



Project Number: 1567

Project Acronym: ISFERALDA

Project title: Improving Soil FERtility in Arid and semi-arid regions using Local organic DATE palm residues

D6-4 Symposium report of the international conference about the recycling of agricultural residues

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Summary

This deliverable on the one hand summarizes some of the different steps taken to organize the ISADAE 2024 international conference (Figure 1) and, on the other hand, presents the most important information and key figures of the conference.



Figure 1 : Logo of the ISADAE 2024 conference

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1 Introduction

From October 28 to 30, 2024, the International Conference on the Impacts of Soil Amendments on Dryland Agro-Ecosystems (ISADAE 2024) international conference took place in the university of Reims Champagne-Ardenne.

This deliverable describes the main information related to this conference.

2 Context and objective of the conference

Drylands, covering 41% of the Earth's land surface, play a crucial role in global food production. However, they face significant challenges, such as soil degradation and water scarcity, issues that are further exacerbated by the effects of climate change. Healthy soils in these regions are essential for maintaining ecosystem services, supporting agricultural production, and regulating water and nutrient cycles.

To enhance the sustainability of dryland agro-ecosystems, soil amendments can be an effective solution to enrich the soil and improve its production potential. However, amendments vary in terms of origin, composition, application practices, and frequency, and their effects are not always easily measurable.

Recognizing the importance of healthy soils, the ISADAE 2024 conference aims to bring together researchers, PhD students, and policy-makers to facilitate the exchange of research findings and experiences, assess various approaches to producing and applying soil amendments. It also aims to foster international cooperation in developing strategies and projects for sustainable soil management in dryland agro-ecosystems.

3 Organisation before the conference

3.1 Website

The website for ISADAE 2024 conference is accessible at this address: <https://isadae2024.sciencesconf.org/> (Figure 2).

It presents the scope of the conference, it describes the different the different topics, it presents the 6 keynotes speakers coming from Greece, Algeria, Spain, Italy and France.

The scope was the following one:

“Drylands, covering 41% of the Earth's land surface, play a critical role in global food production. However, these areas face significant challenges, including low soil quality and water scarcity, which are further exacerbated by climate change. Healthy dryland soils deliver ecosystem services and are crucial for supporting agricultural production and regulating water and nutrient cycles.

To enhance the sustainability of dryland agro-ecosystems, soil amendments can be employed to enrich the soil and improve its production potential. However, amendments can vary in terms of origin, composition, use practices, and frequency of application, and their effects are not always easy to demonstrate.

Recognizing the importance of healthy soils, the ISADAE 2024 conference aims to bring together researchers, PhD students, and policy-makers to facilitate the exchange of research findings and experiences, assess various approaches to producing and applying soil amendments. It also aims to foster international cooperation in developing strategies and projects for sustainable soil management in dryland agro-ecosystems.”

Six topics were proposed to present research work:

- Optimizing crop productivity and ecosystem services in dryland agro-ecosystems
- Soil hydrological processes and water management practices
- Linking soil biological processes and carbon/nutrient cycling to improve soil health
- Degradation and conservation strategies of soils in dry areas
- Economical aspects of soil management and valorization of natural resources
- Soils and drylands under climate change: impacts, adaptation and mitigation strategies.

All practical aspects are presented on this site (submission of abstracts, registration, accommodation).

The organisation and the scientific committee are presented. Eight nationalities are represented in the scientific committee.

The partners and the sponsors of this conference are presented on dedicated web pages.



Figure 2 : Screenshot of the ISADAE 2024 website

3.2 Publication opportunities

In parallel with this conference, some papers submitted to ISADAE 2024 will go through peer reviewing process by an international committee. Accepted papers will be published in the Proceeding journal IOP Conference Series: Earth and Environmental Science, indexed by Scopus (Figure 3).



Figure 3 : Screenshot of the IOP Science conference Series

Moreover, papers submitted to ISADAE 2024 and covering the topics of the journal were invited to be submitted to the Special Issue in Cambridge Prisms: Drylands with free Article Processing Charge. The

main article type in the special issue includes review article and original research article. More information can be found here: <https://www.cambridge.org/core/journals/cambridge-prisms-drylands> (Figure 4).



Figure 4 : Screenshot of the Cambridge Prisms, Drylands journal

4 ISADAE 2024 Conference

Program of ISADAE 2024 conference can be found at this address: https://isadae2024.sciencesconf.org/data/pages/ISADAE_2024_Final_Program.pdf. It includes opening remarks of president of the University of Reims Champagne-Ardenne and of the main funders of this conference.

From October 28 to 30, 2024, over one hundred researchers from 33 different countries participated to ISADAE 2024 (International Conference on the Impacts of Soil Amendments on Dryland Agro-Ecosystems) at the University of Reims Champagne-Ardenne, France (Figure 5, Figure 6). This scientific event provided a unique platform for bringing together researchers, PhD students, and policymakers to facilitate the exchange of research results and experiences, assess current approaches to soil amendment production and application, and promote international cooperation for sustainable soil management in dryland agro-ecosystems.

Over the course of these three days of intense scientific exchanges, six internationally renowned keynote speakers presented their most up-to-date research activities to introduce the different topics of the conference (Figure 7, Table 1).

In total, 40 oral presentations and 60 posters were presented, providing a rich and diverse overview of the current advances on these critical issues. The conference also strengthened the ties between researchers and policymakers, contributing to the development of concrete strategies and projects for sustainable soil management in arid regions.



Figure 5 : Countries represented at ISADAE 2024 conference



Figure 6 : Group photo of ISADAE 2024 conference



Figure 7 : Victor Kavvadias, keynote speaker, presenting his work during ISADAE 2024 conference

Table 1 : Keynotes speakers of ISADAE 2024 International Conference

Dr. Elena BALDI	Department of Agricultural and Food Sciences, University of Bologna	Italy
Dr. Maria Luz CAYUELA	Spanish National Research Council (CSIC), Segura Center for Soil Science and Applied Biology (CEDAS), Murcia	Spain
Prof. Yves COQUET	AgroParisTech, Paris	France
Prof. Ali DAOUDI	National School of Agronomy (ENSA) of Algiers, Algeria	Algeria
Dr. Victor KAVVADIAS	Hellenic Agricultural Organization DIMITRA, Institute of Soil and Water Resources, Athens	Greece
Dr. Pascal PODWOJEWSKI	Research Institute for Development (IRD), Bondy	France

Based on the abstract of the presentations, we made a word cloud (Figure 8). The main words and the main subjects that have been discussed during these 3 days are the soil, the organic amendments (biochar compost and manure), the agricultural production, the water and nutrient management and the climate change.



Figure 8 : Word cloud based on the abstract accepted for the ISADAE 2024 conference

This conference allowed the ISFERALDA project partners to present their research work. In total, 8 oral communications and 17 posters were presented by the members of the ISFERALDA project consortium.

This event attracted the attention of the media, particularly France 3, a French television channel, which interviewed Xavier MORVAN, coordinator of the ISFERALDA project and president of the organizing committee of the ISADAE 2024 conference, and presented a report of approximately 3 minutes on the research project and the conference (Figure 9).



Figure 9 : Screenshot of the TV program on the conference on the France 3 channel

5 Publications

The book of abstracts is available on the website at this address:

https://isadae2024.sciencesconf.org/data/pages/Book_of_Abstracts_ISADAE2024.pdf.

It brings together the summaries of the 89 communications of the conference.

To date, a bit less than 20 papers is accepted to be published in the Proceeding journal IOP Conference Series: Earth and Environmental Science, indexed by Scopus. The proceedings will be online during the beginning of 2025.