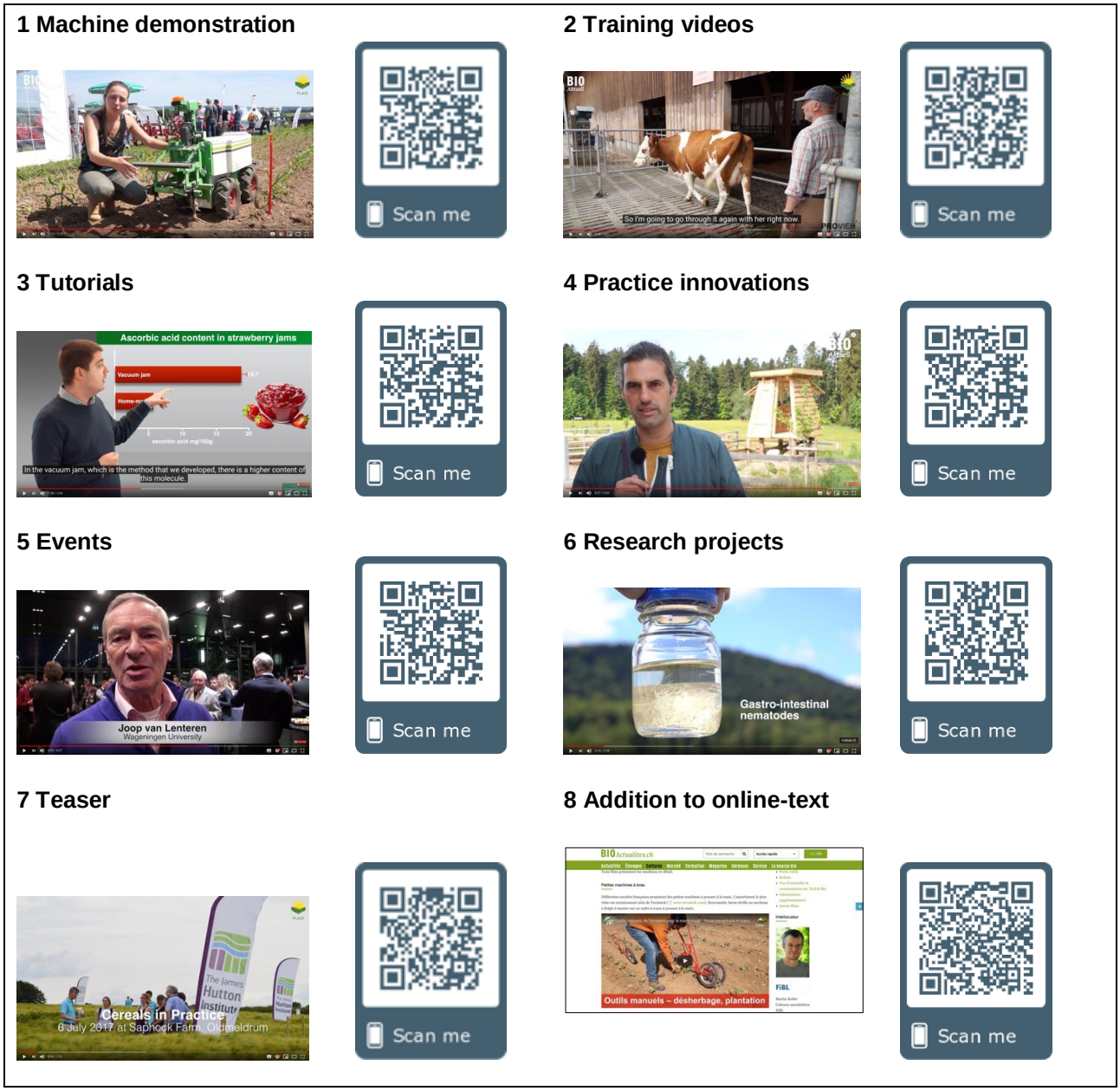

Figure 14. Fields of application of videos in agriculture, with QR-codes to see video examples from the PLAID project. (source: Deliverable 4.3-PLAID)

Other popular formats in agriculture are **video blogs** (vlogs) in which farmers document and comment on their work on the farm. **Advertising films**, for example for a farm shop or **image films** for organizations, are other formats. We recommend hiring professional videographers to produce PR and commercial films.

Some recommendations on choosing a topic:

- Current content that is topical and sometimes seasonal will be the most appealing to viewers.
- Take into account variation in farm types (animal breeding, plant production, mixed, conventional, organic, etc.) and farm size (small, big, medium) when producing virtual demos (but depending on your target audience).

- Have a short 10 second introduction. It has been shown that people's attention is gained in the first 10 seconds. If the content does not catch their attention in this initial engagement, they often become disinterested.
- Demonstrate both whole farm approaches and approaches to specific areas of the farm.
- Use a simple topic to start with, e.g. a machine demonstration. Here, the storyline is linear, i.e. one machine just follows another

Inspiration: how to choose a topic (for beginners)

- Start with a simple, clearly defined topic.
- Ask yourself: Is film really the appropriate medium for this topic?
- Consider whether the topic provides enough visual material. Prevent that too much information that cannot be illustrated should be conveyed as text.
- Avoid Talking Heads!
- Find the story behind a topic. Telling stories and evoking emotions are the strengths of videos.
- Know your own limits. Leave complex topics, concepts, PR and advertising films to the professionals.

6.3 Who do you target?

The contents of a video will differ depending on the target audience of the video. Visual content can be good for engaging at many different levels, for example, technical videos are good at explaining how new technologies can be used in different situations. So a video could include instructional content but also promotional content, for example, to point of selling. Videos of research data and results could be used to disseminate project results or they could show how research is translated to practical farming advice. Examples of audience type and their areas of interest are given below.

6.3.1 Peer-to-Peer

For videos that target peer-to-peer learning, the videos are produced by farmers to inform farmers. These videos focus on material that engages fellow farmers. The video footage has generally been taken by farmers, or on occasion by advisors, to showcase new innovations or management techniques that would be interesting to their peers. The videos can be used to inform on a technical aspect of machinery or husbandry or management techniques and can be used to gather interest or encourage discussion and debate or as a tutorial to help others to use technology.

Peer-to-peer exchanges help to encourage communication within social groups and help the uptake of on-farm innovations. They encourage the development of sustainable agriculture by experimentation of new techniques in on-farm situations. The videos help to create debate and critical problem solving to further develop innovations and encourage the use of new technology for specific on-farm situations where tailored solutions are necessary. Often regional issues can be explored by viewing and following discussion on social media. Equally, cross regions and cross sectorial solutions can be exchanged where face-to-face discussion would have been unlikely to have taken place.

Videos aimed at other farmers need to illustrate and provide additional details to a specific farming approach or method as well as whole farm approaches and systems. Areas of interest for other farmers will include

how the approach was implemented, how transferrable it is to their farm, the benefits, and barriers or challenges to implementing the approach.

Videos for farmers should focus on a strong visualisation of the topic including machines in action, crops, animals etc. Farmers want to see practical solutions on other farms. Whenever possible use other farmers as testimonials. Let them speak about their experiences, about their success, but also about difficulties encountered. Different opinions on a topic increases the attractiveness and credibility of your video. However, statements should be very concise and clear.

6.3.2 Policy

Videos aimed at policy should highlight the transferability of an approach, how this farming approach/ trial can impact policy and how policy can be changed to further influence/ enhance farming practices across Europe. Videos aimed at policy makers can target wider topics, for example, the effect of a change in agricultural management and its impact on biodiversity. These videos can take a broader view on how a whole agricultural community may impact the wider community and may be a good basis to provoke a wider debate. Equally, policy targeted videos can highlight beneficial aspects of a change in agriculture practice and help encourage further changes that are beneficial to all.

6.3.3 Research

Videos are ideal to disseminate results of research. However, be aware that one minute of video corresponds to about 100 spoken words. Thus, a video about research will be in much less detail compared to a written article. But it is ideal to supplement articles and to tease the viewer to read a paper.

There are several approaches on how to use video on research results; either as a short and simple teaser video of 30 to 45 seconds, in which the researcher explains their main results. So called teaser videos can be used on social media and to link to the original paper.

Research can also be presented in a more extensive way (lecture-style). The easiest way would be to film a public lecture. However, the quality of these lecture videos is often not satisfying (dark room with projector), and they are often too long. Therefore, it is recommended to produce research videos separately: either on a location which fits the research topic, e.g., in a lab, a stable or a field, or film indoors in a simple studio with a green screen. Both approaches have their advantages and disadvantages. The outdoor location might be more authentic, specifically if objects related to your research can be demonstrated. Indoor videos allows the environment to be controlled (sound, light) better, and with the green screen technique graphs can be inserted and explained as a tutorial.

If the target audience are other researchers, focus on the most important results. Simplify graphs and tables used in written articles or papers, as the viewer will not have the time to understand too complex graphs. The methods applied in the research might also be interesting to be shown in a video.

If research results have a strong practical relevance or have been carried out together with practitioners, videos are the ideal tool to showcase the multi-actor approach, and to get the interest of farmers and advisors. In this case, an outdoor location might be the better choice. Again, do not overload the video with information! If uploaded to YouTube, practitioners can ask under the comment section for further details.

6.3.4 General Public

Farmers like to engage the general public to help them understand the importance of the farming community in producing the food that they purchase to feed their families. Videos that promote the sustainable production of healthy food are welcomed to encourage the general public to purchase and support food that

is produced sustainably. Often sustainably produced farm products produced according to EC ethics have a higher premium and videos promoting these foods are used to encourage the public to support these foods. The general public may not be aware of specific approaches, techniques or farming terms so the language used in the video and footage shown needs to reflect this.

The areas of interest for the general public will be more general compared to other farming, policy and research audiences and can include, how a demonstrated approach will affect the environment and the availability of food.

6.3.5 Children

Some children are unaware ‘where their food comes from’. Therefore, videos can help them to understand the source of their food and how food is produced. These videos need to be targeted specifically to them as their understanding is at a different level and short effective videos will promote engagement and lead to higher acceptance of healthy options for food choices as they grow. The subjects they find interesting often are more diverse than older viewers although their attention level is high for a limited period of time.

7 PREPARING A VIDEO FOR VIRTUAL DEMOS

As mentioned earlier, every video production consists of three steps: preparing (planning), producing (shooting and editing) and disseminating and evaluating the video. Good planning of a video avoids stress and increases the quality of your video. Depending on the topic and experience, you will have to allow 2-4 hours for the planning phase. More complex topics will take more time to plan.

7.1 Choose a production team

The video production team can constitute a diversity of actors, such as universities, scientific and research institutes, extension services, private companies, farmer organisations or public services. The collaboration between a diversity of actors, such as farmers, advisors and scientists can be challenging because of their different professional backgrounds, skills, knowledge bases, priorities, work routines, and motivations. To help this endeavour succeed; it is important to define clear terms of reference and a mutually agreed upon topic, content and division of labour.

Every demo video project is unique and having the right team in place is crucial to its success. With the right people on board you will make the most of your time, and get a better video in the end. It is important to know your own limits. Leave complex topics, concepts, PR and advertising films to the professionals.

When it comes to deciding on the size of your production film crew, what you're really deciding is how many experts you need to create a successful demo video. This will depend on the complexity of the project. At least the following roles should be covered in your team:

1. **Director and camera operation.** For almost all projects, a 2 man crew (1 director and 1 camera operator) is the best basic set-up. The camera operator can dedicate full attention to the picture and sound quality. The director can lead the shoot, guide the presenters, interviewees or actors, and make sure everything is going according to plan. It's also a good idea to have two sets of skilled eyes on the shoot. This makes it easier to decide which shots are needed for complementary images (see also B-roll in section 7.4). The images help to add style to the material and can bring simple videos to life.
2. **Presenters.** The presenter should be able to explain things clearly and concisely. This saves a lot of work in the subsequent post-production and is the best prerequisite for a successful video. Where possible use a range of stakeholders (researchers, advisors, farmers including young farmers and female farmers) who are asked relevant questions and add value to any written online text.

7.2 Structuring the content

Once the topic is selected, it should be narrowed down and further specified. For example, the main topic "Biodiversity in agriculture" can be transformed into "Creating areas to promote biodiversity on an arable farm" or even more specifically "Planting hedges" or "Maintaining hedges". As a general rule, only one topic should be dealt with per video. Further, the action-oriented elements that you want to include in your video should be defined.

It is important to write down the most important points you want to get across to the audience. First, as keywords and afterwards as formulated sentences. This gives a first indication of the duration of the video. As a rule of thumb: 100 words make 1 minute of film.

The formulated content must then be structured. The basic structure for all video formats include a beginning (intro), a main part and an ending (outro) (Figure 15):

- The **intro** introduces the theme and its relevance. During the first 30 seconds, the viewer must understand why it is worth watching this video. In addition to the topic, the main speaker and, if necessary, the location should also be introduced.
- The **main part** presents solutions or recommendations for action. It is often useful to divide the main part into short chapters.
- The **outro** draws a short conclusion and/or refers to further sources of information (call for action).

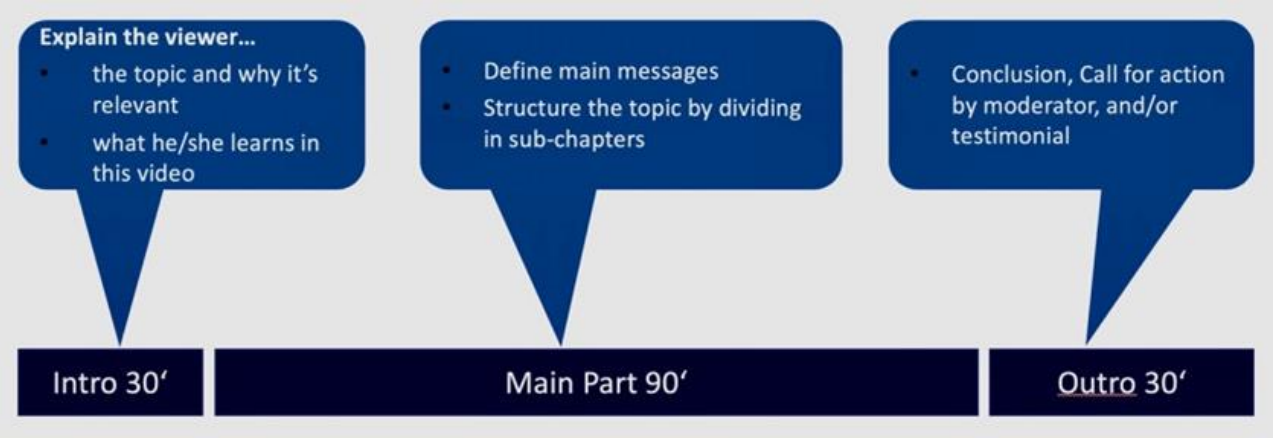

Figure 15. Basic structure of a short video of 2-3 minutes. Whether a further subdivision is needed in the main part depends on the complexity of the topic. (source: Deliverable 4.3-PLAID)

7.3 Speaker, presenter or text inserts

Once the content has been determined, a decision has to be made on who will tell the story. This could be one or several people. In the case of agricultural videos, for example, farmers, researchers or advisors can be considered. As experts, they can convey the content in an authentic and credible way.

An alternative is to have the main points written and then read by a speaker as voice-over. Both methods have advantages and disadvantages (Figure 16). But often are off-camera speakers and original voices of experts are combined.

In short videos, pictures can also be supplemented with short text insertions or subtitles. Specifically, on social media, videos are often viewed without sound which makes subtitles very advantageous.

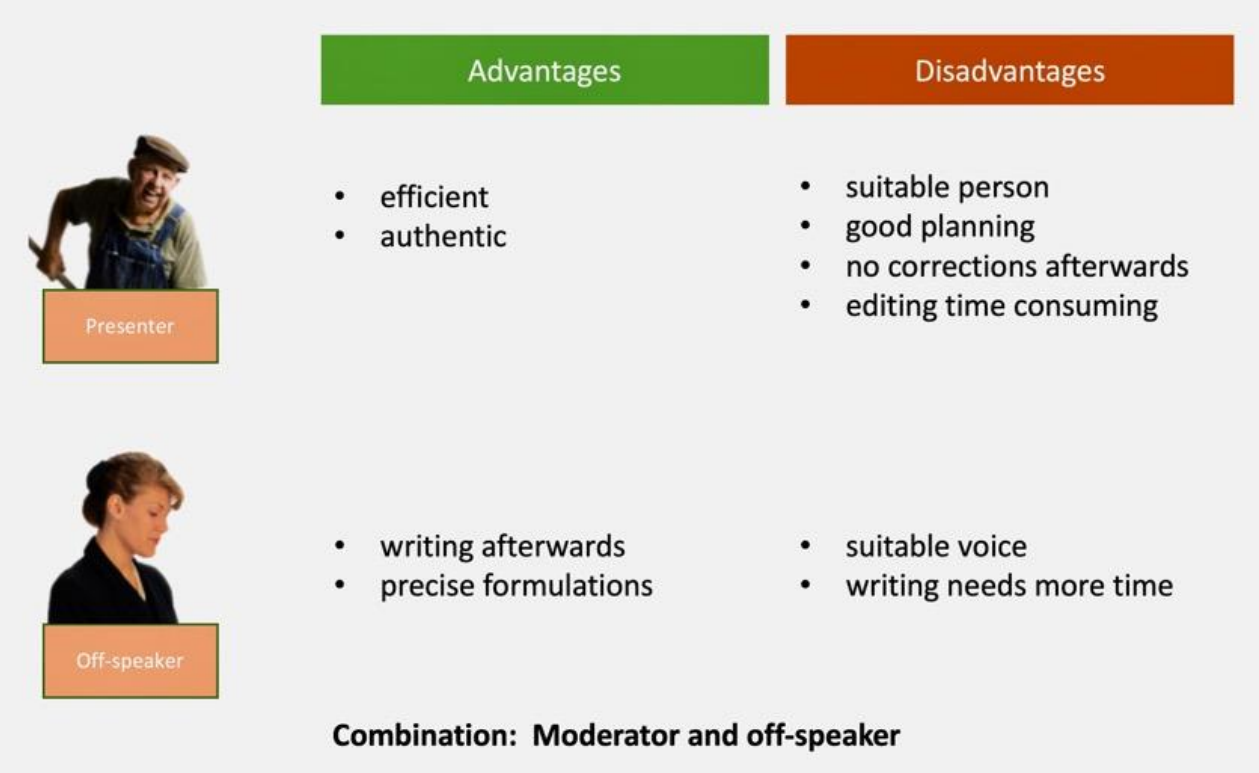

Figure 16. Advantages and disadvantages of presenter and off-speaker. (source: Deliverable 4.3-PLAID)

7.4 Planning A-Roll and B-Roll

It is important to plan the video both at a narrator and image level, regardless of whether the content is narrated by an interviewed person or by an off-video speaker. The narrator's level is also known as the A-Roll. The image level is referred to as B-roll or footage (Figure 17).

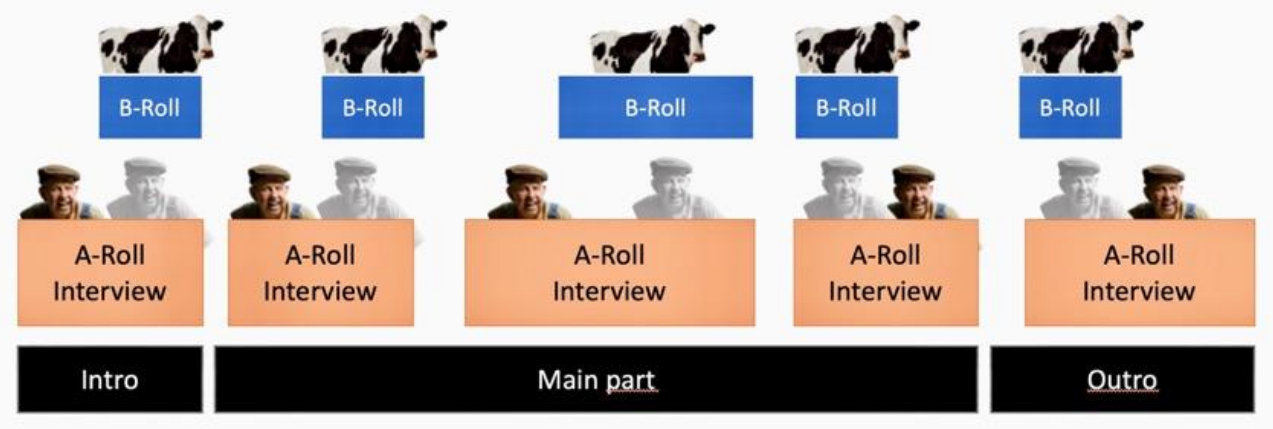

Figure 17. The backbone of a video is the A-Roll, i.e. the essential statements of an interviewee. With the B-Roll, what has been said is illustrated. (source: Deliverable 4.3-PLAID)

Once it is decided what the narrator will say, it is necessary to plan the appropriate images to compliment the narrator level. Having this well prepared, allows to film all required images on the same shooting day. If there are gaps in the planning, existing image material - photos or clips – might have to be used. It is important to list all the pictures you need so that you don't forget anything during the shooting. A template for an outline is shown in Figure 18.

Outline for Video (title): .....

Format: _presenter _narrator (voice-over) _only titles _other

Content 100 words=1 Minute	**Picture level**
Intro Explain the problem, say what will be shown in the Video Keywords: - - - - - - - Estimated time:	e.g. presenting farmer, crop
Main part: Explain your innovation step by step Keywords: - - - - - - - - - - - Estimated time:	e.g. machines in action, details, photos
Outro: recommendations, call for action, statements of farmers etc. Keywords: - - - - - - - Estimated time:	

Figure 18.Template for an outline to plan a video. (source: Deliverable 4.3-PLAID)

7.5 Equipment

7.5.1 Camera

You can choose between smartphones, camcorders or photo cameras with video function (Figure 19).

Smartphones today usually have an excellent camera built in. In bright sunlight, however, image control on the display is difficult. It is important to remember to always film in landscape with smartphones. For further information on how to turn your smartphone into the perfect video camera, click the following url: https://www.backstage.com/magazine/article/turn-smartphone-perfect-video-camera-19498/

Camcorders are fully designed for filming. They are easy to handle and require little practice. They offer an adjustable display, which is a big advantage in bright sunlight. Camcorders with viewfinders and eyecups offer even better image control. The zoom lens is another advantage compared to smartphones.

Cameras (reflex and compact cameras) with video function also offer excellent image quality. However, handling, and more specifically focusing, requires more practice than with camcorders. Important for all camera types is to make sure they can be connected to external microphones and a tripod.

Figure 19. Smartphone, video camera or photo camera: the image quality is good for all of them. The choice of the right device is determined by the application, budget and personal preference. (source: Deliverable 4.3-PLAID)

Inspiration: Tips for choosing the right video camera

- First gain experience with existing equipment.
- Rent cameras and see what suits your needs best.
- Video camcorders with good image quality are available from €300.
- Make sure you have inputs for an external microphone and headphones.
- It depends on your budget whether you buy a camera with Full HD or 4K resolution. Editing video in 4K requires a more powerful computer and more storage space.
- If you have a limited budget and high demands, you may want to buy used equipment.

7.5.2 Additional types of cameras suited for agriculture

Here we present three types of cameras that are particularly suitable for the production of agricultural videos (Figure 20). However, they are not part of the basic equipment for beginners.

Figure 20. Popular in agriculture: Actioncams, drones and 360° cameras. (source: Deliverable 4.3-PLAID)

Actioncams deliver spectacular images when mounted on a tractor or machine in the dustproof and shock-resistant protective housing supplied. The picture quality is usually very good, but the sound quality is poor. You could decide to use separate audio recording equipment simultaneously to obtain a better sound quality.

Drones with good cameras and good flight characteristics are available from €600. The Mavic Air by DJI, for example, is light, small and easy to operate via smartphone. They are useful to shoot aerial photos of fields, machines, herds of animals or farm buildings that allow to enhance every video. The viewer obtains an excellent overview of the location of the event. However, drone recordings should only be used where it makes sense. Further, the drone pilot should ensure they use them within flying laws/regulations. The legal basis for drones is country-specific and varies in its restrictiveness. It is essential to consult the official information office of the country in question prior to use. An overview on drone legislation in different European countries can be found here. However, in all countries it is forbidden to fly over groups of people with drones. For example, if you want to film on on-farm machine demonstrations with drones, you should do so before or after the visitors arrive. Another disadvantage of drones is that sound recordings are not possible. A tip might be to engage a hobby drone pilot from your friends instead of buying your own drone, or to ask children and adolescents who have more experience with joysticks than some adults.

Country-specific regulations for the use of drones in Europe

- The legal basis for drones is country-specific and varies in its restrictiveness.
- This blog gives a good overview of the regulations in different European countries http://dronerules.eu/en/recreational/regulations.
- It is essential to consult the official information office of the country in question prior to use.

360° cameras: A standard video is taken with a single lens and gives the viewer a ‘flat’ view of the object being viewed. 360° video is taken with a specialized camera that uses 2 fish eye lenses to take views in every direction simultaneously. This allows a viewer to move the viewing angle/position during the video. So in practice during the video the viewer can move their orientation to look at a different aspects, for example, up down and around, but it’s not possible to zoom in or change the original video position. 360° cameras offer the viewer a comprehensive spatial experience, which is controlled by the viewer himself on the display or by means of VR glasses.

Figure 21. Ricoh Theta V 360° camera (source: Deliverable 4.3-PLAID)

There are several viewing options for 360° recordings. The videos are ideally suited to be viewed using a Virtual Reality headset or for a more readily available format using an Android phone and a cardboard (google) headset (Figure 22). This gives the viewer a virtual reality immersive experience and the video can be navigated using head movements. The viewer can move around the video to change the viewing position by moving the head. The videos can also be hosted on a YouTube channel and viewed using the chrome browser to allow the viewer to move within the video using a standard PC or Laptop and mouse control/navigation. There is significant potential in the area of virtual training courses and virtual tours. However, producing virtual reality videos requires both experience and good planning.

Figure 22. PLAID Cardboard headsets being demonstrated at DATagri, Spain. (source: Deliverable 4.3-PLAID)

7.5.3 Microphone

A good sound is just as important as a good image. Specifically for interviews, the built-in microphones of video cameras and smartphones do not meet this requirement. As the distance between camera and sound source increases, the sound quality decreases rapidly. Moreover, ambient noise or wind often spoil such sound recordings. The solution here is to use an external microphone.

Microphones with cable connections and wireless microphones are available in various price classes (Figure 8). We also distinguish between lavalier (Lapel) microphones and handheld microphones. Wireless lavalier microphones are well suited for agricultural contexts. The filmed person can move freely and use their hands to show and demonstrate things. The RodeLink wireless microphone offers a very good price-performance ratio and costs around €300.

It is important to always control the sound via headphones. It can happen that there is noise, that the battery is empty or that you forgot to switch on a wireless microphone. When buying a video camera, make sure that there are inputs for the microphone and headphones (Figure 23, right). Unfortunately, these connections are only available for a few models in the consumer segment.

Another advantage of external microphones is the use of a synthetic fur windbreaker which helps to prevent rattling noises that make sound recordings unusable even in light winds. In addition to a lavalier microphone, we also recommend a handheld microphone. This is needed when interviews have to be conducted in situations with a lot of ambient noise.

Figure 23. Left: simple microphones with cables for smartphones are already available from €20. Middle: the RodeLink radio link offers a good price-performance ratio. Right: when buying a video camera, make sure that there are connections for microphone (red jack) and headphones (green jack). (source: Deliverable 4.3-PLAID)

7.5.4 Tripod

Shaky videos look unprofessional and exhaust the viewer. Therefore, a tripod should always be used. There are a variety of options which can be used, including (Figure 24):

- Simple rigs for smartphones are available from €20.
- Gimbals which produce specifically soft and dynamic movements ("steady cam")
- A shoulder tripod or a monopod are recommended for many changes of location when there is no time to set up.

The tripod is the ideal solution for many applications. Thanks to a special video head and with a bit of practice they allow for smooth pans.

Figure 24. Multiple tripod options. (source: Deliverable 4.3-PLAID)

7.5.5 Potential barriers

7.5.5.1 Budget

Video camcorders with good image quality are available from €300. Another €100-300 are needed for an external microphone and tripod. If you have a limited budget, you may want to buy used equipment. If your budget allows, a camera with Full HD or 4K resolution is preferred but requires a more powerful computer with more storage in order to edit 4K footage. This may constrain its use.

7.5.5.2 Editing Hardware

For a smooth editing process, your computer should have at least 8 GB, better 16 GB RAM. The minimum requirements are usually indicated if you buy an editing software. It is also recommended to use external storage space.

7.5.5.3 Editing Software

There are many editing software programs available on the market. Free programs such as iMovie on Apple devices, Movie Maker for PC or comprehensive programs such as Hitfilm or Shotcut, are available.

Nevertheless, we recommend to use payable programs in the price range between €50 and 100, such as Adobe Premiere Elements. With free programs you quickly reach your limits and the extensive free programs like Hitfilm are often too complex to use for beginners.

7.5.5.4 Licences

Suitable background music can enrich videos but music should be used sparsely. Only royalty-free music may be used. YouTube offers a large selection of royalty-free music in its audio library. Popular pieces of music appear again and again in YouTube videos and gradually wear out. For higher demands, music can be purchased from payment providers such as audiojungle.net or premiumbeat.com prices range from $20 to $50 per piece of music.

7.5.5.5 Language

We generally recommend to let the protagonists speak in their mother tongue. As consequence, translations are needed for transnational projects. This can be done either by a voice-over or by subtitles. For both, a transcript needs to be created of all what is said in the original language. The appropriate file extension for subtitles is .VVT or .SBV or T.XT. The transcript can then be translated to other languages and then be read by a speaker or be inserted as subtitles on YouTube.

The time required to transcribe a minute of video ranges between 0.5 to 1 hour depending on the complexity of the topic and of the experience of the transcribing person. For inserting subtitles on YouTube, about 10 minutes per minute of video are needed. It can be concluded, that, if translation is part of the project, videos should be as short as possible, as the time required for translation increases linearly.

Ensure language used both as a transcription and in the native language is not too complex or scientific which may not be understood by the target audience. Abbreviations should not be used unless they are well known and easily interpreted.

7.5.5.6 Time

Videos can take several hours if not days to produce, therefore creators of videos may be limited by how much time they have available to produce a video.

On average the planning of a video takes between 1-2 hours, the filming itself between 1 and several hours and editing takes the most time. As a rule of thumb, the time required to edit a 5-minute video is about 1 day. In the beginning, without practice, it may take more time.

7.5.5.7 Skills

Lack of knowledge or experience in creating videos may deter people from creating their own. It may also affect the overall quality and time taken to produce a video. It is therefore important to follow practice in creating videos, before producing any which will be shared with the target audience. Where possible training sessions provided by professionals should be followed to obtain the skills and confidence needed to produce videos.

7.5.5.8 File size

When you start shooting video footage you should remember to stop shooting from time to time to ensure files do not become too large. For example, a video file of 20 minutes from a good quality camera could easily reach 9 GB size. This file size is difficult to transfer and therefore process. If the laptop/computer has limited RAM/disk space it is possible the computer will either be extremely slow or will be unable to complete the task. Larger files are also harder to edit compared to small files with less footage.

For this reason, it is appropriate to stop recording after 5 minutes for some seconds before resuming to record again. Bear in mind that if the video files are too short (smaller than 2 minutes) this will make it difficult to process them and you will need more time and effort during the editing process to piece together the video footage.

7.5.5.9 Clip size

Clip size is very important to think about. Before starting to process footage check you have enough disk space on your computer/laptop. It means at least 2 GB free space for video making. You should take in mind that you will have several video clips before to finalize the last. One processed video clip with 2 minutes duration is about 200 MGB.

7.5.5.10 Ethics (consent)

Before filming, the EU obliges to obtain free and informed consent from those who (‘s premises) will be filmed (e.g., EC Participant Portal H2020 online manual). Consent can be given orally, in writing or electronically. Where appropriate information sheets should be provided to participants, mentioning the purpose, method, risk and benefits of the research and planned use of the data to enable them to make a clear informed decision to give their consent. Consent can be given by completing a short targeted informed consent form ensuring that the participant has understood the use of the images, knows they can withdraw consent at any time and retains the right of the footage although they allow the project to use the data captured or processed (See the box below).

When dealing with mass attended events it is unrealistic to consider obtaining informed consent from all attending, therefore it is necessary to inform participants that filming is being undertaken and anyone that does not want to be captured in the footage should make themselves known to the management team. Common practice is to issue this person with a coloured badge to wear. This ensures that either footage is not taken if the badge is visible, or when editing any footage with someone displaying the badge is not used or edited out.

Inspiration: example of an informed consent form (based on PLAID)

Photograph, video or audio recording consent from NEFERTITI

I, _____ (person's full name), do hereby consent to the use of my image or voice, or both, by members of the PLAID consortium project. The image may have been captured by either video recording or still photography.

- I agree that all such pictures, video or audio recordings and any reproduction thereof shall remain the property of the author and that the NEFERTITI project may use the image as it sees fit.
- I understand that these images may appear publicly as part of NEFERTITI's website and/or other marketing materials related to the project.
- It is understood that this material will be used in a legitimate manner and is not intended to cause any harm or undue embarrassment to the parties involved.

Signature:_____ Date: _____ / _____ / _____

The project NEFERTITI has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°7727053.

8 PRODUCING A VIDEO FOR VIRTUAL DEMOS

8.1 Shooting the images

8.1.1 Shooting of A- and B-Roll

During the video shooting itself it is also helpful to think in both levels A- and B-roll respectively. Which part you shoot first depends on the situation. For example, for a machine demonstration one usually films the machines "in action" first, i.e., footage images or the B-roll. This includes details and long shots, hands examining the worked soil, people around the machines, etc.

It is usually not recommended to film the live commentary that the demonstrator makes for the participants of the on-farm demo as an A-Roll. This is because the sound quality is often too bad and the explanations are usually too long. Therefore, if possible, the explanatory commentary should be recorded in a separate step as an interview with a competent person (if possible, clarify who and what will be told during preparation).

Ideally, the commentator should be able to explain the individual machines directly in front of the machines. The expert describes the working methods, advantages and disadvantages of the machines just presented. The person must speak in the present tense and formulate the sentences as if they were commenting on the subject live. This then sounds like: "Here we see machine XY...", "As you can see, it works somewhat less deeply than machine XY...".

This will ensure comments fit exactly behind the pictures of the machines. To allow the speaker first to see the machine in operation under the current conditions, the commentary is usually recorded only after the demonstration.

In other situations, e.g., when a farmer explains a routine process, the explanatory comment ("A-roll") can be recorded first and the illustrative pictures ("B-roll") can then be filmed. If the commentator can show actions, speaking and acting are often ideal. In order to be able to edit such recordings well afterwards, the commentary should be recorded as a whole without action. Afterwards, the details of the action are filmed.

8.1.2 A-Roll: 10 tips for conducting interviews

An explanatory commentary is often recorded in the form of an interview. Here are some tips for conducting interviews.

1. **Relaxed atmosphere**. Always ensure a relaxed atmosphere between you and the person you are interviewing.

2. **Sitting or standing.** Normally the person to be interviewed should stand. Sitting is only recommended during long interviews as well as for people who move a lot.

3. **Image composition.** In the interview, the eye line must lie on the upper third line of the image (rule of thirds). If the eye line is lower, the person appears unnaturally small (Figure 25). Make sure that the person to be interviewed looks professional (hairstyle, clothing, etc.).

4. **Direction of sight.** The interviewee should not look directly into the camera, but slightly laterally past it, into the eyes of the interviewer. Only if the interviewee has a moderation role he or she should look directly into the camera.

5. **Fully automatic.** If the interview is conducted by only one person (simultaneous camera and interview conducting), it is advisable to mount the camera on a tripod and operated in fully automatic mode. That is the only way you can fully concentrate on the person to be interviewed and the content of what is said.

6. **Do not turn off the camera.** We recommend that you let the camera run through the entire interview. Turning the camera on and off will distract you and can increase nervousness every time. In addition, there is a risk of forgetting to switch it on.

7. **Silent nodding.** During the shooting, the focus must be on the interviewee and the content. Communicate by eye contact and non-verbally, for example, by nodding your head. The interviewer must not make any intermediate remarks such as "Yes," while the person to be interviewed is speaking. They cannot be removed.

8. **Crisp statements.** Very few people can describe something concisely and precisely. Therefore, it is recommended to plan at least two rounds. The first serves to get an overview of the topic and to reduce nervousness. The second round focuses on the relevant aspects and formulates them as concisely as possible.

9. **Integrate the question into the answer.** In order to save time, the question is often cut out at post-production. In order for the viewer to understand the context, the interviewee must integrate the keyword of the question into their answer.

10. **Follow-up without insisting.** If questions are not answered in an optimal way, it is necessary to follow up. Individual shots should be repeated until the result meets expectations. Sometimes, however, it is helpful to skip a question and pick it up again at the end.

Figure 25. In the interview, the eye line must lie in the golden section, i.e., on the upper third line. If the eye line is lower, the person appears unnaturally small. Multiple tripod options. (source: Deliverable 4.3-PLAID)

8.1.3 B-Roll: Ensure varied image settings

The motifs for the B-roll should have been roughly defined in the outline beforehand. There are a variety of settings which can be used as B-roll (Figure 26). The individual clips should last at least 30 seconds without zoom and pans, so that they can be used afterwards in the editing without problems. B-Roll clips can include:

1. **Long shots as opening a scene:** At the beginning the viewer should get an overview of the place of the demo if appropriate (establishing shot). A long shot either from the ground or drone shot is suitable for this purpose.

2. **Medium long shot:** This setting is ideal for machine shots but can become boring if used frequently or for too long.

3**. Details, close-ups:** Long and medium shots should be supplemented with close-ups. These can be produced in different ways: By getting close with the camera or zooming in on details with the Tele lens. An action cam mounted on machines also provides exciting perspectives which live participants of on-farm demos do not have.

4. **Additional image material:** Additional material such as farmers in conversation, hands in the ground, plants, landscape shots are very helpful for editing and improve the quality of the video.

Figure 26. Varied camera settings of B-Roll motives are the basis for an interesting editing. (source: Deliverable 4.3-PLAID)

8.1.4 Recommendations

8.1.4.1 Approaches and tools

1. **Clearly state the contents of the video at the beginning**.

2. **Use transitions wisely**. Unwarranted transitions are off putting and viewers get distracted from the real content by bad formatting.

3. **Use short sections of interviews or people speaking**. Viewers engage with moving footage rather than with a static view. So as movement is important to engage the audience, only use short sections of interviews.

4. **Use voice overs to narrate a technical clip**.

5. **Provide subtitles to make content more widely accessible**.

6. **Think well about the framing of the video**. The framing of the video, including movement and momentum, is really important for a well-produced video as it can make any subject pop into life and increase the interest of audiences to the approach or technique demonstrated.

7. **Use alternative formats to present the content**. For example, you can use music or graphics on the screen, which are well paced – not too long and include the right amount of information. Ensure thumbnails are used effectively. Where appropriate humour can be used to draw in the viewer.

8. **Videos should be edited and shortened as much as possible**. This allows to provide the maximum amount of information in the minimum amount of time. Audio should be clear and concise.

8.1.4.2 Presenters

1. **The presenter should be able to explain things clearly and concisely**. This saves a lot of work in the subsequent post-production and is the best prerequisite for a successful video.

2. **Use a range of stakeholders where possible**. This can be researchers, advisors, farmers (including young farmers and female farmers) who are asked relevant questions and add value to any written online text.

8.1.4.3 Skills and knowledge

1. **Follow video training to become skilled**. Or share experiences with others (or other farmers) interested in producing videos.

2. **Start with short videos of maximum 2 minutes.** Editing is the biggest challenge for many beginners, so keep it short in the beginning. To do so, you have to narrow down the topic as much as possible. Short videos are also much less time-consuming for translations.

3. **Show your videos to an independent viewer before publishing**. The viewer can point out ambiguities and unnecessary length.

4. **Upload materials regularly**.

8.2 Editing the video

Editing is a challenging part for most participants, as it has some requirements on the performance of the computer. Efficient editing also requires practice and discipline. Editing of a video consists of the following steps:

1. **Rough cut of the A-Roll**. Start with editing the A-Roll, i.e., the commentary track. All clips are listened to and the best versions are selected. The commentary is structured according to the plans and shortened to the essentials. When shortening, it is advisable to make several runs and always ask the following questions: Is this sentence relevant for the understanding of the topic? Does the sentence drive the story forward? This step takes between 1 and 4 hours, depending on the amount of material filmed.

2. **Fine cut of the A-Roll.** Once the "scaffold" of the A-Roll is in place, cut out the misspells and "aahms".

3. **Insert the B-Roll**. In this step, select the image material from the B-Roll and place it over the appropriate position of the A-Roll. The cuts of the A-Roll will be covered by these clips and thus made invisible, but what has been said is clarified and emphasized with appropriate images.

4. **Provide rhythm.** This step is about providing the film with a rhythm. This means, for example, determining the duration of the A-roll sequences, deciding when B-roll images appear, adjusting B-roll cuts to

the rhythm of the voice. After this music, intermediate titles and pauses should also be inserted so that the viewer has time to catch their breath. The film should flow and have no unnatural breaks.

5. **Show the video**. Show the (almost) finished version to an outside person. This person can indicate if the video is easy to follow and understand, if the length is right and if any parts which need to be amended. After these last corrections have been made, the video can be published publicly to the target audience.

Figure 27. Arrangement of A- and B-roll in the editing program. Images of the B-roll are used to cover cuts in the A-roll and to visually support what has been commented on in A-roll. (source: Deliverable 4.3-PLAID)

9 DISSEMINATION AND EVALUATION OF VIRTUAL DEMOS

9.1 Dissemination of virtual demos

There are multiple channels for disseminating the demo videos.

9.1.1 Social Media

Social media is a great way to share videos to a large number of people. It can be used to disseminate audio-visual materials to all audiences, but some forms of social media may suit a specific audience more. It is therefore important to know what forms of social media your target audience uses and to tailor dissemination to this.

Short 30 second to 1 minute videos can be used on platforms such as Twitter and Instagram to share a snapshot of a practice or innovation. If your video is on YouTube and too long for Twitter, you can just upload the intro and link to the full version on YouTube. It is important to use subtitles, as most people watch videos on Twitter and Facebook without sound. Short videos can also be used as a great promotional tool for a demonstration event or conferences. On Twitter videos can also be shared by followers, helping to increase the views and interactions with the post. Facebook can also be used to share audio-visual materials. These can be either similar to short clips used on Twitter and Instagram or longer more in depth videos similar to that of YouTube videos.

9.1.2 YouTube Channels

For agricultural videos, distribution via YouTube is recommended because it is the most popular platform in agricultural circles compared to Vimeo or other video platforms. In order to upload videos, you must have your own channel or open a new one. Every day, thousands of new channels are opened and millions of new videos are uploaded. Therefore, some efforts are needed to make the uploaded videos known and to ensure optimal distribution.

Inspiration: Measures to make your YouTube video easier to find

- Choose a meaningful title with the most important key words.
- Provide a brief description on the content of the video. Here you can also provide links to further information.
- Specify keywords as tags and also translate the most important ones.
- Do not use the thumbnails suggested by YouTube, but upload your own meaningful screenshot from the video.

Particularly with newly launched YouTube channels, it is difficult to generate many views at the beginning due to the small number of subscribers. In the beginning, a YouTube channel serves more as an online video archive. From here the videos should be embedded into existing websites and made known through social media networks. Depending on the topic, the quality of the videos produced, and the existing networks, it can take months, if not years, for a new YouTube channel to be accepted by the audience.

9.1.3 Networks

There are a variety of different network types which can be used to disseminate audio-visual materials to target audiences. These include local farming groups, national or regional demonstration farm networks,

research or trial groups (such as Innovative Farmers in the UK), advisory groups and email/ communication networks and networks of project partners.

All these network types are great for sharing videos to people who share common interests and thus can help to increase the impact of the video. Some of the networks, such as demonstration networks, may also help to raise the profile of the video or topic area as these farmers are often highly regarded in the community/ farming industry and also come in contact with a variety of people across the industry who they can share a video with. Networks also provide opportunities to tap into new groups or stakeholders who might not currently be aware of a particular practice or approach. By sharing a video within the network ensures all will have access to the video and increases the chances of them watching the video compared to sharing it without using such networks.

Networks set up within H2020 projects are another way of disseminating videos outside of a project or research group, e.g., NEFERTITI. These networks allow videos to be disseminated more widely, across member countries, enhancing the knowledge exchange between farm clusters. Likewise, the European Network for Rural Development (ENRD) and respectively National Rural Networks (NRNs) serves as a hub for exchange of information on how Rural Development policy, programmes, projects and other initiatives are working in practice and provide another route for disseminating videos across Europe.

9.1.4 The virtual farm

The PLAID Virtual Farm proof of concept has been created by students at the Abertay University, Dundee, Scotland, whilst studying for a masters in Gaming Technology, in conjunction with staff at The James Hutton Institute.

During research for the farm demonstration Inventory it became apparent that access to demonstration can, in some cases, be limited. The project therefore investigated innovative methods of increasing access to on-farm demonstration, one way is by Virtual demonstrations. The students have developed a simulated environment (Figure 28) depicting a Farm platform, which is a virtual walk through the environment of a typical farm. This can be accessed both on the web or with a virtual reality (Cardboard) headsets and an Android phone. Within the virtual reality environment, it is possible to access videos of innovations filmed in both standard video and 360° video. These videos showcase farming innovations in use around the farm.

Figure 28. Simulated environment showing tractor.(source: Deliverable 4.3-PLAID)

The hosted videos can be accessed within the simulated environment (Figure 29) by clicking on the sphere when the indicator is centred on the video. This allows the video to be accessed and the viewer can move around within the video to get a full spherical view that is omni-directional. The video can be exited, and the viewer can continue to explore the simulated environment using head movement to find further videos.

Figure 29. Simulated environment depicting hosted 360o videos spheres. (source: Deliverable 4.3-PLAID)

The videos can be removed and replaced depending on the requirements of the situation. For example, when demonstrating to children the videos can display child friendly videos, but when engaging the farming community, technological videos appropriate to the audience can be hosted.

The virtual farm has been disseminated to various audiences both in the UK and at events across Europe. The visual nature of the technology has overcome language barriers often seen to halt/hinder communication to large crowds without a native speaker present to translate.

9.2 Evaluation by using video metrics

When you've launched a new video, you will probably want to evaluate the performance of your video. Evaluation refers to any feedback on the demo video that can be taken into account to improve following related demo videos, and to be aware of how the audience perceived the demo video. Video metrics can be useful to measure the success of your demo video. Ideally, you think about those before you start a new video project. This is arguably the most important part of the whole video process, as it is the only way to evaluate the success of your video.

Video metrics can sometimes be confusing or overwhelming, especially if you're new to video. The choice for specific video metrics is defined by the objectives of your virtual demonstration. What were you hoping to achieve ? From there you can tie specific metrics to your goals and begin measuring success. It is recommended to measure a few different video metrics to get a comprehensive view of the success of your video. However, if you track everything then you probably haven't narrowed down your objectives enough. Use your findings to learn, improve, and direct your future video projects towards greater successes.

The following section presents 7 of the most important video metrics, and explains how to use them to find out how successfully your demo video achieved your demo goals (based on https://www.skeletonproductions.com/insights/video-metrics).

9.2.1 View count

The simplest but most deceptive metric of all. View count tells you the raw number of how many times your video has been viewed (as you might expect). Basically your views indicate the reach of your video content. If you want your video to be seen by millions of people in your target audience, then you'll want to track views. However, be aware that views are counted differently across the web – for example, on YouTube a view is counted once 30 seconds of a video have been watched, whereas on Facebook it's only 3 seconds. So if you've placed your video on various channels, keep this in mind when aggregating data.

If you're looking to boost your video view count, consider these tips:

- Share your video with your audience, through email and social media
- Share your video with relevant influencers
- Pay to promote your video on channels where your audience can be found

Don't take views as the be-all and end-all of your video content. It's nice to know how great your video reach is, but unless your only aim for your video was to spread awareness, it's really just the first step in measuring its success.

9.2.2 Play rate

Play rate is the percentage of page visitors who actually clicked play and began watching your video.

This metric is a good measure of how relevant your video content is to the location where it's placed, and how successful it is at enticing visitors to watch. If you want a certain percentage of your target audience to click play on your video, play rate is the number to keep an eye on.

If you want to increase your play rate, try the following:

- Increase the size of your video embed or move its position on the page.
- Pick a more engaging, vibrant, eye-catching and relevant thumbnail.
- Change the copy around the video to make sure it accurately communicates its content.
- Move your video to a different page – maybe it would be more appreciated elsewhere.

The play rate doesn't just depend on the attractiveness of the video, but also on its content. A video that appeals broadly to everyone in your target audience will likely have a higher play than a supplemental, specialized video.

9.2.3 Engagement

This metric is a measure of how effective your video is.

Engagement for each viewer shows you how much of your video they watched, and is expressed as a percentage.

Average engagement, also a percentage, tells you how much of your video all viewers watched on average. This metric is incredibly useful, especially if you see it expressed as an engagement graph which shows how your audience as a whole watched, re-watched and stopped watching you video. With this data you can start to gauge the quality and usefulness of your videos.

Are viewers watching all the way to the end, as they might do with a story-driven narrative? Or jumping around to view specific parts, as they might do with a Q&A video? If you have a Call-to-Action (CTA) at the end of your video you'll want your audience to reach it, but with and engagement graph you may realise that lots of your audience are dropping off before that point.

To improve your video engagement, here are some recommendations:

- Keep your video content short, concise and clear. If something is unnecessary, cut it.
- Fulfil your audience's expectations – this ties into accurate communication on the page around the video.
- Pay attention to your average engagement, and especially engagement graphs. If viewers are stopping watching at certain points, work out why and change your video.

Engagement is relevant to almost every type of video in every type of industry. After all, at the end of the day you want your video to be watched. Just keep in mind the purpose of your video and be aware that a low average engagement isn't always a terrible thing.

9.2.4 Social sharing

Social sharing shows how much people are sharing your video content, usually measured by numbers of shares across social channels.

Although it might not appear to mean much by itself, social sharing leads to more views for your video which generally leads to more sharing. It's also a good measure of how appealing your video is to your target audience (and others), and how willing they are to spread the word about it. This all leads to greater awareness of your demonstration project as well as an opportunity to tap into a larger portion of your target audience.

If your video objective is to reach the largest audience possible, you will probably focus on this metric along with view count. You can increase social sharing by following these tips:

- Ask your viewers to share your content – just asking can go a long way.
- Specifically create content to be shared.
- Kick-start the sharing of your video by passing it onto influencers relevant to your target audience.

But don't just pay attention to the number of retweets you get. Also keep track of the comments you receive about your video, and whether people are saying positive or negative things.

9.2.5 Click-through rate

Another metric that isn't unique to video, click-through rate (CTR) is the percentage of viewers that click on whatever CTA (= Call-To-Action) you include in your video content.

Your CTR will give you an indication of how successful your video is at encouraging viewers to take action. Of course, nobody will click on your CTA if they don't watch enough of the video to see it, so keep an eye on engagement too. The click-through rate metric is most important if you're looking to drive your audience on after watching your video.

To improve the CTRs in your video content, it is suggested that you :

- Alter your CTA. Try placing it at a different point in your video, or make it more visually appealing.
- Improve your average engagement first, especially if viewers are dropping off before reaching your CTA. The more of your video viewers watch, the more likely they are to click through.
- Make your CTA highly relevant to the content of your video.

Always make sure your CTA matches the video it's placed in, it should not only be relevant to the video topic, but should also fit the tone and look of the video.

9.2.6 Conversion rate

Conversion is the number of leads that you have gained thanks to a piece of video content. A lead is defined as an individual or organization with an interest in what you are showing. Depending on the conversion opportunities on your site, their interest is expressed by sharing contact information, like an emailID, a phone number, or even a social media handle. This number can also be expressed as a percentage of all viewers that convert (your conversion rate).

This metric is a little trickier to track, and will probably involve some setting up through a separate analytics software to your video host, such as Google Analytics.

Conversion is a vital metric to measure if you're producing videos with a goal to increase your conversion rate, and therefore gaining more leads. You can improve conversion with these tips:

- Make your video relevant to what your target audience wants to know at that stage of the funnel
- Always provide valuable information; answer your audience's questions or allay their fears
- Place your video in the right area of your site to help drive conversions.

9.2.7 Feedback

The final key metric is feedback on your video, which we touched briefly on in social sharing. This is not a number but rather the qualitative data you can gain by tracking how viewers react to and comment on your video content.

To get a true feel for the reception of your video, you'll need to listen to your target audience and the communities they engage with. Keep a note of both the digital and in-person comments you hear. Try to judge the tone of these comments, and thereby the overall reaction to your video.

Because of the qualitative nature of feedback, it's hard to suggest ways to "improve" this metric. However, don't forget this more human side of the data and don't be afraid to use it as evidence to create video content more tailored to your target audience in the future.

10 FURTHER READING AND REFERENCES

Further reading

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