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Deliverable 4.2

Set of 28 videos of virtual demonstrations on farms on YouTube and PLAID web-site



PLAID
PEER-TO-PEER LEARNING:
ACCESSING INNOVATION
THROUGH DEMONSTRATION



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DOCUMENT SUMMARY

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ABSTRACT

In total, a set of 47 videos has been produced within the PLAID project. This deliverable provides an overview of the videos produced. The different types of videos are discussed and recommendations are given.



PLAID

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PLAID

Introduction

The objective of WP4 was to develop and assess on-line solutions for expanding the outreach of demonstration activities on commercial farms. The focus was to enable commercial farms to undertake 'virtual demonstration', using audio-visual tools, creating a suite of videos uploaded to YouTube.

In order to promote the PLAID project and its YouTube channel, short videos on selected topics presented at demonstration events were produced.

This Deliverable will provide an overview on the videos produced for the PLAID project. The videos are categorised according to their purpose, target groups, and format.

The FarmDemo YouTube channel

In total, 47 different videos have been produced for the PLAID project and uploaded to the YouTube channel *FarmDemo* (fig. 1). 27 videos were produced by FiBL to promote the PLAID project and the *FarmDemo* channel, 16 videos were produced by demonstration providers within Task 4.2, and 4 videos have been produced by stakeholders during a video workshop held by FiBL at the annual meeting in Zagreb.

The channel was started in February 2017, and has reached 33'000 total views and 150 subscribers (fig. 2). In order to increase the viewer audience, PLAID videos have been uploaded to FiBL's YouTube channel *FiBLFilm*. Here, PLAID videos have reached 72'795 total views. The English Virtual Demonstration videos have also been uploaded to the LEAF YouTube channel where they have reached 165 total views. All PLAID videos have reached a combined total of 105'000 views (15 December 2018).

In the following, all 47 videos produced for PLAID are listed, their content is described, and lessons learnt are provided.

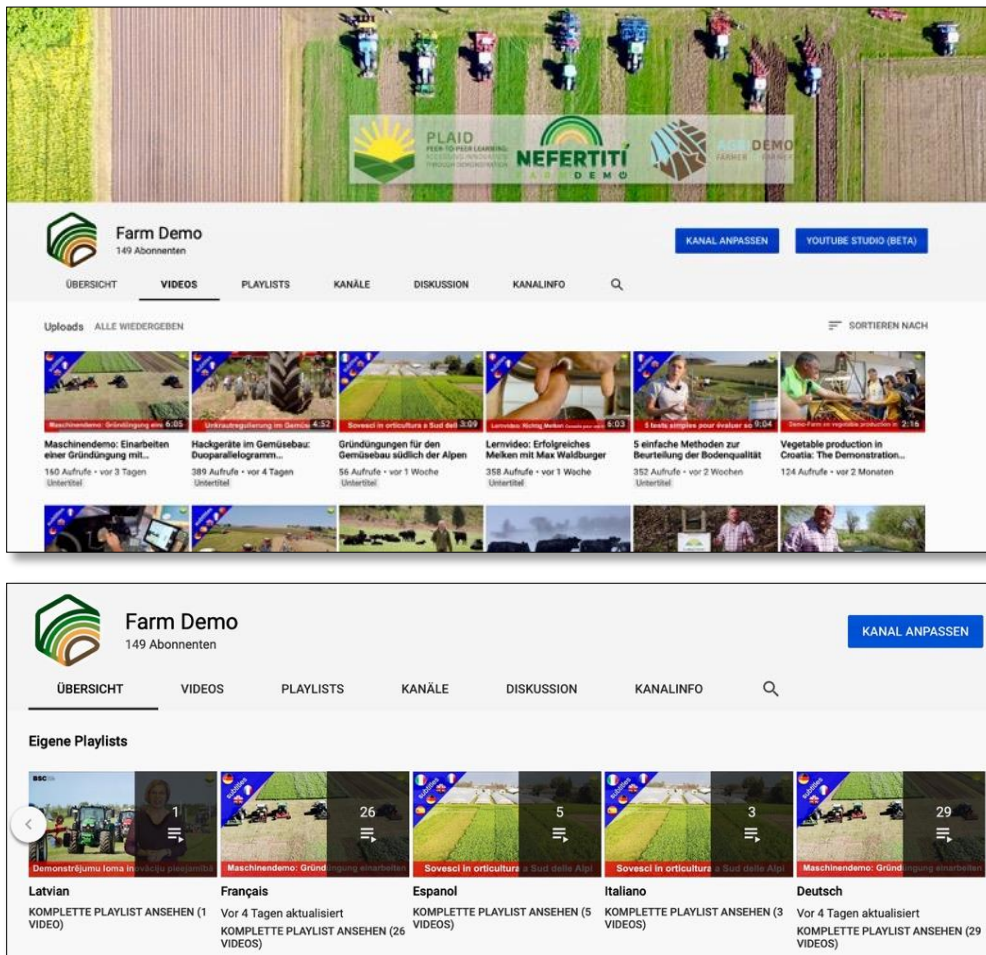


Fig. 1: Above: The YouTube channel *FarmDemo* has been set-up by the PLAID project and will continue within the NEFERTITI project. Below: As multilingual channel, the different languages have been allocated to different playlists.

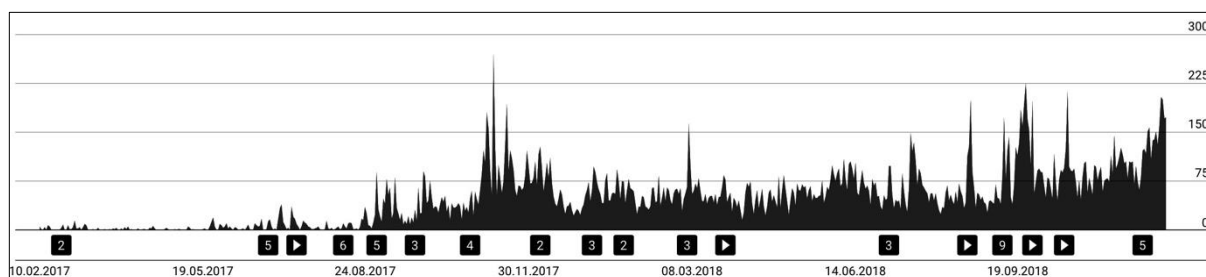


Fig. 2: Development of the number of total daily views in the FarmDemo YouTube channel between February 2017 and December 2018 (source: YouTube Analytics).

Set of 27 videos promoting the PLAID project

The videos listed below were realized at following events:

- PLAID Kick-off (Ghent, January 2017); 1st Annual meeting (Aberdeen, June 2017)
- Organic farming days (in Kassel, Germany; June 2017)
- Salon Tech&Bio (in Valence, France; September 2017)
- Provieh Demo-Event (in Alberswil, Switzerland; June 2018)
- Different demonstration events in Switzerland

For several videos, additional versions with voice overs have been made. All videos have been subtitled in several languages (mostly English, German, and French). Language versions are indicated by a, b, c etc.

1a) Peer-to-peer Learning: Accessing Innovation through Demonstration

In this video, PLAID coordinator Lee-Ann Sutherland explains what the PLAID project has to offer in the coming years. Subtitles: English, French, Italian, Bulgarian, Polish, Latvian, Dutch, Spanish; 532 views <https://youtu.be/xGy-ce38Hvs>

1b) Innovation in der Landwirtschaft durch Demonstrationsaktivitäten

German version of video 1a) Subtitles: German, Croatian; 409 views <https://youtu.be/FvfsV97ksXg>

1c) La formazione tra pari

Italian version of video 1a); 83 views <https://youtu.be/h8koFHQ65zw>

1d) Aprendizaje entre iguales

Spanish version of video 1a); 125 views <https://youtu.be/OMMUdtl9n1I>

1e) Projet PLAID: L'apprentissage entre pairs

French version of video 1a); 109 views <https://youtu.be/K03aeCDPK3w>

1f) Lauksaimnieku savstarpēja mācīšanās

Latvian version of video 1a); 63 views <https://youtu.be/EW8OIPCYCGI>

2) Teaser: Visit Cereals in Practice

Teaser video for a demo-event in Scotland; 141 views <https://youtu.be/ODXzeR1UL3s>

3a) First Organic Field Days at the Hessian State Domain Frankenhäusen

On 21 and 22 June 2017, more than 8000 visitors attended the first nationwide Organic Field Days in Frankenhäusen, Germany. Over 200 companies, associations and organisations presented what they have to offer in the organic agriculture arena at the first ever nationwide Organic Field Days. Most exhibitors were from the sectors of agricultural engineering, inputs and seeds/vegetative propagation material. Eleven additional categories ranging from consultancy to research and certification all the way to animal husbandry and marketing were present. The Organic Field Days provided information how organic farms can further develop. Central themes were: organic breeding, nutrient management and conservation tillage, as well as, agriculture and nature conservation. Subtitles: English; 58 views <https://youtu.be/tt6GyhrGLog>

3b) Öko-Feldtage auf der Hessischen Staatsdomäne Frankenhäusen

German version of video 3a); 125 views <https://youtu.be/OMMUdtl9n1I>

3c) Journées agriculture bio sur le domaine «Frankenhäusen»

French version of video 3a); 46 views <https://youtu.be/jGV3VNN28Zw>

4a) Oz, the weeding robot for smaller vegetable producers

Oz is a robot for mechanical weed control. It is suited to smaller vegetable producers managing between one to ten hectares. Oz was developed in 2011 by the company Naïo Technologies. In France, roughly fifty robots are already in use. This robot can weed up to one hectare of ground per day. In the video, available tools and the steering mechanism based on laser and camera are presented.

English, 488 views; https://youtu.be/6ba301f_Y_4

4b) Roboter Oz für die Unkrautregulierung

German version of video 4a); 5676 views <https://youtu.be/jBZiYiAZrSE>

4c) Robot de désherbage Oz de Naïo Technologies

French version of video 4a); 150 views <https://youtu.be/qf3nKwqo6LA>

5a) Robot for slug control in arable farming

The Agricultural Engineering Department at the University of Kassel, the Kommtex company, and the Julius Kühn-Institute are working together to develop a robot for slug control in arable farming. Its aim will be to autonomously navigate arable fields using GPS, to map slugs detected, and to control slugs. It is to determine where slug hotspots are located and target such areas. Following a learning phase, the robot should be able to anticipate hotspots through machine learning.

English 394 views; <https://youtu.be/9RkrTvzKPK8>

5b) Roboter zur Regulierung von Schnecken im Ackerbau

German version of video 5a); 1267 views <https://youtu.be/QoPwZidmsxU>

5c) Robot anti-limaces pour les grandes cultures

French version of video 5a); 102 views <https://youtu.be/XAR9pbPuBaw>

6a) The new ABRAH cultivator for weed control

The start-up company DULKS will launch the new ABRAH cultivator for weed control in 2018. The ABRAH makes it possible to hoe in immediate proximity to young, tender crop

plants, for example between double or triple rows of carrots – which until now had to be weeded manually in organic crop production.

English 87 views; https://youtu.be/dE6g_SkFLM0

6b) Neues Hackgerät ABRAH von Dulks

German version of video 6a); 1380 views <https://youtu.be/6hWsnugiFTQ>

6c) Bineuse-sarcleuse ABRAH de Dulks

French version of video 6a); 696 views <https://youtu.be/cTZRLaDqJM4>

7a) Activités de démonstrations en Europe: Le salon Tech&Bio 2017

Overview on the demo-event "Tech&Bio" in Valence, France.

French version 172 views; https://youtu.be/tNN_6t9e2Lk

7b) Tech&Bio 2017 in Frankreich - Demo-Aktivitäten in Europa

German version of video 7a) 108 views; <https://youtu.be/ViQigqVrjp0>

8) Slake test: visualizing the structural stability of the soil

This test allows to compare different soils and draw conclusions about the cultivation techniques that can be used to improve them.

French spoken with German subtitles; 771 views <https://youtu.be/pRaN6SLUPuk>

9a) Robot de désherbage "dino" de naio-technologies

Dino est un robot enjambeur pour le désherbage mécanique des légumes en planches. Il convient particulièrement aux cultures de salades, qu'il désherbe mécaniquement et de manière autonome grâce à ses outils de binage et guidage. Dino était présenté au Salon Tech et Bio 2017 à Valence, France.

French version, 4394 views; <https://youtu.be/3zfr6TDfGkg>

9b) Roboter "dino" zur Unkrautregulierung im Gemüsebau

German version of video 9a); 2296 views; <https://youtu.be/uD4L0R1e0-g>

10a) Outils manuels de Terrateck pour le maraîchage

Au Salon Tech&Bio 2017, l'entreprise Terrateck a présenté des outils manuels pour le maraîchage diversifié sur petites surfaces.

French version; 1014 views <https://youtu.be/GnclGQmwNs0>

10b) Manuelle Geräte für kleinere Gemüsebaubetriebe: Radhacke und Setzgerät

German version of video 10a); 1111 views; <https://youtu.be/3MP7sCHDuqs>

11a) The network Demonstration Farms Organic Farming

The farmers of the demo network open their farms to consumers, professional colleagues, marketers of organic products and other interested groups. They demonstrate organic farming, its special quality, opportunities and problems to visitors in a practical way. In addition, they also provide information about their special production focuses and marketing forms and explain typical regional location conditions.

English version; 95 views <https://youtu.be/CttvHetKzFo>

11b) Netzwerk Demonstrations-Betriebe Ökologischer Landbau

German version of video 11a) 837 views <https://youtu.be/VIqs5BhQX4c>

12) biosorten.de - The new knowledge platform for organic varieties

German with English subtitles; 56 views https://youtu.be/oQMa_m6-eKI

13) Knowledge transfer between research and practice

German with English subtitles; 294 views <https://youtu.be/BfkkuhbJ9OI>

14) Organic Pilot Farms in North Rhine-Westphalia

Since 1993, research, advisory service and practice work together in the German, Federal State of North Rhine-Westphalia (NRW) on solutions for selected issues of plant cultivation and animal husbandry with practical relevance for organic farmers. The project that is funded by NRW entails demonstration and optimisation of selected organically operating farms and their methods of production as well as professional advice.

German with English subtitles; 81 views <https://youtu.be/xuNAzSDOsZo>

15) Autonomous feeding of dairy cows - the "Reine Mathilde" project

The "Reine Mathilde" project started from an idea by the Stonyfield company, which wanted to motivate more farmers to produce organic milk in the Normandy region. It was built on a network of demonstration farms and farmers, who had already converted to organic farming, and wanted to share trials and practical ideas with other farmers.

One common theme of the trials on this demo farm is: how can an organic dairy cattle farm achieve more autonomous feeding strategies. Several crop mixtures have been tested to produce concentrate. We find that some of them stand out from the crowd: Triticale combined with beans; peas and barley combine well, in terms of harvesting at the same time. Most associations with beans work quite well, such as oats or spelt too. With vetch, triticale remains very interesting because it is rich in protein.

French with English subtitles; 145 views https://youtu.be/r6SF_QUzO_A

16) Peer-to-peer learning in farmer working groups / Lernen in Arbeitskreisen

As part of the "Provieh" project, around 30 farmer working groups are active throughout Switzerland. These are moderated and managed by organic farmers. Various topics in the field of animal husbandry are dealt with. In this video, the moderators describe their experiences with the working groups.

Swiss German with subtitles German, French, English; 84 views <https://youtu.be/Td4oOCYXLLM>

17) Demo-Network Legumes in Germany: Soya, Lupine, Peas/Beans

The cultivation of legumes offers many advantages. The legumes expand crop rotations, help to improve soil fertility and increase nutrient availability.

In Germany there is a demonstration network for soybeans, lupins and peas/beans. The aim is to support the cultivation and processing of these crops and to bring demand and supply together.

The demo farms show innovative and practical approaches to growing and recycling legumes. To this end, they organise field days and plant tours and are contacts for colleagues.

German with subtitles English, French, Spanish, Italian; 113 views
https://youtu.be/10E_13d85-I

18) Videos for knowledge exchange in agriculture

Videos are an ideal tool for the exchange of knowledge in agriculture. Within the EU project PLAID, various video workshops for farmers and advisors will be held. Participants learn how to produce simple videos themselves. This video was made by the participants during a one-day course in Switzerland.

German, 140 views <https://youtu.be/dZNQRmu7N-o>

19) Low Stress Stockmanship - how to handle cattle without stress

Dairy cattle herds are getting bigger and bigger, and the form of husbandry is becoming more extensive. This leads to problems in cattle handling. For example, if the animals have to be taken into the hoof stand. In this video, Philipp Wenz shows how the "Low Stress Stockmanship" method can be used to achieve stress-free cattle handling.

The method uses the cattle's subtle reaction to movement, similar to shepherd dogs, which instinctively use it when rounding up herd animals.

The method avoids beckoning, pulling, hitting and shouting altogether. Instead, the cattle are driven, guided and stopped by the increasing and decreasing pressure. Humans approach the animal at a certain angle and guide it into the desired direction by specific forward and backward movements. The animals are not touched.

German with subtitles in English, French; 1338 views https://youtu.be/_vAcn7WIOcE

20) Harrow with electronic depth control

The earlier the harrow can be applied, the greater the success in weed control. Precise adjustment of the tines is necessary to prevent damage to cultivated plants. In the video, Paul Treffler, from the company of the same name, presents their newly developed electronic depth control system.

German with subtitles in English, French; 512 views <https://youtu.be/2w7C1HE-hpE>

21) Machine demonstration - Destroying an alfalfa crop without plough

In this video we show you how you can destroy alfalfa without herbicides and without a plough. This is a challenge in organic farming. We present various machines that work differently: with undercutting or the complete destruction of the alfalfa. We show two cultivators and two PTO driven tillers, both for shallow soil tillage. (Treffler, Kerner, Alpego) The video was realized at Damien Poget's farm on the occasion of an event on conservation organic farming, organised jointly with Swiss No-Till.

French with English, German, Spanish, Portuguese subtitles; 1342 views
<https://youtu.be/ON3wnhzMDpQ>

22) Trends in digitization and smart farming - Swiss Future Farm

The Swiss Future Farm is a demonstration farm for new technologies and aims to show farmers the benefits and added value of digitisation. In this video, Thomas Anken from Agroscope presents the following highlights:

- Automated overseeding of meadows with Krummenacher air seeder drill
- Electric tractor Fendt
- Automated data acquisition
- Combine harvester Fendt Ideal
- Field robot Fendt Xaver
- SMARTBOW - monitoring cow health
- Weather station iMetos

English with German and French subtitles; 82 views <https://youtu.be/0eKxCsMWO8s>

23) Vegetable production in Croatia: The Demonstration Farm "Grunt"

Vladimir Bais, together with his sister Dragica, runs the family farm „OPG GRUNT“. The farm is situated in the North-West part of Croatia in the small village Imbriovec Jazabetski near Varazdin. They are pioneers in integrated vegetable production and seedling production using a seedling-planting robot. The Grunt farm has 18 acre open fields and 4.000 m² of glasshouse production, produces four million of the most varied vegetable seedlings and one thousand tons of vegetables annually.

English; 124 views <https://youtu.be/FgAPEevudWI>

24) 5 simple methods to self-assess the quality of your soil

Soil is the basis of agricultural production. In this video, Sandie Masson introduces you to five soil diagnostic tools that are both simple and quick for the farmer:

- the underwear method,
- the slake test,
- the teabag method
- the spade test and
- the "pot barber" method to observe beetles on the ground.

All these methods allow you to observe your soils and compare the results with your neighbouring farmers or in peer groups.

French with English and German subtitles; 352 views <https://youtu.be/9VWMoDiJDm4>

25) Learning video: Successful milking

Swiss German with German and French subtitles; 329 views <https://youtu.be/PGh02hsjke4>

26) Mechanical weeding in organic vegetable production

Demonstration of machines for mechanical weed control in organic vegetable production during a field tour for organic farmers: This video shows the DUO parallelogram on Belgian endive ridges and the finger weeder in cabbage of K.U.L.T.-Kress, the ABRAH cultivator on carrot ridges and the precision weeder by Treffler in leek and cabbage.

German with English, French subtitles; 407 views <https://youtu.be/1k7ZwNwYrZw>

27) Machine demo: Incorporating green manure

In this video, seven different machines for the shallow incorporation of green manure are presented. First, four PTO-driven rotary tillers are shown, followed by three trailed machines. The advantages and disadvantages of the two types of equipment are shown. The video was realized during a machine demonstration at the end of September 2018 at the Neuhof in Birr, Switzerland.

The following machines are presented:

- Geohobel, Rath machines
- Celli rotary tiller, Heller Landtechnik
- Kongskilde Howard Biocircle, Meier Maschinen AG
- Kuhn rotary tiller, Bucher Landtechnik AG
- Kerner X-Cut/Helix, Alphatec SA
- Horsch Joker
- Güttler Super Maxx, Agrarlandtechnik

German with English and French subtitles; 352 views <https://youtu.be/ZNjwI4xloGU>

Lessons learnt on project promoting videos

Produced videos can be allocated to the following categories (see Annex 1 for details):

1. Project and network presentation
2. General presentation of a demonstration farm/activity
3. Teaser to announce a demonstration activity
4. Presentation of a specific topic presented at a demonstration farm/activity
5. Videos produced by stakeholders

Regarding category 1, PLAID developed an efficient workflow to produce a project presentation video in several languages.¹ This allowed for a personalized and country-specific video, and can be recommended to other transnational projects.

Videos on demonstration-networks provide a good overview on activities in other countries. The number of views is generally lower compared to other categories. However, whilst promoting the networks, they also promote the PLAID project within the relevant target group of demo-organisers.

Videos in category 2 presenting a demonstration farm or a demo-event are especially valuable if embedded to an event website. The purpose is to inform and attract visitors and exhibitors to future events.

Teaser videos (Category 3) have a limited "life span". If resources for a demonstration event are limited, we recommend to produce rather videos related to a specific topic (category 4).

The most viewed PLAID videos fall under category 4. Most demonstration events offer an excellent opportunity to select individual topics (e.g. new weeding robots) and to process them into an informative video. Good preparation before shooting is key. If the content is presented in a clearly structured way such videos have the potential to be used for teaching and consulting.

¹ At the kick-off meeting, an English version, with the project coordinator as a presenter, was produced. At the first annual meeting, project partners presented the same text in their own language in front of a green screen. In the editing, only the audio track had to be changed. Thanks to the green screen technique, the different presenters are shown in selected sequences.

Set of 16 virtual demonstration videos

Within Task 4.2, 14 demonstration activities in the UK, Bulgaria, and Switzerland have been selected, and demo-providers have been trained in national video workshops to produce their own videos. The following 16 videos resulted as output.

CH1) Agroforestry and Permaculture: BioDiVerger

In Marcelin (VD), FiBL and the "Service de l'Agriculture et de la Viticulture" of the Canton of Vaud (SAVI) have been testing a new cultivation system for fruit growing since 2013. The aim is to produce fruit and vegetables in ecological balance. Elements of agroforestry and permaculture are being integrated for this purpose. BioDiVerger is divided into two areas. 54 ares are managed according to agroforestry principles: rows of fruit trees alternate with nitrogen-fixing plants, with grass strips, hedges and vegetables. The other part of the complex comprises 6 ares and is managed according to the principles of permaculture. A large number of trees, shrubs and climbing plants, perennials or annuals are available for self-harvesting. BioDiVerger is managed by the organic farm "des Sapins" in Colombier-sur-Morges VD.

French with English and German subtitles; 787 views <https://youtu.be/YKlQA8fhQZM>

CH2) Teaser for a demonstration event on forage production

German; 255 views <https://youtu.be/H8kflfwD83k>

CH3) The new organic demo farm "Stiegenhof" at Strickhof agricultural school

Organic farming has a long tradition at the Strickhof agricultural school in Canton Zurich. The first organic plot trials already started 30 years ago.

In 2018, the organic farm "Stiegenhof" in Oberembrach/ZH became a demonstration farm for training and further education. This video shows what the "Stiegenhof" demo farm has to offer today.

German with subtitles in English, French; 440 views https://youtu.be/FH_ScpE-3_s

CH4) Green manure in horticulture south of the Alps

Italian with English, French, German, Spanish subtitles; 56 views <https://youtu.be/zzt0WVcWxis>

UK5) Farmer Introduction Renner Farming

Renner farming located in North Northumberland is a family owned 202 Ha livestock farm including Aberdeen Angus Suckler cows and Texel and Suffolk Ewes. They follow Integrated Farm Management, a whole farm approach helping to deliver more sustainable farming that combines the best of modern technology and traditional methods to deliver prosperous farming that enriches the environment and engages local communities. Renner farming are a LEAF Demonstration Farm and hosts farm visits for farmers, advisors, students and others throughout the year. They are a participating farmer in the PLAID Virtual Demonstration Farm Network, a trial network of farmers creating and uploading videos on the approaches and practices they use on-farm, providing virtual demonstration of the farm.

English, 29 views https://youtu.be/GfNz_CX9EHI

UK6) Managing Extreme Weather: North Bellshill Farm

LEAF Demonstration Farm, Renner Farming are a family owned livestock farm located in North Northumberland. John Renner explains the on-farm impact of the extreme UK winter in 2018 and effects from the 'Beast from the East'. John explains how their Integrated Farm Management approach helped to mitigate and overcome challenges caused by the effects of the extreme weather.

English, 33 views <https://youtu.be/NsOqKzuRfzo>

UK7) Russell Smith Farms Introduction

Russell Smith Farms is a 1,000 Ha farm growing root vegetables and combinable crops in South Cambridge. They follow Integrated Farm Management a whole farm approach helping to deliver more sustainable farming and crop production methods used at Russell Smith Farms are both technically advance and environmentally sensitive. Russell Smith Farms are a LEAF Demonstration Farm and hosts farm visits for farmers, advisors, students and others throughout the year. They are a participating farmer in the PLAID Virtual Demonstration Farm Network, a trial network of farmers creating and uploading videos on the approaches and practices they use on-farm, providing virtual demonstration of the farm.

English, 16 views <https://youtu.be/hCWMH6WVDyg>

UK8) Water Management at Russell Smith Farms

LEAF Demonstration Farm Russell Smith Farms are a large potato producer in South Cambridge. They are reliant on sustainable, good quality water for potato irrigation. Through an Integrated Farm Management approach, farm manager Ralph Grindling, explains the water management approaches they use to effectively manage water usage on-farm.

English, 18 views <https://youtu.be/xFr2yEqvUII>

UK9) Farmer Introduction Tangmere Airfield Nurseries Ltd

Tangmere Airfield Nurseries Ltd is a family owned business based on the famous Battle of Britain airfield in West Sussex. They are one of Europe's largest Sweet Pepper nurseries following LEAF's Integrated Farm Management Approach and grow to the LEAF Marque Standard since 2003. Tangmere Airfield Nurseries are a LEAF Demonstration Farm and hosts farm visits for farmers, advisors, students and others throughout the year.

English, 15 views <https://youtu.be/B5yBVd0DzdU>

UK10) Community Engagement at Tangmere Airfield Nurseries Ltd

LEAF Demonstration Farm Tangmere Airfield Nurseries are a large glasshouse grower in West Sussex. Through their Integrated Farm Management approach they host a number of school visits and community engagement events throughout the year to share their passion for farming and help to educate how the food people eat is produced. Mark Knight, Technical Crops Manager and Gerard Vonk, General Manager explain the different activities and events they organise to engage with their local community.

English, 15 views <https://youtu.be/VgmLN8R2Rrg>

UK11) Farm for Profit Programme

The Farm for Profit Programme is a joint venture between Aberdeen Northern Marts Group and the Farmers Journal, the programme is supported by the European commission and the Scottish Government. Running for 3 years the programme has one objective to make livestock farming in the North East of Scotland Profitable. The Programme has 6 focus farms which run field visits to demonstration innovations in technology and management systems. They also discuss the farms figures to assess performance and possible changes that can be made for the following season. We joined the Duffus Family on one farm visit in early September 2018 to document the field visit.

English <https://youtu.be/ZvJ8GuVzP0Q>

UK12) Farmer innovation - handling livestock crate facility

Sandy Duncan a local North East of Scotland Livestock Farmer is aware of the safety implications of handling livestock when working in situation handling livestock as a lone operator. He has developed a handling crate facility at his farm near Gamrie to enable himself and colleagues to handle both cows and sheep safely with minimum stress to both livestock and farm workers. He contacted the PLAID team with video footage to ask for help with editing the footage to enable him to promote the innovation to neighbouring farmers. The operating crate using a battery powered hydraulic ram to gently lower the animal to a position where care can be safely administered whether its hoof maintenance or calving/lambing.

English <https://youtu.be/YOCQEJ0cO4g>

UK13) AHDB Potato Irrigation

The Agriculture and Horticulture Development Board (AHDB) UK is a levy board funded by farmers and growers and parts of the supply chain. Their main objective is to inspire farmers, growers and the industry to succeed in a rapidly changing world. They equip the industry with easy to use, practical know-how, which they can apply straight away to make better decisions and improve their performance. Following a drought in the summer 2018 the potato ware growers needed to irrigate their crops to increase growth and help set skins whilst resisting disease. Claire Hodge Knowledge Exchange Manager discusses the need to irrigate and the benefits to the potato crop in Scotland.

English <https://youtu.be/VGQBQVa7ghQ>

UK14) AHDB Potato storage

John Hutchison, Potato Store Manager from Greenvale, took time out during the AHDB Spot demonstration day in August 2018 to explain the importance of good Potato Store Management during an interview with Claire Hodge, Knowledge Exchange Manager for AHDB. John described how to dry the potato crop postharvest; the importance of airflow; CIPC application and how insulating the store can impact on profits.

English <https://youtu.be/Izm0oeTSnGk>

BG15) Introduction of the innovative mixed farm "Agro Yustina"

The Bulgarian Demonstration Farm "Agro Yustina" is situated in the village Ustina, in the Plovdiv district, Bulgaria. The farm has goats of a breed called "Boer". It grows field crops and vines. The farm has a wine cellar and active in rural tourism. The farm it is applied integrated farming agriculture that conserves natural resources. Innovative methods for the production of meet and breeding animals from the breed "Boer" are applied. Goats are

fed with juicy green fodder produced by an innovative technology continuously during the year. There are also special tanks for storage and water collection.

Bulgarian, English subtitles <https://youtu.be/ysoYjFoivTk>

BG16) The innovative mixed farm “Pasishtno prase LTD (Chiflik Livadi)”

The Bulgarian Demonstration Farm “Pasishtno prase LTD (Chiflik Livadi)” is situated in the village Damianitsa, municipality of Sandanski, Blagoevgrad region, Bulgaria. The farm has reared pigs, laying hens, chickens and cows as well as crops and grassland. Innovative methods for free pasture farming of different types of animals are applied. Non-entombological rearing of chicken meat and non-selectively controlled grazing of cows are also applied. The farmer also uses innovative no-till methods to cultivate his land.

Bulgarian, English subtitles https://youtu.be/1Kn_phtseqA

Lessons learnt on virtual demonstration videos

Selected demo-providers have been trained in national video workshops to produce their own videos. The level of support for the video production varied case by case. For example, in **Switzerland**, one video was completely planned, shot and edited by the demo-provider (CH1). For the other videos, the demo-provider usually wrote the script and produced footage material. The recording of the voice-track and the final editing was carried out by FiBL.

Within the **English** Virtual Demonstration network a two-day video training course was given to demonstration farmers to give them the skills and confidence needed to film, star in and edit videos on their own farm. Following on from the video training, each virtual demonstration farmer was visited by LEAF to assist them in the filming and creation of their first demonstration videos. All videos produced were filmed and edited by the farmers. Editing was the trickiest aspect for the farmers but all were able to edit proficiently using iMovie after training. All videos were later added to the *FarmDemo* YouTube page and Virtual demonstration farm playlist. Subsequently additional videos from the demonstration farmers are planned for Spring 2019.

In **Bulgaria**, a one-day video training course was given to demonstration farmers. Before and/or after the training, each virtual demonstration farmer was visited by NAAS to assist them in the filming and creation of their first demonstration videos. Especially the editing part turned out to be very challenging, because there is no suitable editing software available in Bulgarian language. Therefore, a strong support by the NAAS team was necessary.

Set of 4 videos produced by stakeholders

In addition to the national video training, provided through the Virtual Demonstration Platform, a workshop was carried out at the stakeholder meeting in Zagreb led by FIBL. During this training, the participants produced the following videos:

- Samuels sheep farm in France <https://youtu.be/wkRv3ZMfC2U>
- Victors cattle farm in Spain <https://youtu.be/zM-DKYXNpeU>
- Potato Gene Bank <https://youtu.be/SoFjNwq6eto>
- Communicating networks by WhatsApp <https://youtu.be/YZUE1gHwt5U>

Conclusion

Videos can significantly increase the reach of demonstration activities.

A prerequisite, however, is that the contents of demonstration activities are selected carefully according to innovation criteria.

Didactic, well-structured videos not only find their audience on YouTube, but are also used in agricultural education and consulting.

For the organizers of demo events, general overview videos are valuable for promoting future events. For farmers and advisors, however, generally look for more subject-specific content.

A YouTube channel for a project (such as PLAID) has the advantage that all videos produced within the project can be archived by topic and language.

However, in order for a new YouTube channel to impact the target audience, patience and above all, regular uploading of high-quality videos is required. In our case, the number of viewers began to rise after about a year. Simultaneous release of videos on established channels (e.g. of project partners) can significantly increase the outreach of project videos.

A further challenge is the multilingualism required within the context of EU projects. For the PLAID project, an efficient workflow was established to create different language versions. First, a transcript was created using voice recognition by YT, the transcript was then corrected manually, and then translated using the translation program www.deepl.com. Final corrections were undertaken by a native speaker.

The farmers taking part in the Virtual Demonstration Network participated with great enthusiasm in the video training sessions in the UK, Switzerland and Bulgaria. Producing videos can be fun and team building is encouraged. However, it has also been shown in all three countries that video editing is a considerable hurdle for many of the participants to produce high-quality videos.

For many projects, videos are a suitable medium to actively involve stakeholders and to disseminate project results. For future EU projects, however, we recommend a centralised editing hub where an experienced cutter edits the audio-visual material provided by the participants.

Annex 1: Type of videos produced in PLAID

The videos produced in PLAID can be categorised as follow:

Project, network presentation:

- 1a-f) PLAID project;
- 11a-b) Network demonstration farms, Germany;
- 12) Knowledge platform Biosorten, Germany;
- 13) Knowledge transfer project, Germany;
- 14) Organic pilot farms, Germany;
- 15) project Reine Matilde, France;
- 16) Peer-to-peer learning, Switzerland;
- 17) Demo-network legumes, Germany;
- 18) Videos for knowledge exchange, Switzerland;

UK11) Farm for Profit Programme

General presentation of a demonstration farm/activity:

- 3a-c) Organic Field Days;
- 7a-b) Salon Tech&Bio;
- 23) Demo-farm Grunt in Croatia;
- CH1) Agroforestry and permaculture;
- CH3) Demo farm Stiegenhof;
- CH4) Green manure trial
- UK5) Farmer Introduction Renner Farming
- UK7) Russell Smith Farms Introduction
- UK9) Farmer Introduction Tangmere Airfield Nurseries Ltd
- UK9) Farmer Introduction Tangmere Airfield Nurseries Ltd
- BG15) Introduction of the innovative mixed farm "Agro Yustina"
- BG16) The innovative mixed farm "Pasishtno prase LTD (Chiflik Livadi)"

Teaser to announce a demonstration activity:

- 2) Cereals in Practice;
- CH2) Demo on forage production;

Presentation of a specific topic presented at a demonstration activity:

- 4a-c) small weeding robot;
- 5a-c) robot for slug control;
- 6a-c) Abrah cultivator;

- 8) slake-test;
- 9a-b) big weeding robot;
- 10a-b) hand-weeding device;
- 19) Cattle handling;
- 20) Harrow with electronic depth control;
- 21) Machine demo – destroying alfalfa crop in arable farming;
- 22) Trends in digitisation;
- 24) 5 tests for soil assessment;
- 25) Successful milking;
- 26) Machine demo – weeding in vegetable production;
- 27) Machine demo – incorporating green manure;
- UK6) Managing Extreme Weather: North Bellshill Farm
- UK8) Water Management at Russell Smith Farms
- UK10) Community Engagement at Tangmere Airfield Nurseries Ltd
- UK12) Farmer innovation - handling livestock crate facility
- UK13) AHDB Potato Irrigation
- UK14) AHDB Potato storage

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PLAID