

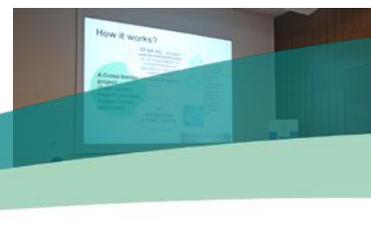


# Subgroup on Innovation for agricultural productivity and sustainability

9<sup>th</sup> Meeting

*13 October 2017*

**REPORT**



## Introduction

The Subgroup on Innovation met for the ninth time in Oeiras, Portugal on 13 October 2017, back to back with the Agricultural Innovation Summit 2017 (AIS 2017).

The main objective of this meeting was to continue preparing the thematic work for the EIP-AGRI Network, for 2018. One session was focusing on digitisation (since this theme had not been included in previous discussions and following-up on the AIS 2017 that had just taken place) and a second one was dedicated to build on the work developed during the 8<sup>th</sup> Subgroup meeting.

## Session I - Shaping the thematic work for 2018 - Digitisation

The objective of this session was to collect ideas for future networking activities related to digitisation.

Previously to the meeting, all Subgroup members were invited to have a look at several documents concerning previous EIP-AGRI activities on digitisation and to suggest new activities via an online questionnaire. All the ideas suggested, including those collected during the previous Subgroup's meeting, were presented in a background document made available to all Subgroup members before the meeting.

An introductory presentation by Fabio Cossu (DG AGRI) and Quico Onega (EIP-AGRI Service Point), delivered the main outcomes of past EIP-AGRI digitisation events (which can be accessed [here](#)), which are also summarised in a brochure made available to the Subgroup members.

The ideas put forward were then discussed in 4 breakout groups in order to identify the activities receiving more interest from Subgroup's members and that could provide more added value in 2018. As a result, ten suggestions came up from the members, dealing with varied issues within the digitisation context. For the full list of suggestions, see [Annex 1](#).

In general, the need for further dissemination of available information and recent outcomes about digital opportunities for farmers and rural areas was acknowledged.

Rob Peters (DG AGRI) concluded the session by summarising the guiding lines emerging from the discussion as follows:

- There is a need to capitalise on the significant work carried out already around digitisation.
- Further work should be focussed on make digitisation simple and accessible to farmers in the first place, but also at different levels. The idea of creating a "toolbox" for making knowledge about digitisation more accessible to people on the ground seems very promising.
- Developing digitisation strategies at different levels – local, regional, national and EU – clearly emerged from the AIS2017 as an essential requirement for exploiting the opportunities offered by the digital transformation. This is an issue where the EIP-AGRI network has a role to play, for instance by exchanging existing experiences and good practices.
- Concerning some of the activities proposed (e.g. an inventory of the existing affordable sensors) it should be further checked whether the EIP-AGRI network would be the appropriate context for carrying them out. Some other activities, e.g. social innovation in marginal areas and digitisation for logistics, embrace the wider rural economy and might be better dealt with under a wider rural umbrella (for instance the ENRD)

## Session II - Shaping the thematic work for 2018 – Building on the discussions started in June (8th Subgroup meeting)

The main goal for this session was to fine-tune the priority topics for future networking activities other than those digitisation-related, building on the past discussions.

Before the meeting the members of the Subgroup received a background document summarising the priority topics identified in the previous Subgroup meeting the ideas collected via the EIP website, suggestions from the Subgroup from past years which were not followed through as well an overview on key sectors and topics not covered by the EIP-AGRI network so far.

All topics were clustered under four main themes - Resource management, Farm resilience, Circular economy and Capacity building – and were discussed at four discussion tables following a World café process. As a result all the ideas included in the background document were discussed thoroughly and each member of the Subgroup had a chance to indicate her/his preference and to deepen the possible scope and participants for each of the proposed activities.

Following the proposals of a few members of the Subgroup coordinated by the Italian NRN, the discussion table on Farm resilience discussed also a proposal non included in the background document for a new focus group on pest and diseases of olive trees.

The results of this interactive session are summarised in [Annex 2](#).

The debate following the reporting from the discussion tables emphasised the importance of making more value out of the results of Operational Groups. This will be a key topic for the EIP-AGRI network in 2018 and further.

The chair stressed that the scope of new Focus Groups should not be too broad in order to achieve concrete results.

## Session III - Other networking activities in 2018

Session III was introduced by Antonella Zona (DG AGRI), who also invited all Subgroup members to present suggestions on themes / issues for the next meeting of the Subgroup. Further suggestions can be sent to DG AGRI until mid-November, some ideas were already presented such as: How to connect OGs and promote better knowledge exchange; new Thematic Networks; link EIP-AGRI with EIP Water.

Members were also asked to share their own activities relevant for the EIP-AGRI Network. Within this context, Rocío Wojski (RDP Managing Authority from Spain) announced that a Focus Group on big data is being prepared at national level.

Helena Pärenson (RDP Managing Authority from Estonia) presented the Estonian initiative on cross-border cooperation (presentation can be accessed [here](#)) followed by Q&A.

The speaker explained the Estonian initiative consisting in a call (no priority themes) open to both approved OG projects and those that plan to apply.

The presentation raised interest within the Subgroup and several questions and comments were put forward. The discussion could not be exhaustive given the complexity of the topic and the little time available. It was agreed to devote more time to OG transnational cooperation in one of the next meetings of the Subgroup.

## Next steps and closing

Rob Peters closed the meeting thanking the Subgroup's members for their work in shaping the future networking activities. The final work plan will be presented to the EU Rural Networks Assembly on 14 December 2017

The next meeting of Subgroup on Innovation will take place on 22 February 2018



The detailed agenda of the meeting and all presentations can be found on the [EIP-AGRI website](#).

The next meeting of the Subgroup on Innovation will take place 22 February 2018 in Brussels.

## Annex 1 Harvesting from Session I “Shaping the thematic work for 2018 on Digitisation”

As a result of Session I, ten suggestions regarding digitisation came up as for possible issues to tackle in the next year programme of the EIP-AGRI network:

### 1. Digitisation for logistics: new opportunities for farmers

Aim / focus: support farmers to adopt innovative ways of finding customers and develop their market by using digital technologies. There is the need to link such new opportunities for farm logistics to the local economy. Focusing on local systems to make it more efficient and environmentally friendly, while taking in consideration the whole supply chain. How digitalisation can help in optimising logistics in transporting rural goods and services, which would lead to lower transport costs.

This synergizes the two ideas that have been suggested by COPA: ‘Optimising logistics using digital technologies’ and ‘Generating new business opportunities via e-market and logistics’.

Possible issues:

- Collect info on new opportunities offered by digital technologies for farm logistics, namely from the farm gate to the next step in the value chain of different agricultural products;
- Benchmarking solutions from non-agricultural sectors; explore the possibility to liaise with the Digital Transport and Logistics Forum, set up at EU level by the EC;
- IOT and data/information for optimisation.

Format: workshop/seminar (as a follow-up to workshop ‘Cities and Food’)

Ambassador: Marko Mäki-Hakkola, COPA

Contributing - Interest in Finland, where concept of REKO-rings has been introduced; it connects, for instance, 300.000 consumers to farmers via Facebook.

### 2. New forms of cooperation linked to data use /digital technologies

Aim / focus: (this topic is derived from the previous one - digitisation for logistics) the use of digital technologies can foster new forms of cooperation among farmers, under the sharing economy umbrella. Possible focus:

- how digital technologies can support new forms of cooperation among farmers aiming at:
- sharing the access to goods and services (e.g. farm machineries, transport of agricultural products like milk in mountainous areas...)
- develop new market opportunities via [online market places](#) (same as topic nr. 1)

Format: Focus Group

### 3. Social innovation in marginal areas

Aim / focus: address how digitisation can benefit marginal areas (such as mountains, low infrastructure areas or areas having scarce or ageing population), which is the possible provision of services or possibilities for farmers, SMEs or agribusiness in general. Target audience of the event would be, not the farmers or agri-business experts, but those with capacity of decision or means (e.g. enterprises providing data and/or infrastructures, policy makers, etc.).

Format: seminar or workshop

Ambassador: Ricardo Passero

#### 4. Best practices to engage farmers to use / benefit from digitisation

Aim / focus: inspiration to promote a bigger uptake of digitisation by farmers. How can farmers use these tools and understand the benefit of them? What can advisory services, extension services, NRNs, training schools, etc. do to help in this?

Format: Communications - newsletter / brochure / factsheet

#### 5. Data collection and data use

Aim / focus: related to the gathering, sharing and use of data. Possible issues:

- new technologies for data collection in rural areas (e.g. low power devices)
- value of farms' data for farmers payback through money or services ("Google-style")
- which use for which data - what is relevant and useful from farmer's perspective, and can support their decision-making
- block chain technologies

Format: options could be a) workshop on various aspects related to data collection and use, or b) focus group on a specific topic related to data use.

#### 6. Sensors and Digital Innovation Hubs (DIH)

Aim / focus: prepare the base for building a DIH on agriculture. Activities could be 1) prepare an inventory of existing affordable tools, sensors, models and DSS; 2) structure them; 3) make them available.

Format: Focus Group

Ambassadors - Bram Moeskos, Rosa Mosquera

#### 7. Dissemination

Aim / focus: as a lot of activities on digitisation have already taken place, the focus should now be on how to bring it out to farmers (follow-up to previous activities).

Most of the outcomes of EIP events and focus groups are for the players on the ground to take further, in the form of recommendations. While raising awareness, the 'setting the scene' needs to be kept in mind by including elements such as the need for broadband and rural services, generation gap and demographic change (perhaps leading to 'smart villages'). The aim should be to facilitate capacity in the region, which is broader than digitisation *per se*. Digital is not an end on itself, it's a way to provide services. It impacts human resources and how the work is done, thus the organisation of the farm and the competences that are needed. A suggestion could be to link it to a Digital Innovation Hub and build from there, speaking of an 'agro hub'. This is where education should be offered and a platform created.

Create a **toolbox** with 'easy-to-use' materials to disseminate at regional level all the things that have been done already, starting with a workshop on creating the toolbox, (maybe next to an event for NRNs). Make use of different formats - such as PowerPoints, testimonials and 'farminars' (an Austrian concept) - for sharing the outcomes of the event at regional level. An idea could be to have one moment when all the tools would be shown at the same time (i.e. several workshops taking place on the same day in various locations in EU, maybe organised by NRNs)

Format - Communication Tool-kit [plus eventually "launching" event(s)]

Ambassador – Province of Limburg, NL/ Annemiek Canjels, Florian Herzog (Austria), Karin Ellermann-Kugler (Germany)

Contributing - NRNs

## 8. Digitisation for ecosystem services delivery from farmed landscapes

Aim / focus: ‘digitisation vs. public goods’, targeting grass and marginal land systems - areas which are farmed only with the support of public funds. In order to demonstrate that support is paid off, there is the need to analyse the ecosystem services they provide. While many of these services are difficult to characterise and quantify, digitisation can offer the opportunity to identify, map and measure those ecosystem services (public goods delivered by farming practices) and the interactions between farming and natural resources. On the other hand, ecosystem delivery can be improved by digitisation, creating an opportunity for more precise farming.

Follow-up to previous activities [Precision farming]

Format: seminar/ focus group

Ambassador - Michael Gooding (Institute of Biological, Environmental and Rural Sciences-IBERS, UK)

## 9. Operational Groups and farm data

Aim / focus: discuss issues like data ownership, data sharing, data management and prepare a toolbox to support better decisions. In one hand, OGs are farmer-driven and farmers are the end-users of data while, on the other hand, there are several OGs dealing with data issues. Therefore, we could discuss issues like: how to improve communication to make farmers feel comfortable about using and sharing data or what are the critical points for them? Key issues are “What does it mean to me?”, “What’s in it for me?” and “How do I manage it?”. The idea could be to see what OGs are doing in this respect and exchange knowledge.

This suggestion is a mix of topics 1 ‘New business models based on data as currency’ and 3 ‘New data for farmers’ in the background document for this session.

Format: Seminar

## 10. Bridging the digitisation gap

Aim / focus: 1) map de digitisation gap - where is the gap (is it in small or big farms, in pioneer or less-advanced regions, etc.); 2) identify challenges that need a solution, and how to address them; 3) focus on small/medium farms.

Format: Focus Group

Ambassador - Timea Reszketo

**Besides the above referred specific ideas, some overall issues were referred as well:**

- Digitisation is a cross-cutting matter, so it can be addressed while focusing on a specific topic (e. g. supply chains).
- There is the need to raise awareness on digitisation.

## Annex 2 Harvesting from Session II - Recapping and fine-tuning the thematic work for 2018 in other thematic areas

During Session II, several topics for the thematic work were discussed, resulting in several suggestions listed below.

### 1. Resource management

#### 1.1 Soil management

Aim / focus: several objectives were referred – (1) disseminate outcomes from previous related activities, (2) showcase good practices on how knowledge about soil has been implemented (transfer the scientific debate into concrete farming practices), (3) gather OGs working on soil-related projects, (4) inspire new OGs and (5) look at opportunities offered by digital technologies for nutrient management.

Even though a lot of work has already been done by the EIP-AGRI network on this topic (and other groups are active around soil - e.g. European Soil Partnership), the topic remains central to EIP-AGRI scope and the Subgroup considered it useful to have a soil-dedicated activity in 2018.

Format: workshop

#### 1.2 Water quality

Aim / focus: water management is considered a key topic and it was suggested that new networking activities should:

- gather OGs working on water-related projects
- build on previous activities and bring together different groups working around water at the EU level (e.g. EIP Water and Commission Water Task-Force)
- focus on territorial approaches and consider the issue of water management and water quality at landscape level
- provide examples of how farmers work together at catchment level with advisors' support
- involve water authorities
- consider soil erosion linked to water management

Format: workshop

#### 1.3 Air quality

Aim / focus: the discussion focused mainly on manure management - new processes and machines for manure management (e.g. combination of manure with other materials to reduce emissions) are an interesting topic and good examples could be showcased. The need to capture ammonia from the air was also mentioned.

#### 1.4 Animal welfare

Aim / focus: while considering that this issue is multifaceted and complex, Subgroup members showed more interest on its link with consumers expectations and on how farmers can better meet such expectations and gain market / better prices (short chain). The consumer-driven certification system

applied in the NL was mentioned as an interesting example to be showcased. The support given under certain RDPs (e.g. Romania) was also mentioned. The group also referred to the fact that the well-being of farmers has a direct impact on the well-being of animals: research outcomes about this correlation could be usefully disseminated by the network. Nevertheless, some members were of the opinion that there is not an urging need for the network to work on this topic as a lot of research has been done and the outcomes are well implemented by farmers.

## 2. Farm resilience

### 2.1 Non-chemical weed management

Aim / focus: two different approaches were suggested:

- Identify the existing problems with pesticides, make a diagnosis of the current situation and identify the risks, which needs a geographical approach as problems differ across the countries. This discussion should focus more in non-annual weeds (annual weeds are easier to manage) and it should be linked to digitisation technologies and machinery (robots, drones, etc.) and /or to soil issues (over-fertilisation, contamination of ground water, etc.). It should also include complementary crops or practices that help to diminish pest risks (e.g. intercrop, agroforestry, etc.). Some members of the Subgroup considered that there's no knowledge gap on this issue, there's already a lot of knowledge, discussion groups, projects, on this topic.
- Link non-chemical weed management to climate change. Discuss on the need for new non-chemical weed management methods/tools and timings (e.g. seasoning is changing), while considering future challenges. I was also suggested to try to "break" with common tendencies of creating direct relationships between non-tillage practices and direct seeding techniques and higher use/need of chemicals (which is critical in organic farming).

### 2.2 Technologies for protection from frost damage

Aim / focus: spring/summer period. Current active and passive protection is not working due to climate change (e.g. heat waves and frost are coming out of the normal season), so machinery is not working. Therefore, there's the need for recommendations for further action, new technologies and practices. These need to be specified according to types of crops (apple trees, vineyards, strawberry, cherry trees, etc.) and also needs a geographical approach (climate change influences regions differently). The starting point should be to gather results from previous projects and then capitalise on earlier research programs. There was a request to broad the topic to extreme weather events, draught, hail and not only frost.

### 2.3 Antimicrobial Resistance (AMR) in poultry

Aim / focus: main issue should be how to limit antibiotics in poultry (biological treatments, etc.) and particularly how to deal with organic breeding / organic livestock and free-range breeding in this respect. Members also suggested to consider anthelmintic resistance (e.g. critical in sheep now) and to discuss about genetically modified crops and livestock for cultural disease control. It was suggested to follow same approach as in the Focus Group 'Animal husbandry - Reduction of antibiotic use in the pig sector'.

## 2.4 Pest and diseases in olive trees

This was a topic that was recently raised by some of the Subgroup members, prior to the meeting, which was included for discussion.

Aim / focus: mainly on new pests and threatens due to climate change, related new techniques for farmers using environmental friendly practices. This topic is more relevant in Southern Europe where, for example, there has been big losses due to *Xylella fastidiosa* and other pests that benefit from climate change. The risk is enhanced due to state of the trees: they become more sensitive due to changes on their phenology provoked by climate change (e.g. flowering 2 times per year instead of 1 time per year). There's a need a map/inventory of pests and diseases, and for environmental friendly solutions (technologies, practices, ...). This topic should be linked to plant nutrition and soil management.

## 3. Circular economy

### 3.1 Working with biomass from on-farm residues

Aim / focus: there was a bit of controversy concerning the focus between the Subgroup members, as some mentioned that a farm could also take residues back from cities and offer an on-farm bio(gas) refinery facility. Few members noted that one shouldn't just restrict it to residues, as one could also create markets for short rotation coppice, thus diversifying farm activities. Either way, it needs to be looked at consumer level - how to find markets for side streams.

### 3.2 New/ alternative feed for livestock

Aim / focus: there is a need to find alternative sources to feed livestock, so suggestion is to look at new feed produced from farm residues. Currently, legislation limits the types of alternative feed that can be used. The challenge is then to get new types of feed introduced to that list. One example was given: producing insects from on-farm waste/ residues is allowed, which can be used for fish feed, however it is not allowed to use for pig feed. The focus should be on feed and not on protein or alternative protein sources (pigs are fed by farm residues and not by imported protein). In addition, it was suggested that other sources than farm residues should be considered too, such as mussels or algae (aquaculture/ aquaponics).

### 3.3 Reducing food waste and on-farm losses

Aim / focus: reducing food losses at farm level, from harvesting (included) to delivery of the product (harvesting, handling, storing...), while focusing on perishable/ fresh products, such as fruit and vegetable. It could also include marketing strategies for products which are not '1st' quality and are not accepted by main market channels. It was mentioned that 30 percent of resources are wasted, even before they become waste. Subgroup members were discussing on the scope - what can be done at farm-level or what can be done in the value chain (example: low calibre apples are not accepted, which is a value chain problem, while the objective is to maximise the volume of apples that follow the normal track; but still, there are practices and strategies that a farmer can adopt for marketing low calibre fruit and vegetable as food and not as waste). Post-harvesting handling and the 'lean' concept was mentioned - creating a process that minimises mistakes and requests continuous improvement, to minimise accidents and losses.

## 4. Capacity building

### 4.1 EIP implementation + Putting OG results into practice

Aim / focus: work on the roadmap to a successful OG project implementation, while learning from (results of) implementation of OGs and from each other (what are the existing problems, how to manage the measure?). Bring Managing Authorities together to see what they are doing in managing this measure and to share good practices. Also have a look on how to capitalize the results of EIP projects and how are the results being taken up by diverse types of actors / by the innovation ecosystem. Another suggestion is to consider multifunding and discuss how can EIP projects be multifunded and if it can be a way to upscale OGs (how social funds can work with RDP? how to integrate RDP measures - M1 and M2 are the easiest ones to integrate with M16.1, also M4 can work together with M16.1). A point was made that there's a need for info on what are the topics taken up by OGs in EU (database, NRNs websites) - OG projects need to be widely communicated / disseminated asap.

Format: event targeting MAs (but should involve advisory services as well); a proposal was made to organise two events focusing on:

- dissemination of results (learning from existing experiences) – how results are being taken up by the whole ecosystem? How to conciliate the requirements for dissemination of results and need for some level of secrecy? How can we know what others are doing? How to structure networks and other entities so that dissemination is effective?
- process (learning from existing experiences) – why things didn't work, why didn't the project achieve the expected results, how to deal with it; problems facing implementation of measure (management of measures).

### 4.2 AKIS and Interactive innovation: incl. advisory services and education systems/farmers' schools

Aim / focus: discuss on how to structure advisory services to work on OGs, how should advisory services be better used in setting up / running OGs, disseminate info (results, challenges, etc.). The main issue should be the interconnection between advisors and OG projects (how are projects set-up? what are incentives for advisory services to be part of OGs?).

### 4.3 OG project implementation process

A new topic was suggested by Subgroup members but it was said that it could also be put together with 4.2: OG project implementation process

Aim / focus: main issue here would be to see how countries are supporting OG projects implementation (social capital, structure), which actors are involved in this process and what are their roles along the project implementation. In addition, discuss which are the competences needed to run an OG project and what is needed to successfully implement these projects. It was also suggested to have a particular look at two types of actors: advisers (give advice, support setting-up, act as innovation broker - which should be their skills and competences? what roles do they have in this process and what are the incentives for advisers to be involved in OGs?), Innovation Support Services (with different roles at different phases of the process). Maybe an event "Train advisers" / "Train the facilitator".