FARM
Fostering Agriculture Rural Development and Land Management

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IO4: Creating educative training material for DSS in ARD

1st Virtual Webinar Report

November 2022

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Content

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1. Introduction

First national webinars introduced modern, innovative, effective, practical, economical and IT-related to approached and learned about the generation of usable information from data. The topics were focused on increasing productivity and optimizing the usage of nutrients and fertilizers. Promoting, networking, and sharing best practices and avoiding soil erosion, and adapting to climate change.

Webinar creating educative training material for DSS in ARD (IO4) described the ICT and DSS tools in all training spheres formal and non-formal, by encompassing the competencies, knowledge, and skills of stakeholders in ARD. Promoted communication across different stakeholders and contributed to sustainable investment, performance, and efficiency in ARD. In order to achieve that during the webinar IO4 goals were presented.

1.1 Webinar scheduled topics:

- Topic 1 10:00- 10:10 Welcome and start introducing FARM project
- Topic 2 10:10- 10:30 Brief summary of the IO4 of FARM project
- Topic 3 10:30- 11:00 Valorization of slurry through advanced technologies and example of prototypes of DSS in ARD.
- Topic 4 11:00-11:30 Videos related to FARM project
  - Video 1 related to FARM project (Polytechnic university of Cartagena, Spain)
  - Video 2 related to FARM project (Harz University of Applied Sciences, Germany)
  - Video 3 related to FARM project (Polytechnic university of Cartagena, Spain)
  - Video 4 related to FARM project (University of Cyprus, Cyprus)
- Topic 5 11:30- 11:40 Conclusion and questions.

2. Objective

Promote sustainable management of pig slurry implementing the concept of DSS (algorithm with the best possible options available), providing support to agriculture practitioners to scale-up their activities.

3. Material 1st webinar.

National Webinar number 1 which took place on November 9, 2022, consisted of 3 topics, a brief summary of the IO4 farm project with the purpose of FARM project, scope, aim, and target group. Explanation of how to train farmers to DSS and the positive impact of using a DSS platform. The content generated, study area, objectives, and the methodology used to achieve the objectives. The second topic valorization of slurry through advanced technologies and examples of prototypes of DSS in ARD. In this section the software implantation, and how to generate the inputs to obtain a positive output.

During the 1st Webinar download training material were presented as a set of videos describing briefly the project, the needs of the project, specifying the DSS applied, why the DSS has been selected, how the training material is applicable and explaining the circumstances. Additionally, mentioned the DSS inputs method of sampling and testing, what kind of parameters are considered, the procedure of monitoring soil nutrient levels, and the climate impact forecast. Videos related to FARM project, download training material consisted of 4 videos, (1) valorization and sustainable management of slurry: traceability and smart fertilization, (2) introduction educative training material for DSS in ARD, (3) DSS crop for management and (4) prototypes sampling, analysis, and data management.

3.1 Registration process

There was a webinar registration template to collect the participant´s information, using Jotform.com. The Webinars registration link was created as: 1st Webinar: https://form.jotform.com/222782875253363. The link was shared on social media, Email, direct invitations to encourage registrations. The targeted group were students, and farmers, will gain the contents in the training materials based on research work, experience gained in previous surveys, and new inquiries.

3.2 Platform for the webinar

Miscrosoft teams was used as a platform for live stream and recorded for later viewing, those videos were part of the materials to be delivered.

4. Participants and Fedback.

Webinar evaluation about particular aspects of the event (e.g. transmission quality, etc.) and express the weakest and strongest points. Webinar Feedback form was created using

Jotform.com: https://form.jotform.com/222802831878361. The participant´s feedback for online webinar help us to improve our events

For the first webinar, the total number of registered participants was 42 people. The statistics established that 52.4% were men, while women accounted for 47.6%. This demonstrates the interest that the topic has in the population in general terms.

Another statistic that demonstrates the variability in the occupations of those interested is that 28.6% of the attendees belonged to sectors other than livestock/agriculture and academic researchers/students.

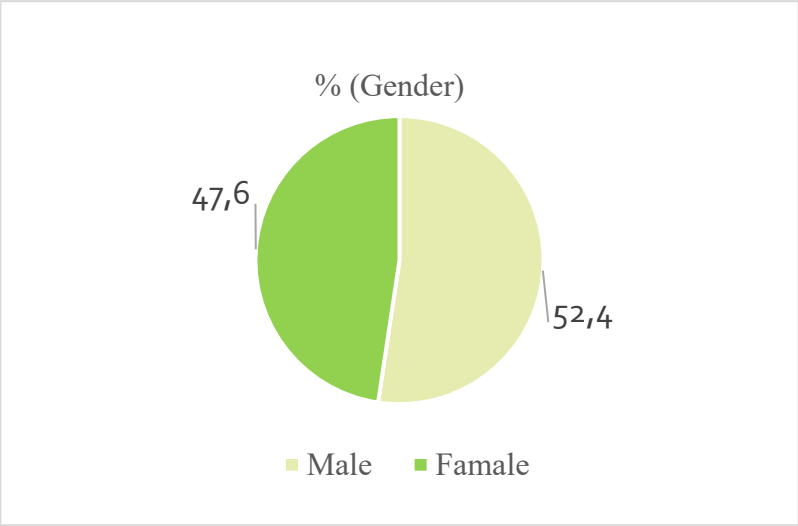

Fig 1. Gender of the participants (1st webinar)

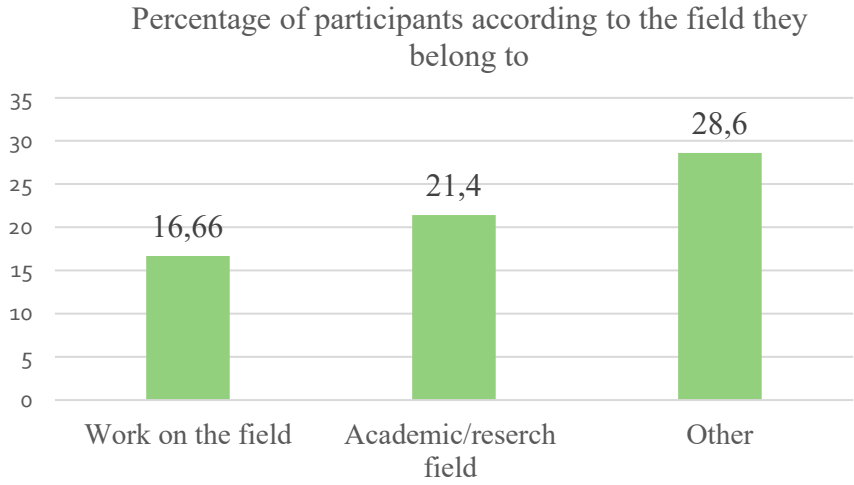

Fig 2. Participants occupation (1st webinar)

The participants were distributed among farmers, researchers, business people in the sector, among others. The way by which most of them got to know about the event was through direct communication with the organizers of the event.

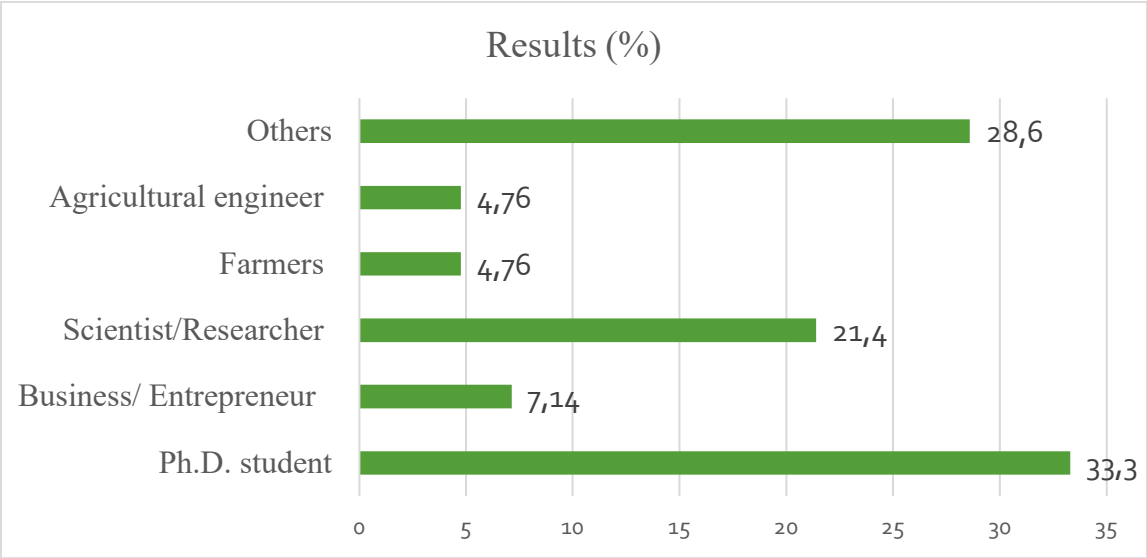

Fig 3. Participants field occupation (1st webinar)

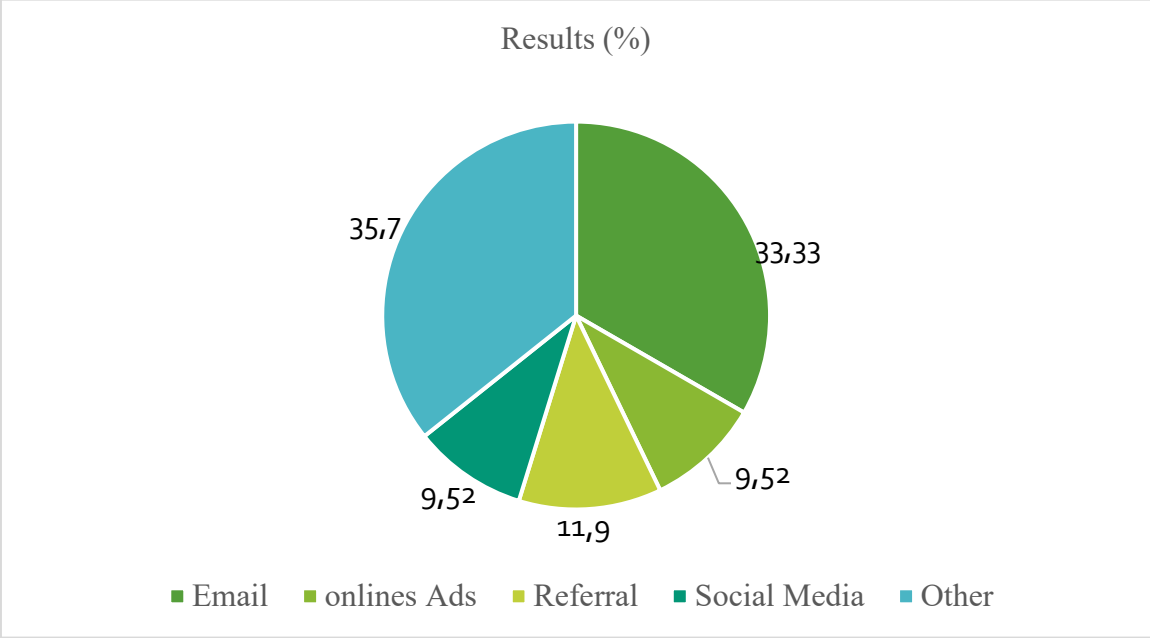

Fig 4. Media to know about the event (1st webinar)

Participants expressed their satisfaction through surveys conducted on an online platform. The majority rated the webinar as at least interesting. They also emphasized how helpful it can be as training material.

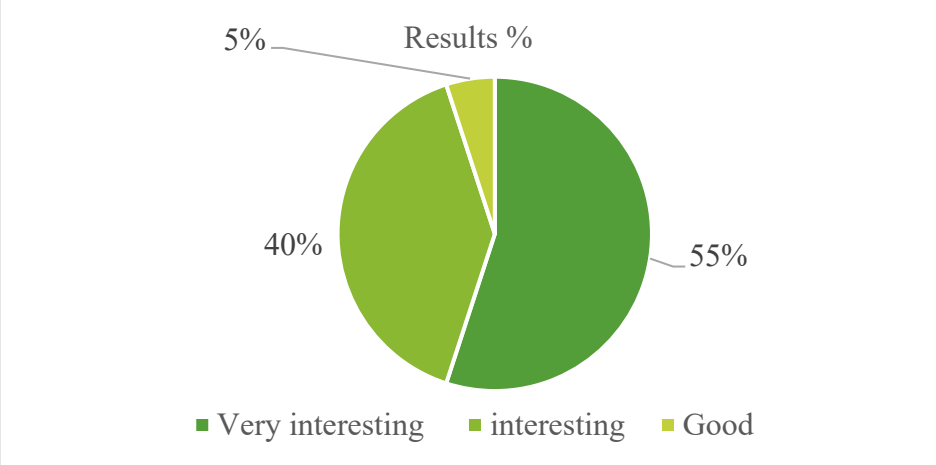

Fig 5. Interest in the event (1st webinar)

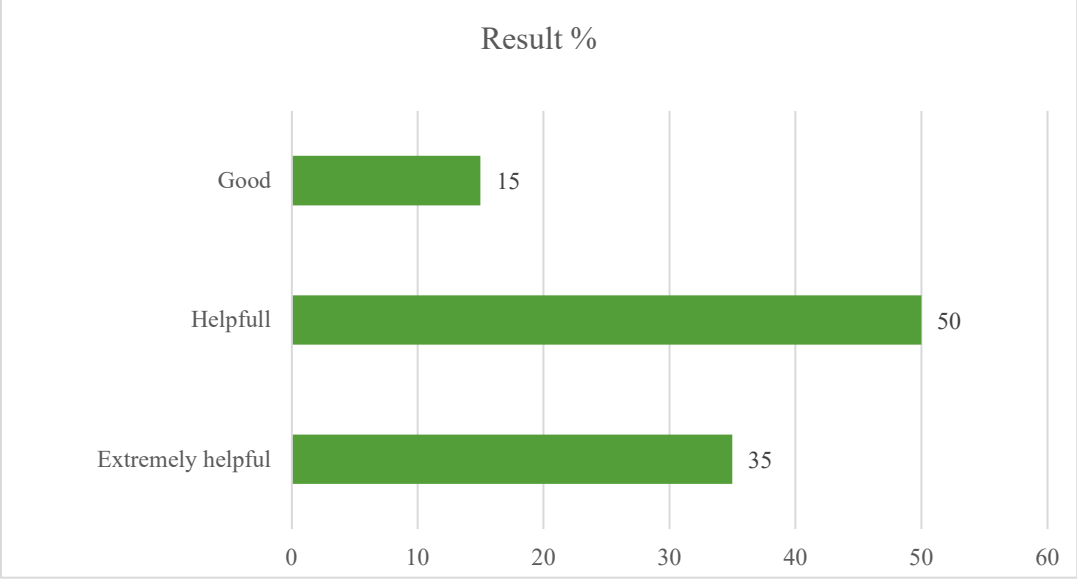

Fig 6. Helpful of the webinar (1st webinar)

For the first webinar, most of the participants stated that they do know what a DSS tool is. They also stated in which fields it can be used, however over 70% have never use it.

Some Answers (Yes, they know about DSS)

1. It is software applied to the agricultural field in order to optimize the management of the three main factors involved: available farmland, resources and farmer.

2. It is software that allows the user to optimize the decision-making in the business. As for the applications, it can be used in the management of the three main aspects involved in the agricultural field: the available farmland, the resources (plants, fertilizers...), and the farmer. Furthermore, it offers responses to problems such as climate change.

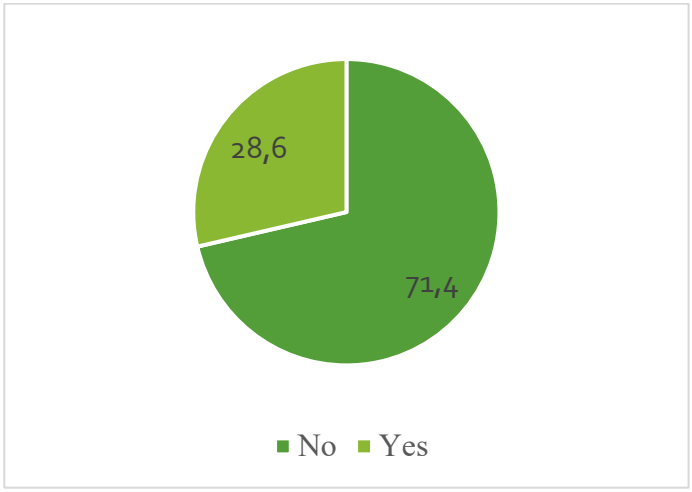

Fig 7. Have used a DSS tool (1st webinar)

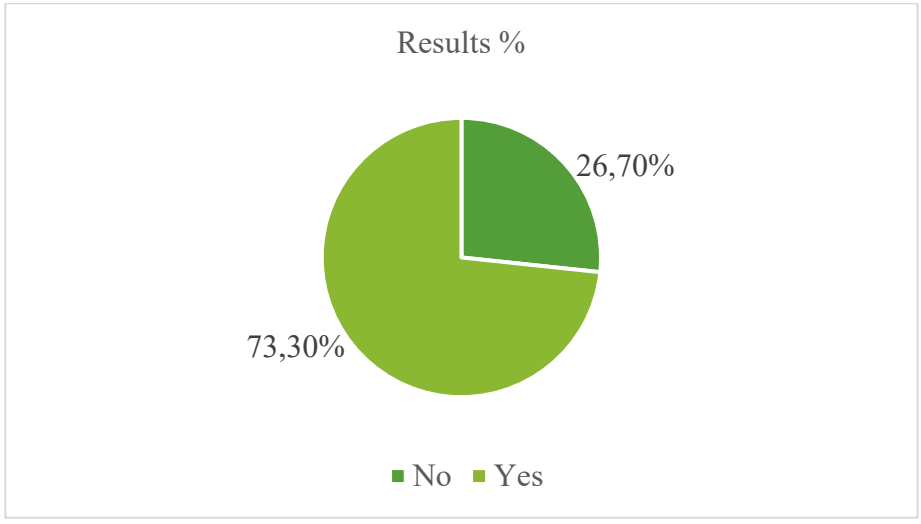

Fig 7. Know what is a DSS tool (1st webinar)

The participants also had the opportunity to express which media would be ideal to have a DSS tool with the characteristics of the one presented. The majority opted for a mobile device (tablet/smartphone).

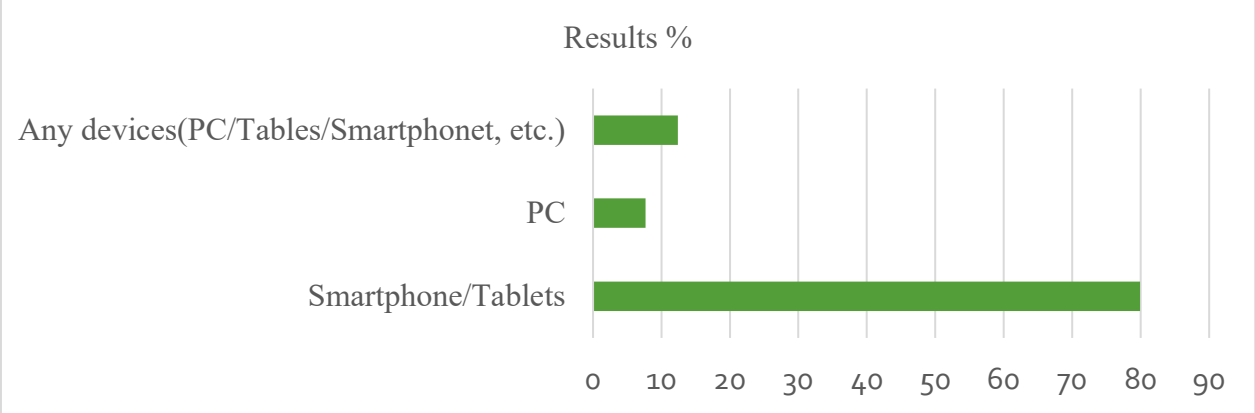

Fig 8. Device to use a DSS tool (1st webinar)

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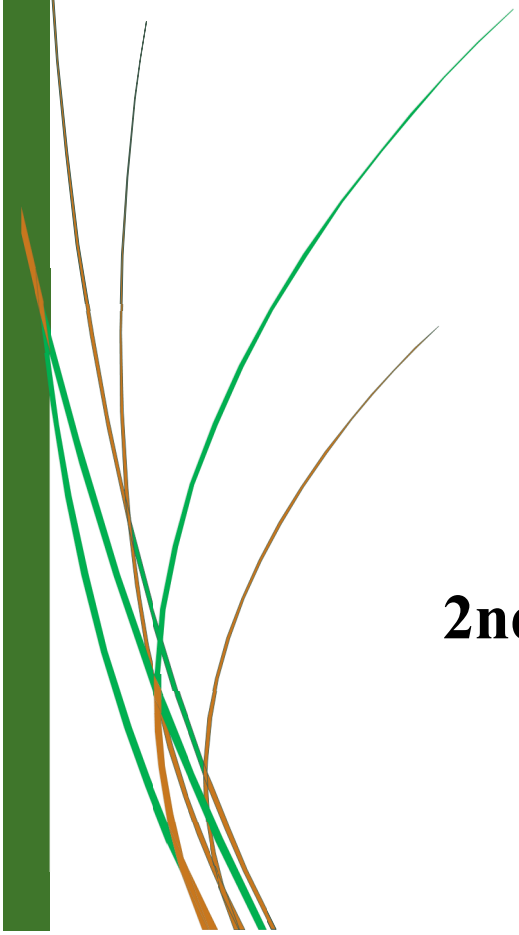
IO4: Creating educative training material for DSS in ARD



2nd Virtual Webinar Report.

December 2022

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Content

1. Introduction

The main idea of FARM is to facilitate and reinforce cross-sectorial collaboration in agriculture. The support in this sector represent a vital component: for economic, social and environmental sustainability. Mainly facing the challenge in terms of sustainable management of natural resources. Webinar creating educative training material for DSS in ARD (IO4) described the ICT and DSS tools in all training spheres formal and non-formal, by encompassing the competencies, knowledge, and skills of stakeholders in ARD.

The adoption of digital farming eliminates risks and uncertainties by giving farmers access to big data and algorithms to manage their crops. Digital agriculture means the creation, development and application of innovative methods for the use of information and communication technologies. Digital tools are already step ahead comparing to traditional ways of farming, at the same time imply new knowledge, skills and competencies that farmers still don't have.

1.1 Webinar scheduled topics:

- 10:00- 10:10 Welcome and Start
- 10:10- 10:30 Current status of IO4 and final steps
- 10:30- 10:50 Local emerging DSS prototypes in pig farming
- 10:50-11:10 Scope of the developed training material, DSS tools provided, and other resources (catalog and maps).
- 11:10- 11:30 Questions and concluding remarks"

2. Objective

overview of existing ICT DSS tools in ARD that support crop farming, precision livestock farming, climate and quality control, and farm management. Scope of the educative training material including recommendations for the various groups of stakeholders.

3. Material 2nd webinar.

National Webinar number 2 which took place on December 15, 2022, consisted on, Current status of IO4 and final steps .

Current status of IO4 and final steps was about the aim and scope of the farm project. Backgrounds relate with DSS tools and their usage that are not widely known throughout Europe. An unknown system that allows the collection, analysis, and processing of huge amounts of agricultural data. The 1st webinar process and feedback where participants were able to access creating educative training material for DSS in ARD from the comfort of their home or office. The presentation was focused on the 1st webinar took place on November 9, 2022 with brief summary of the IO4 of FARM project, Valorization of slurry through advanced technologies and examples of prototypes of DSS in ARD. All the statistics from the feedback were share with the audience of the 2nd webinar.

The presentation local emerging DSS prototypes in pig farming described essential requirements for Agriculture 4.0 was related with agriculture 4.0, allows the collection, analysis and processing of huge agricultural data, such as weather information, soil conditions, marketing demands and land uses, to help farmers make the right decisions and obtain higher benefits. The platform for the management of pig slurry present: complete traceability of the process, very simple solution to use in the field, assistance to the operator (plot, dose control, programmed dose, etc.) , and simple document management. Some of the local emerging DSS prototypes described were: (1) DSS prototypes in pig farming (2) Tauste CGE (3) Life MANEV – GEMA program (4) Agroxcontrol (5) Isagri – Geofolia (6) VGSP Valorization of slurry through advanced technologies

Scope of the developed training material, DSS tools provided, and other resources represented the facilitate and reinforce cross-sectorial collaboration in agriculture by providing support to the sector scaling up their activities by integrating innovations for sustainable development. Adopting DSS also means: (1) Avoid waste by calculating the exact water needs of the crop. (2) Detecting the appearance of certain plant diseases. (3) Better control production costs. (4) a Better ability to plan with great precision. (5) Improve the traceability of the supply chain. (6) Keep the entire production process under control. The presentation also explained other resources for the agricultural sector a catalog that includes methodology and literature review, a general aspect of digitalization in agriculture. Another output was an Online map, an interactive dashboard created to represent the most relevant European ICT and DSS hotspots that were identified during this first phase of the project.

3.1 Registration process

There was a webinar registration template to collect the participant´s information, using Jotform.com. The Webinars registration link was created as: 2nd Webinar: https://form.jotform.com/222793083098363. The link was shared on social media, Email, direct invitations to encourage registrations. The targeted group were students, and farmers, will gain the contents in the training materials based on research work, experience gained in previous surveys, and new inquiries.

3.2 Platform for the webinar

Miscrosoft teams was used as a platform for live stream and recorded for later viewing, those videos were part of the materials to be delivered.

4. Participants and Fedback.

Webinar evaluation about particular aspects of the event (e.g. transmission quality, etc.) and express the weakest and strongest points. Webinar Feedback form was created using Jotform.comhttps://form.jotform.com/223452756080354. The participant´s feedback for the online webinar help us to improve our events

For the second webinar, the total number of registered participants was 46 people. The statistics established that 54.3% were men, while women accounted for 45.7%. This demonstrates the interest that the topic has in the population in general terms.

Another statistic that demonstrates the variability in the occupations of those interested is that 17.4% of the attendees belonged to sectors other than livestock/agriculture and academic researchers/students.

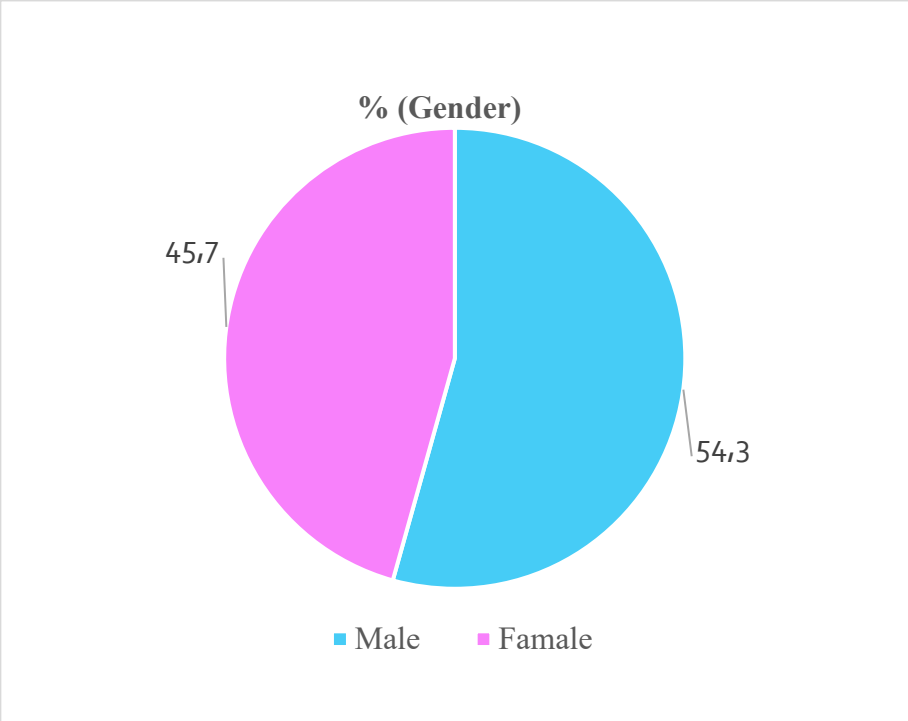

Fig 1. Gender of the participants (2nd webinar)

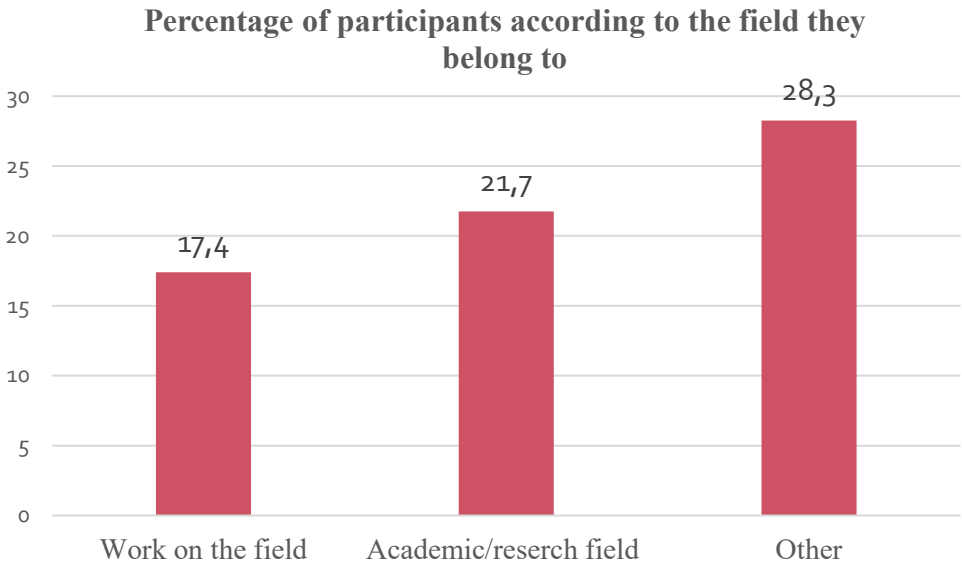

Fig 2. Participants occupation (2nd webinar)

The participants were distributed among farmers, researchers, business people in the sector, among others. The way by which most of them got to know about the event was through direct communication with the organizers of the event.

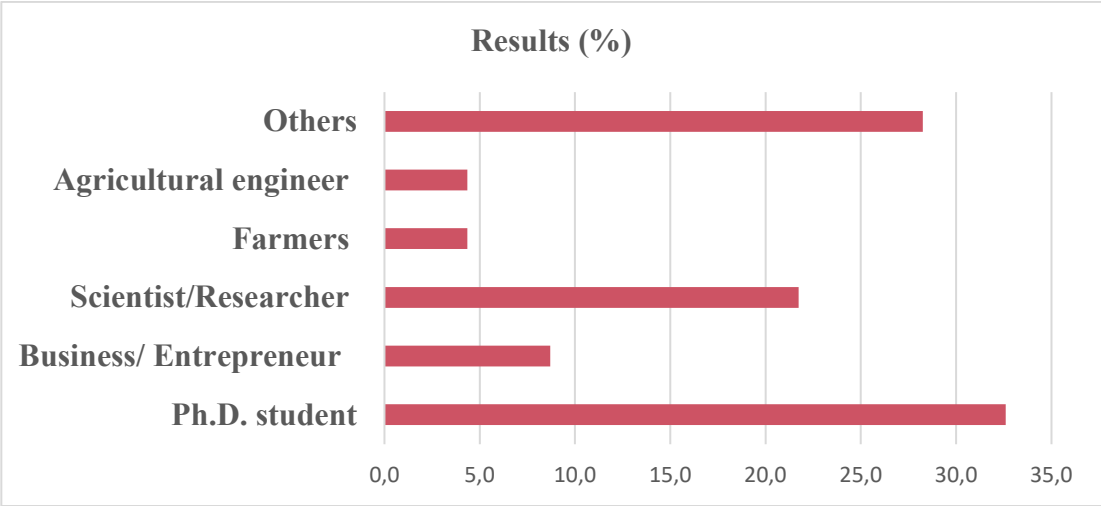

Fig 3. Participants field occupation (2nd webinar)

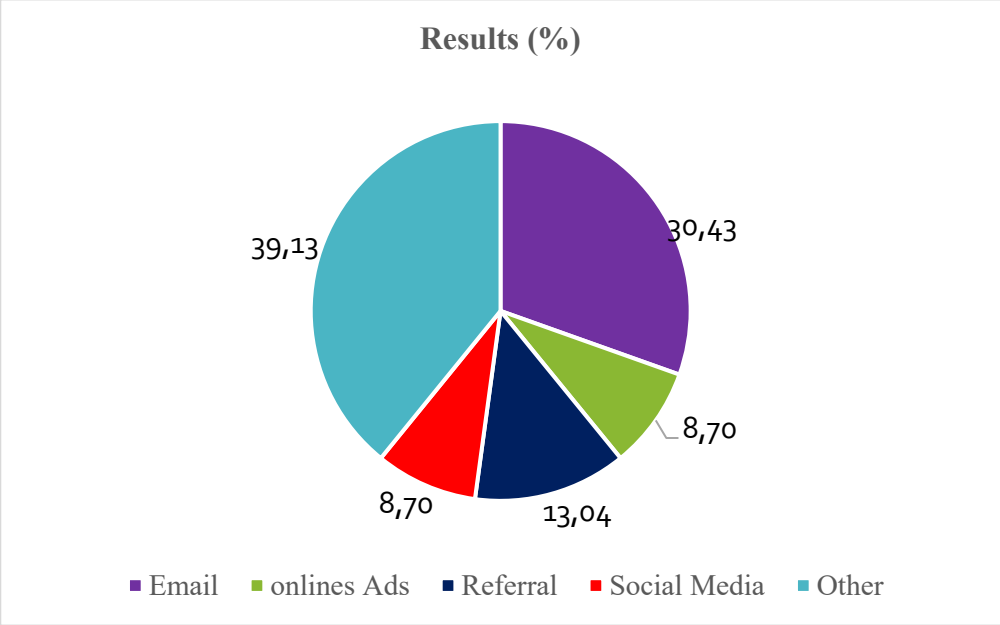

Fig 4. Media to know about the event (2nd webinar)

Participants expressed their satisfaction through surveys conducted on an online platform. The majority rated the webinar as at least interesting. They also emphasized how helpful it can be as training material.

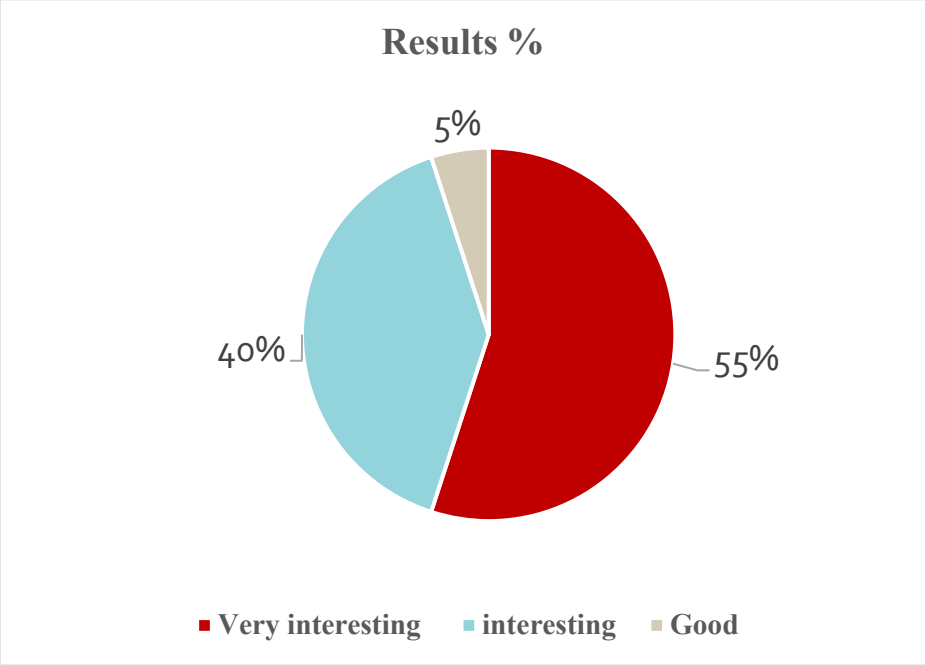

Fig 5. Interest in the event (2nd webinar)

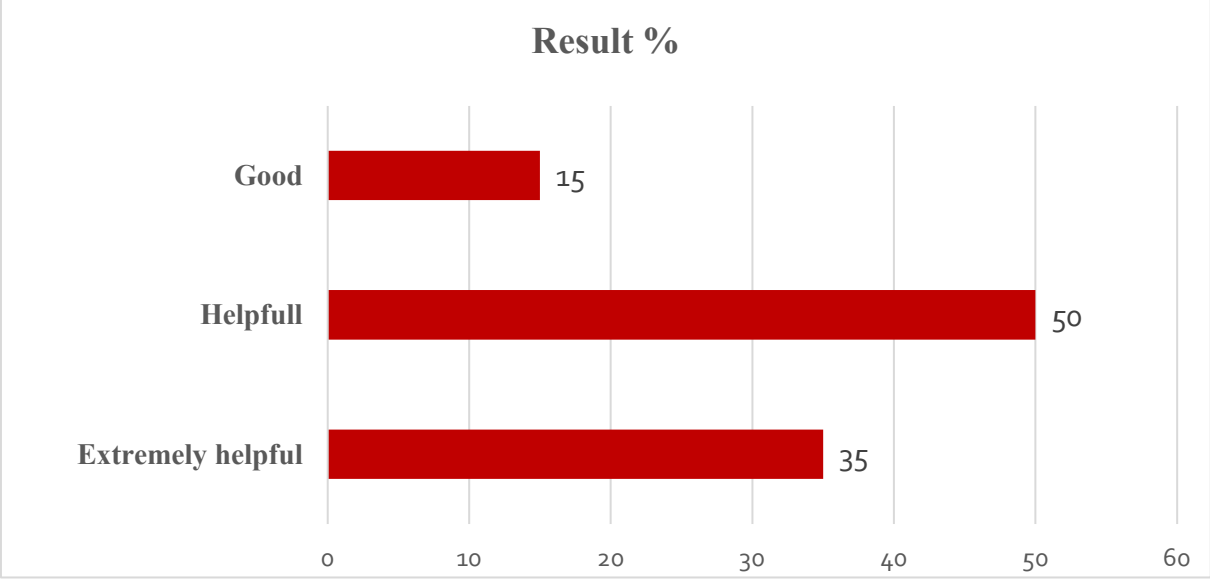

Fig 6. Helpful of the webinar (2nd webinar)

For the second webinar, most of the participants stated that they do know what a DSS tool is. They also stated in which fields it can be used.

Some Answers (Yes, they know about DSS)

1.Yes, it can be used in any area related to management.

2. Yes, in general, it is used by management to make decisions, it can be used in different areas to provide them with timely data and analysis to support their decisions, it is no longer required in simple judgment or intuition, but in information obtained through deductive and analytical methods.

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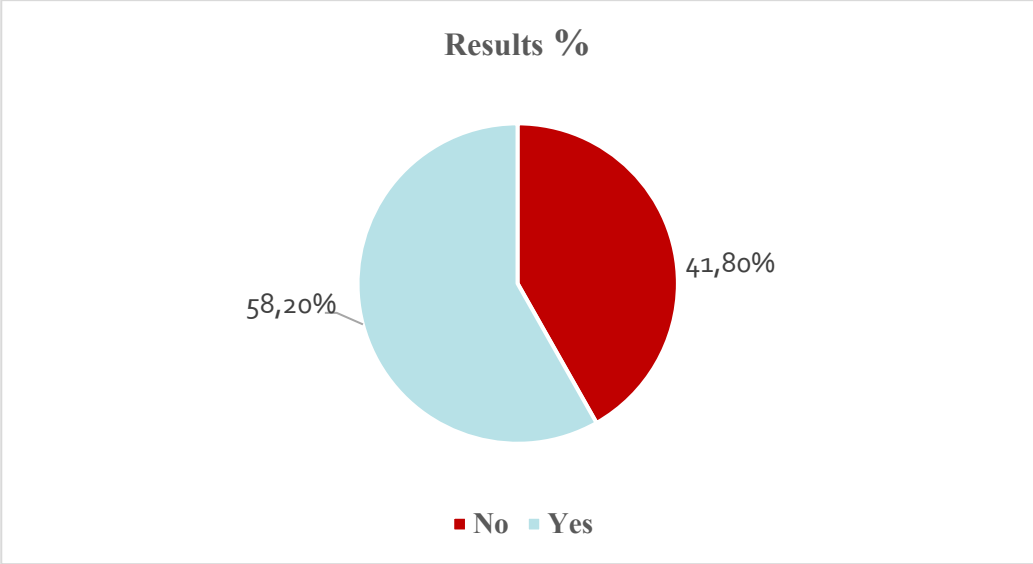

Fig 7. Know what is a DSS tool (2nd webinar)

The participants also had the opportunity to express they think that the DSS can have some use limitations. Some of the answers were:

- Necessary training and reliance on technological systems
- Yes, DSS programs without sufficient data can also make bad decisions because they do not understand the situation well.
- It depends on how it works, if the tool needs internet there may be connectivity problems, but if the information can be recorded without internet there are no limits.

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