AgroTec Newsletter

Fifth Issue

January 1, 2025 - September 30, 2025

AgroTechnology VET Centres to Network and Train Future Farmers in Jordan and Palestine / AgroTec

Project Facts

Type: Erasmus+ Programme
Grant Holder: AgriWatch B.V.
Duration: 3 Years
Start Date: January 1, 2023
UNDER "ERASMUS+ Capacity Building in the field of Vocational Education and Training (VET)"

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Erasmus+ VET Programme, AgroTec Project Number: 101092160

Project Profile

Project Summery

AgroTec is a 3-years project that started on the January 1, 2023 and is co-funded by the Erasmus+ programme of the European Union. It is coordinated by AgriWatch B.V. from the Netherlands, in collaboration with 7 partners from Jordan, Palestine and Europe.

The main objective of the AgroTec project is to establish 5 “AgroTec” centres within partner Universities in Jordan and Palestine. These centres will be dedicated to the development of practical and innovative VET (Vocational Education and Training) courses. They aim to foster collaboration between companies and VET institutions while creating strong connections among all stakeholders involved in the Agri-Food value chain. Additionally, these centres will facilitate the implementation of smart tools, leveraging IoT sensor networks for soil-crop monitoring, processing, marketing and quality control.

By achieving these goals, the AgroTec project aims to enhance knowledge transfer, promote technological advancements, and strengthen the agricultural sector in the region.

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Partners

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Meetings

5th Steering Committee Meeting

May 7th - 8th, 2025 (Leipzig, Germany)

The 5th Management Meeting of the "Agro Technology VET Centers to Network and Train Future Farmers in Jordan and Palestine" (AgroTec) was hosted by the Int@E UG in Leipzig, Germany, from May 07-08, 2025.

During the meeting, each partner presented detailed progress reports to the project's steering committee, covering activities conducted over the past six months, challenges encountered and future plans. Discussions emphasized key aspects such as the project's quality, sustainability, and dissemination, alongside updates on AgroTec centers and the courses allocated to each partner.

The partners also deliberated and reached agreements on upcoming activities, specific tasks for each partner, and the timeline for future training sessions and management meetings.

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6th Steering Committee Meeting

September 5th, 2025

The 6th Management Meeting of the "Agro Technology VET Centers to Network and Train Future Farmers in Jordan and Palestine" (AgroTec) was organized in Hengelo on Friday, the 5th of September 2025. The management meetings focused on the progress and upcoming activities related to the AgroTec project, including the status of deliverables and preparation for the final AgroTec Report. This meeting took place during the 3rd AgroTec training and focused on reviewing the outcomes of the earlier session held in Jordan (July 22, 2025) in the presence of the project's external reviewer. The Jordan meeting was essential for assessing project results, final reports and documents, as well as addressing the feedback provided by the external reviewer.

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3rd AgroTec Training at AgriWatch B.V

September 3rd - 8th, 2025

The third Training of Trainers (ToT) session was held at the AgriWatch Center, World Trade Center Building in Hengelo, Netherlands (Sep 3–8, 2025), with partners from Jordan and Palestine. The program introduced AgriWatch Remote Sensing IoT sensor packages through both theory and practice, including demonstrations with the CoSpectroCam (CSC) system covering spectrometers, RGB cameras, optics, reflectance references, and light sources. Key sessions addressed fundamentals of radiation sources and physics of remote sensing (photons, quantum efficiency, A/D conversion, signal-to-noise ratio, reflectance), RGB data analysis (feature extraction, clustering, vegetation and water indices), and radiometric environments for sensors and objects. Participants also explored CSC applications in mission planning, calibration, correction, and environmental engineering using indoor and outdoor reflectance data. The training built a solid foundation in advanced remote sensing and practical CSC applications for environmental monitoring.

Sustainability and Co-financing

The South Korean government has made a generous donation to Palestine Polytechnic University (PPU) for the establishment of an indoor aeroponic farming system, which is currently being shipped to the university. This initiative aims to advance sustainability and address food security challenges, while also serving as a vital training resource for the newly accredited Smart Agriculture Diploma program. The donation was made possible through the success of the AgroTec project, which played a pivotal role in securing this support.

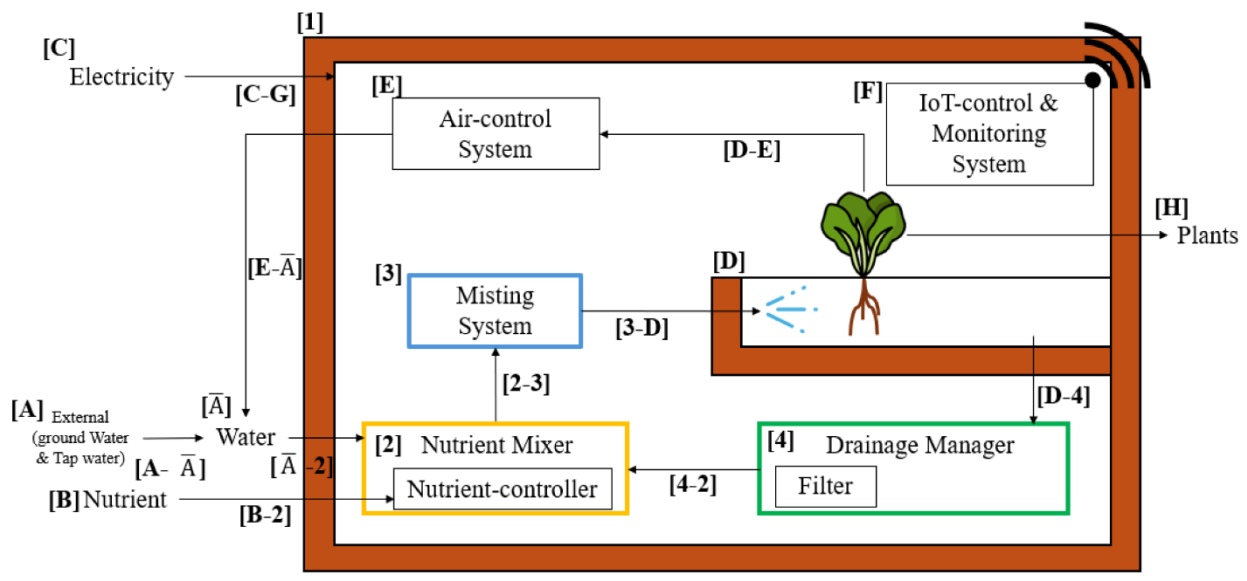

Figure 1. Schematic overview of the closed-system misting smart farming system. This schematic illustrates the key components and resource flow within the closed-system misting smart farming setup.
Kim, J., Park, H., Seo, C., Kim, H., Choi, G., Kim, M., Kim, B., & Lee, W. (2024). Sustainable and inflatable aeroponics smart farm system for water efficiency and high-value crop production. *Applied Sciences, 14*(11), 4931. https://doi.org/10.3390/app14114931

- PPU continues to implement service charges for local stakeholders and the agro-food sector for services provided by the AgroTec Center using several PPU equipment, including the ones received from the AgroTec project. These services include the analysis of agro-food products, pesticides, fertilizers, and similar items. This initiative aims to support the project's sustainability.

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Partner Activities

Palestine Polytechnic University (PPU)

PPU's Ongoing Student Training in Smart Agriculture

The AgroTec team at Palestine Polytechnic University continues to provide hands-on training and supervise student research projects. The sessions emphasize the use of advanced analytical equipment acquired through the project—such as the Kjeldahl digester—to introduce students, staff, and future farmers to innovative techniques for analyzing agro-food products. Trainees are guided through the full workflow, from receiving samples from fields or food factories to conducting detailed analyses and preparing comprehensive reports.

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Upcoming Events

Green Energy in MENA Region Conference: Solar Energy, Green Hydrogen and AgroTec (GE-MENA 2025)

December 1st-2nd 2025, Amman – Jordan

AgroTech project partners will participate in the GE-MENA Conference in Jordan. This international event aims to foster collaboration and showcase the latest research, technologies, and practices in renewable energy across the MENA and Mediterranean regions, with special focus on solar energy, green hydrogen, and smart agriculture. A dedicated session on Smart Farming and Precision Agriculture will demonstrate how advanced technologies can optimize crop production, reduce waste, and improve sustainability. Project partners will also have the opportunity to present their contributions in this session, aligning with the outcomes of the AgroTech project.

Conference Themes

1. Innovations in Solar Energy Technologies, PV systems, hybrid solar solutions, smart integration.
2. Green Hydrogen Production, Renewable-powered electrolysis, storage, and transport.
3. Sustainable Energy in MENA and the Mediterranean Regional policies, cross-border cooperation, and success stories.
4. Renewable Energy Applications, Energy use in agriculture, industry, and smart cities.
5. Environmental and Socioeconomic Impact Climate benefits, job creation, education, and community engagement.
6. Reliable Renewable Energy Systems 100% renewable supply models, storage, and energy security.
7. Research, Innovation, and Capacity Building Insights from HYMENSO, INNOMED, ReSys100, Agro Tec, and other projects.
8. Smart Farming and Precision Agriculture utilize advance technology to optimize crop production, reduce waste and enhance sustainability.
9. Machine Learning in Agriculture Support smart, sustainable farming decisions.
10. Agro Voltaic. The practice of simultaneously using land for both agriculture and solar energy production.
11. Nexus Approach: Integration Water, Energy, and Food System The nexus approach enhances management of water, energy, and food to ensure sustainability and resilience.

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Miscellaneous news

- **The World Trade Center Twente *News Report on AgroTec Training at AgriWatch BV:***

Marie-José Nassette

At World Trade Center Twente we are proud and pleased to host guests from Palestine and Jordan in the gathering of the project AgroTechnology VET Centres to Network and Train Future Farmers in Jordan and Palestine. The gathering was organised by our resident AgriWatch BV's, Mr. Ali Abkar and his team.
Partners in the project are: The University of Jordan, Mutah University (Jordan), National University College of Technology (Jordan), Palestine Technical University Kadoorie, Palestine Polytechnic University, the Slovak University of Agriculture in Nitra, Int@E Company (Germany). The goal is to identify the questions from teachers at five university partners in Jordan and Palestine, thereby monitoring the objectives of the AgroTec project. The workshop focuses on developing the necessary skills to create effective technology services, harnessing local potential to improve smart farming practices at a national level, and establishing a data acquisition and analysis system based on knowledge-driven research.
During the training, fundamental concepts of remote sensing and mission planning are discussed, using practical examples from AgriWatch BV's CoSpectroCam system and data acquisition tools. The topics covered include the spectrometer, RGB camera, optics, white reflectance reference, darkroom techniques, light sources, calibration and correction methods, targets, radiation sources, photon detection, quantum efficiency, electron management, charge well management, voltage, A/D conversion, signal-to-noise ratio, and photon-matter interaction (reflectance). Additionally, a mobile sensor platform designed for high-quality remote sensing data acquisition, feature extraction, and classification is showcased.

For more news on the event, please visit…..

https://www.linkedin.com/in/agnes-kromane-5b105512/

https://lnkd.in/p/ehqFHpCH

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- **AgroTec project Partners from Palestine and Jordan visit to *EmsFlower:***

The AgroTech project team visited *Emsflower* to observe large-scale potted plant production fully integrated with smart agriculture technologies. *Emsflower*, a leading producer of ornamental and potted plants, operates three production sites in the Netherlands and Germany, supplying customers across Europe. The visiting team was able to experience firsthand the practical use of robotics and smart agriculture in industrial operations.

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- This month marks the first anniversary of the passing of Professor Nabil Al-Joulani, a valued member of the PPU Steering Committee in AgroTec, who left us on September 6, 2024. Professor Nabil was admired for his dedication, professionalism, and unwavering commitment to the project. He consistently ensured tasks were carried out efficiently and on schedule, earning the deep respect of his colleagues and the AgroTec team. His legacy of commitment and integrity will be warmly remembered by all who worked with him.

AgroTec News

https://www.facebook.com/Agrotecnuct

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https://lnkd.in/p/ehqFHpCH

https://www.ppu.edu/p/ar/news/7805

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