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**Wageningen University & Research  
(WUR Wageningen)  
September 29<sup>th</sup> – September 30<sup>th</sup>, 2022  
MEETING MINUTES**



In a period 29-30.09.2022. at the Wageningen University and Research project workshop and meeting was held. The workshop was attended by representatives of the institutions of the project consortium, where several papers related to the use of ICT in agriculture were presented. Beside theoretical part, participants had opportunity to visit Fruit Research Station of the Wageningen University as well as presentation of the use of a drone in agricultural fields.

On the first day at the Wageningen University participants had opportunity to visit Fruit Research Station of the Wageningen University. Host of the visit was dr Marriane Grot, station manager. After her presentation of activities of the Station Marriane showed to the participants different aspect of use of ICT in agricultural production as well as those which are still under development.



Co-funded by the  
Erasmus+ Programme  
of the European Union



**WAGENINGEN**  
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Of special interest was the camera for measuring the quality of the fruits after harvest, as well as the development of a robot for mechanized pruning and harvesting. The use of solar panels in the production of pears, as well as the production of apples in a fully automatized greenhouse, were of particular interest to the participants.



Visit to Fruit Research Station

Arriving at the university, the participants had the opportunity to become familiar with the activities of this renowned institution regarding the use of ICT in agricultural production. The presentation was given by Dr. Bedir Tekinerdogan, who was also the host of the meeting. You can find out more about his presentation [here](#)



Presentation of professor Bedir Tekinerdogan

After his presentation, the participants were presented with the work of this group on drones and their use in regular agriculture, especially in the research segment. The presentation entitled "Drones for Precision Agriculture" was held by Sergio Velez Martin, Mar Ariza Sentis, WUR. After a theoretical lecture and an introduction to research carried out using drones, the young scientists demonstrated to those present the operation of drones in outdoor conditions.



Demonstration of Drones

The second day of the meeting was reserved for project activities and a workshop. During the first part of the day, the project coordinator Miljan Cvetković informed the attendees about the state of the project, the upcoming activities, the degree of implementation of individual work packages as well as the upcoming activities. During the discussion, it was established that the biggest challenges in the coming period are the realization of the EXPO 2022 event, the implementation of student courses, as well as training for various stakeholders in agriculture. You can see more information about the presentation [here](#).



Project implementation status , Miljan Cvetković, UNIBL

In his lecture, Bedir Tekinerdogan, WUR, spoke about the importance of systems in the programming process in general, but also for agricultural production, their development and the feasibility of connecting them. You can see more about the presentation itself [here](#)



Architecting Farm Management Ecosystems, Bedir Tekinerdogan, WUR

What is extended reality and what does it look like in everyday life and in the field of agricultural production, as well as to what extent can its expansion be expected in the coming period, said Wil Hurst, WUR.

To what extent agricultural production can be realized in a closed space, which species are most suitable for such purposes, as well as which researches are current in this field, Cor Werdouw spoke in his presentation entitled "Data-Driven Greenhouse Horticulture".



Data-Driven Greenhouse Horticulture, Cor Werdouw, WUR

What are the possibilities and significance of the development of biohybrid systems in everyday life was the topic of professor Zdenka Babić, UNIBL. She spoke about research into the possibility of using bees to detect mine devices.



Biohybrid systems: Let bees and drones work together to find landmines  
Zdenka Babić, UNIBL

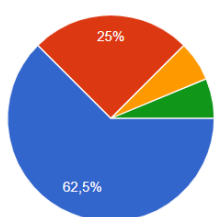


ICT achievements in the University of Agronomic Sciences and Veterinary Medicine of Bucharest, Ana Butcaru

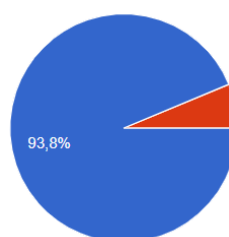
Colleagues from the University of Bucharest, through their two presentations "ICT achievements in the University of Agronomic Sciences and Veterinary Medicine of Bucharest" ([presentation here](#)) and "Research on using digital programs for vegetation study" ([presentation here](#)), showed the level of development of the use of ICT in agriculture in the research and development part of the work university. Ana Butcaru and Stefan Iina presented the papers on behalf of the group of authors who worked on these issues.

The workshop ended with a discussion by the participants and questions for the authors. In the last part of the meeting, the dynamics of the implementation of project activities in the coming period were also discussed.

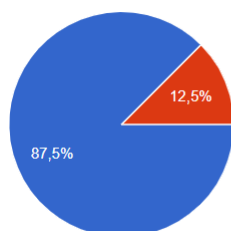
As part of the evaluation of the meeting held in Wageningen, participants had the opportunity to evaluate individual segments of the work through a questionnaire. The category of participants was divided into 62.5% teaching staff, 25% non-teaching staff, and 12.5% students and others (Graph 1). When asked whether the content of the workshop was useful and relevant, a large percentage (93.8%) of respondents answered that they completely agreed that it was (Graph 2). A number of respondents (87.5%) fully agreed that the workshop was properly prepared for new learning on the use of ICT in Agriculture (Chart 3).



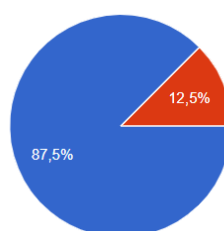
Graph 1.



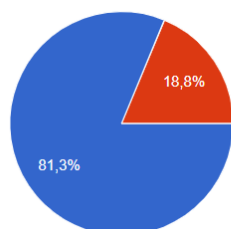
Graph 2.



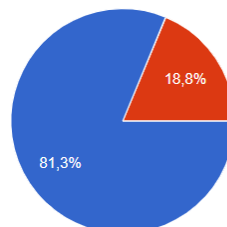
Graph 3.



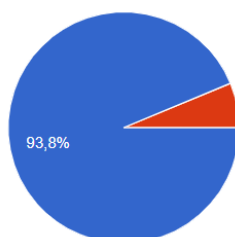
Graph 4.



Graph 5.



Graph 6.



Graph 7.

Also, a same number of respondents (87.5%) fully agreed that the responsible persons were well prepared and informed about the topics of the meeting (Graph 4). For the same percentage of participants duration of workshop was appropriated (Graph 5). The high percentage of respondents fully agree that the plan, type, responsibilities and dynamics of the realization of upcoming events - work packages WP4 are clear (Graph 6). The expectations of about 93.8% of respondents were fully met (Graph 7).

*The most significant results of the workshop meeting were the following:*

- ↳ the meeting provided an opportunity to learn about the importance of continuous research in the field of ICT use in agriculture, as well as connecting different institutions with the aim of comprehensive and successful research;*
- ↳ participants had the opportunity to get acquainted with some of these achievements in a theoretical and practical way;*
- ↳ the participants had the opportunity to familiarize themselves with the implementation of activities on the project so far and the dynamics for the next period.*

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