







The Third B2B event on Multifunctional Olive Systems in Lebanon emphasizes the increasing interest in agroforestry

The Lebanese Agricultural Research Institute (LARI), the Regional Forest Agency for Land and Environment of Sardinia (Fo.Re.S.T.A.S.) and the whole LIVINGAGRO Consortium hosted the **Third B2B event on Multifunctional Olive Systems** in Beirut-Lebanon on the 16th of February 2023 at the Hilton Beirut Habtoor Grand. With a strong participation exceeding 100 attendees, the event highlighted the growing interest of stakeholders in agroforestry issues, especially those related to multifunctional olive systems in the Mediterranean region.

Throughout the day, experts and acclaimed speakers from Lebanon, Italy and Greece shared their experiences and addressed various issues and innovative solutions with farmers, entrepreneurs, local administrators, researchers, private companies, policy makers and multiple stakeholders in Lebanon interested in agroforestry issues.

The Seminar

Dr. Milad El Riachy, the Coordinator of the LIVINGAGRO project for LARI, delivered the welcoming speech on behalf of Dr. Michel Afram, the General Director and the Chairman of the Board of Directors of the Lebanese Agricultural Research Institute (LARI)- Lebanon, stressing the fact that the project provides farmers with a sustainable support based on state-of-the-art innovations and scientific methods, allowing them to develop their agricultural skills and capabilities. Dr. El Riachy invited farmers to reach out to experts through the ICT Platform created for this purpose allowing e-farmers to find information about all initiatives and research conducted by LARI and the other international partners in the framework of the LIVINGAGRO project.

In his turn, Dr. Peter Moubarak, the Project Manager for LARI, presented the achievements of the project during the last three years passing through the field trials, field visits, e-learning modules, previous B2B events and much more activities.

Dr. Antonio Casula, Director General of Forestas-Italy welcomed participants to the event, while Dr. Maurizio Malloci, Director of Technical Service of Forestas-Italy and project coordinator, presented an overview of Forestas' ongoing efforts for cross-border cooperation with Mediterranean partner countries through several European funded projects. Also speaking on behalf of Forestas- Italy, the Project Manager Dr. Sara Maltoni underlined the fruitful cooperation among the countries taking part in the

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LIVINGAGRO project and the achieved results, among which the building of two Living Laboratory for Agroforestry Systems, namely Multifunctional Olive Systems (MOS) and Grazed Woodlands. In her speech, Dr. Maltoni emphasized the importance of agroforestry to face the challenges of climate change, affirming the role of the living laboratory as an open innovation environment aiming to support farmers and create interaction between stakeholders through ground-breaking technologies to increase the technology transfer of innovations in this field. She invited all attendees to join the LIVINGAGRO ICT Platform at the link https://livingagrolab.eu/ and Register to be part of the cross border living laboratories. After this short introduction to the project, it was time for the presentation of the innovations in the field of MOS.

Prof. Theodore Tsiligiridis, Professor of Information and Communication Technology at the Agricultural University of Athens in Greece, presented the FuitFlyNet-ii Project as an innovation working on an automated monitoring and control system against the olive fly and Mediterranean fruit fly.

Dr. Claudio Porqueddu from the CNR-ISPAAM- Italy, tackled the benefits and objectives of using innovative legume-based mixtures as cover crops. These include achieving sustainable soil management, preventing soil erosion, reducing the use of pesticides and fertilizers, improving carbon sequestration while retaining olive oil production.

Dr. Milad El Riachy focused on the "Time Domain-Nuclear Magnetic Resonance" (TD-NMR) as a useful tool to determine the oil content in olive paste. According to Dr. El Riachy, "the methods used today are very expensive and time-consuming, in addition to the problem caused by the large quantities of chemicals used that pollute the environment. Therefore, the TD-NMR offers a new alternative to determine the oil content in olive fruits in a short and cost effective way. Dr. El Riachy pointed out that this innovation depends on the absorption of radiofrequency radiation by an atomic nucleus in an intense magnetic field.

Dr. Andrea Pisanelli from the CNR-IRET in Italy, joined online to describe the traditional practice of using cover crops and green manure systems (olive pruning residues) as a sustainable and environmentally friendly model in agroforestry, emphasizing its ability to support olive cultivation, provide fodder for grazing animals in times of forage shortage, ultimately offering a sustainable method that provides social, economic and environmental benefits by improving soil fertility, providing natural habitat for beneficial organisms and reducing the cost of production mainly by reducing the use of fertilizers and pesticides.

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Dr. Antonio Brunori Director of PEFC -Italy presented a study on the marketing and expansion of agroforestry systems through the Pan European Forest Certification Program (PEFC). Dr. Brunori stated that this initiative is led by an international non-governmental non-profit organization, dedicated to promoting sustainable forest management through independent third-party certification and has recently developed a standard specifically addressed to Agroforestry Systems, as a way to address market needs for sustainably managed systems.

Dr. Luciana Baldoni from CNR-IBBR- Italy, discussed the effects of climate change on olive orchards revealing an exploration methodology to identify and test climate-adapted and stress-tolerant olive varieties, calling for a wide survey at the regional level within traditional olive orchards, possibly including old trees.

Prof. Prokopios Magiatis from the National and Kapodistrian University- Greece, introduced the Olive Predictor, a device consisting of a mini press that includes a small mill, a mini mixer and a centrifugal system capable of producing a sufficient amount of oil. This predictor helps to make the best choice of harvesting time, aiming to achieve the best compromise in terms of quantity and quality.

Dr. Abdel Kader El Hajj from LARI-Lebanon discussed the results of a two-years experiment carried out within the LIVINGAGRO project to assess green manure and cover crops effects on soil characteristics and olive orchard productivity in the town of Abra (south Lebanon). Dr. El Hajj presented details of the experiment, highlighting the land problems and how it benefited from the cover crops and agroforestry methods.

Open Discussion

Following the event's schedule, attendees had the opportunity to participate in open discussions through Q&A with experts and representatives of the LIVINGAGRO consortium, focusing on how to implement or further develop the innovations in their farms or research labs, and how to maintain the productivity of the system by using state-of-the-art scientific methods and innovations.

Answering the attendees' questions, Dr. Andrea Pisanelli encouraged farmers to adopt new spraying methods and to regulate the quantity of chemicals used in a way that does not damage the crop used by animals, stressing the importance of animal grazing in olive orchards to eliminate bad weeds.

Dr. Luciana Baldoni highlighted the new strategies pursued in olive growing, and the need to continually improve the search of traditional varieties and olive germplasm suited for a changing environment. In her

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discussion Dr. Baldoni underscored the necessity to identify the human skills and traditional knowledge that play an active role in improving the quantity and quality of oil.

Dr. Milad El Riachy called for the introduction of new technologies, but he expressed concern regarding the high cost of these technologies, which prevents their use by farmers due to the financial hardship experienced today in Lebanon.

Prof. Theodore Tsiligiridis stated that "farmers are looking for direct support and easy-to-apply solutions and not for guidance about the appropriate solution, and this is wrong because we have to find an integrated solution". He explained that first we need to study the site where to plant, the time required for planting, and what types of pesticides to use, and all of this must precede the choice of technology that we want to use.

On the sidelines

On the sidelines of the event, Dr. Sara Maltoni underscored the value of the LIVINGAGRO consortium and the professional organization of the LARI team, and its importance to help farmers facing challenges in Lebanon. She praised the existing cooperation between Lebanon and Italy in the agroforestry field, stressing that Lebanon is always highly devoted to conducting research, developing agricultural methods and helping farmers implement all new innovations despite the crisis the country is going through, and this indicates perseverance, strength and value of knowledge sharing.

Dr. Peter Moubarak, National Director of the LIVINGAGRO project noted that the response to the event was great and increased significantly, pointing out that the high number of registrations exceeded expectations. Dr. Moubarak explained that farmers aim to increase the production and reduce costs, that's why they are interested in issues related to the implementation of new techniques and methods. These topics are raised in workshops, where farmers can benefit, mainly, from the exchange of experiences with national and international experts, the research presented on the platform, and the exposure they get to new technologies.

Participants to the **Third B2B event on Multifunctional Olive Systems**, expressed their gratitude for this workshop, affirming that it will contribute to enhancing their knowledge in the scope of agroforestry work. Elie-Nazih Hedwane, project manager at Jouzour Loubnan, explained that the association works to preserve forest wealth and all existing biodiversity, hence their interest in agroforestry and this event to help farmers. According to Hedwane, benefiting from such a workshop "means that we are on the path toward a better development of our agriculture, and the implementation of new technologies and

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important innovations... awareness is not enough, the farmer needs encouragement to go through a new experience". Hedwane pointed out the existence of "a cooperation with the French Association of Agroforestry and this cooperation will expand to other agriculture". As for Youssef Bouezz, a farmer who owns an olive orchard, he affirmed that the interest in the LIVINGAGRO project stems from his aim to develop his agricultural system in an integrated manner and implement new scientific methods that could help him increase production and expand the marketing area. He believes that the cover crops topic, which was discussed during this workshop, will help to reduce the cost of production and the consumption of chemicals.

The <u>Cross Border Living Laboratories for Agroforestry (LIVINGAGRO) project</u> is co-funded by the European Union through the ENI CBC Med Programme 2014 – 2020 and implemented in Italy, Greece, Lebanon and Jordan. The project aims to support education, research and development, innovation, and technology transfer, including sharing of research results, by establishing two Living Labs, one for multifunctional olive systems (Living Lab 1) and the other for grazed woodlands (Living Lab 2).

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Project website: livingagrolab.eu

EU program website: enicbcmed.eu/projects/livingagro

















