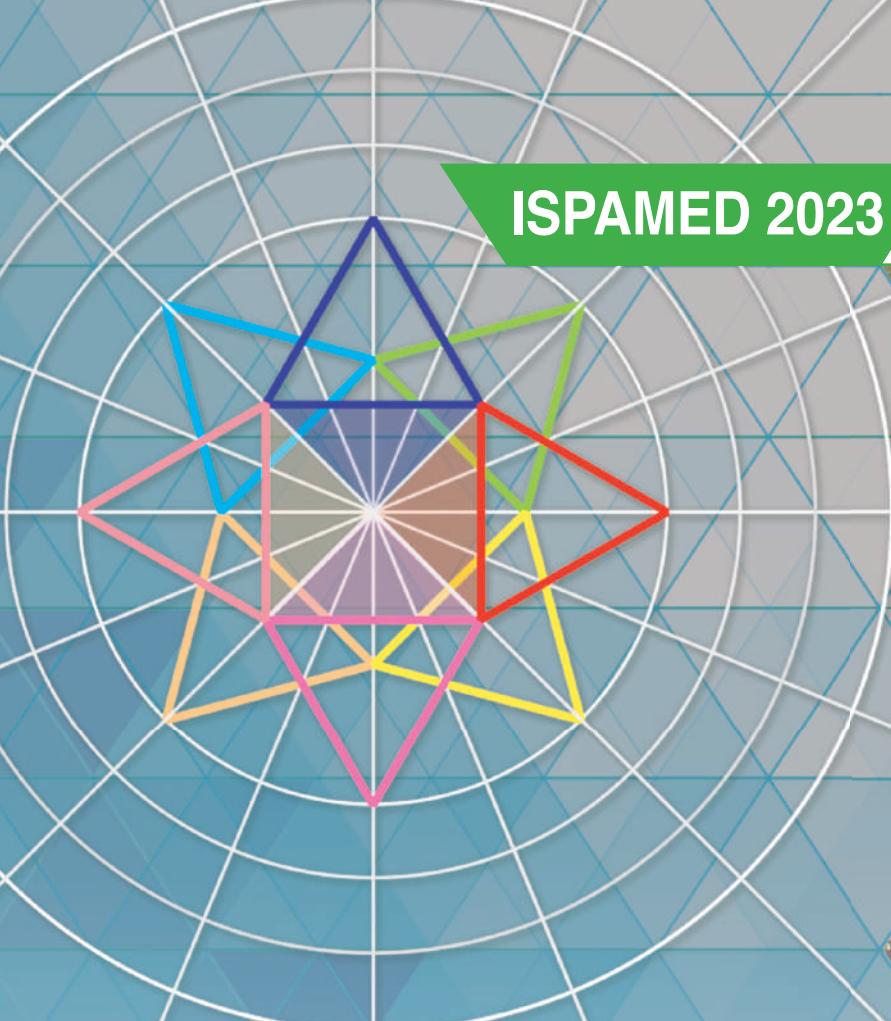




ISPAMED 2023



International Conference
Palermo 12 - 13 July 2023

International Conference

Innovations for Sustainable Crop Production in the Mediterranean Region

Palermo 12 - 13 July 2023

Dipartimento Scienze Agrarie, Alimentari e Forestali
Aula Magna "Gian Pietro Ballatore"
Viale delle Scienze, Edificio 4

SAAF **80**
DIPARTIMENTO **1942**
SCIENZE **2022**
AGRICOLE
ALIMENTARI
FORESTALI  Scienze
Agrarie



Partners

International Conference

“Innovations for Sustainable Crop Production in the Mediterranean Region”

WELCOME ADDRESS

Agriculture is an important sector with the capacity to fulfill the food requirements of a rapidly growing global population while also generating income. The adoption of high-input agricultural techniques in recent decades has resulted in various negative consequences. These include a decline in soil fertility, the advancement of desertification, an increase in greenhouse gas emissions, unsustainable utilization of non-renewable energy resources and a loss of biodiversity. It is evident that agriculture contributes to climate change and is also vulnerable to its effects. Therefore, there is a pressing need for innovative production methods that can enhance the sustainability of agricultural practices.

The primary objective of the International Conference “Innovations for Sustainable Crop Production in the Mediterranean Region”, which will take place at the Main Lecture Hall “Gian Pietro Ballatore” of the Department of Agricultural, Food and Forest Sciences (SAAF), University of Palermo, from 12th to 13th July 2023, is to assess the current state of environmental impacts in agriculture and promote potential innovations aimed at enhancing the sustainability of agricultural products.

To comprehensively address these topics, the program is divided into five thematic sessions.

- Climate Change, Biodiversity and Mediterranean Production.
- Enhancement of Water Resources and Food Safety.
- Economic aspects, sustainable crop production and Consumption Models.
- Advances in plant diseases and arthropod pests management in a context of climatic change.
- Sustainable greenhouse production systems for vegetable crops.

An important highlight of the conference will be the presentation of the results from the INTESA project (Italy-Tunisia 2014-2020) titled “Innovation in technologies to support the sustainable development of agribusiness”. These findings will be shared during the fifth session, contributing valuable insights into technological advancements for sustainable agribusiness.

This event offers a further opportunity to exchange knowledge and discuss cutting-edge research towards a more sustainable future for agriculture.

Chair of the Scientific Committee
Prof. **Tiziano Caruso**

Chair of the Organization Committee
Prof. **Giuseppe Di Miceli**



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- Prof. **Tiziano Caruso**, *University of Palermo, Italy – Chair*
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- Dott. **Francesco Salamone**, *University of Palermo, Italy*
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- Prof. **Salvatore La Bella**, *University of Palermo, Italy*
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ORGANIZATIONAL SECRETARIAT

- **Consorzio di Ricerca per lo Sviluppo di Sistemi Innovativi Agroambientali, Italy**
- **Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy**

Wednesday, 12 July 2023

8:30 Registration

9:30 Welcome, Opening and Addresses

- o **Prof Tiziano Caruso**, *Scientific Committee Chairman*
- o **Prof Massimo Midiri**, *Rector University of Palermo*
- o **Dr Dario Cartabellotta**, *Director General of Agriculture Sicily Region*
- o **Dr Luca Sammartino**, *Vice President of Regional Government*

10:00 **SESSION 1 - Climate Change, Biodiversity and Mediterranean Production**

Chair: **Prof Tiziano CARUSO**, *Department of Agricultural, Food and Forest Sciences – University of Palermo, Italy*

Keynote lecture

New fruit species adapted to a changing climate

Prof Florin STANICA, *Faculty of Horticulture, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania*

Invited speaker

Tomato cultivation in Sicily: from tradition to innovation

Dr Rosario Paolo MAURO, *Department of Agriculture, Food and Environment, University of Catania, Italy*

Algae-based biostimulant positively affects germination and seedling vigour in durum wheat under salt stress conditions

Dr Angelo ROSSINI, *Department of Agricultural and Forest Sciences, University of Tuscia, Italy*

Agronomic response and leaf gas exchange of old Sicilian wheat populations

Dr Sebastiano Andrea CORINZIA, *Department of Agriculture, Food and Environment, University of Catania, Italy*

Bringing value to Albanian biodiversity: the case of MAPs challenges for the future.

Dr Alban IBRALIU, *Department of Crop Production, Agricultural University of Tirana, Albania*

Exploitation of durum wheat agrobiodiversity: yield performance and quality of the grain and flour of Sicilian landraces

Dr Silvia ZINGALE, *Department of Agriculture, Food and Environment, University of Catania, Italy*

13.00 Light lunch

14.30 **SESSION 2 - Enhancement of water resources and food safety**

Chair: Prof **Maurizio BORIN**, Department of Agronomy, Food, Natural Resources, Animals and the Environment, University of Padova, Italy

Keynote lecture

Sustainable water resources management to enhance food security: innovation and strategies

Dr **Federica CARUCCI**, Department of Agricultural and Forest Sciences, University of Tuscia, Italy

Invited speaker

Treated wastewater irrigation of oregano crop in a Mediterranean environment: effects on growth, yield and essential oil compounds

Dr **Mario LICATA**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Sustainable mitigation strategies to enhance tomato performance under nitrogen and water deficit: the role of silicon and plant breeding

Prof **Susana CARVALHO**, Faculty of Sciences, University of Porto, Vairão, Portugal

Low-cost systems for precise and sustainable orchard irrigation management: combining proximal and remote approaches

Dr **Roberto MASSENTI**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy and Dr **Mariana MARTINES**, Graniot, Spain

Identification of Putative Biomarkers Involved in Defense Response to *Spilotea oleagina* in olive by using a RNAseq approach

Dr **Annalisa MARCHESE**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Farmers' perceptions and attitudes in using treated wastewater and desalinated water for irrigation: Yuck factor vs sustainability

Prof **Sandra RICART**, Department of Electronics, Information and Bioengineering - Politecnico di Milano, Italy

17.00 **Short presentation**

Chair: Prof. **Youssef ROUPHAEL**, Department of Agricultural Sciences, University of Napoli, Italy

Ecklonia maxima-derivate seaweed extract supply as mitigation strategy to alleviate drought stress in chicory plants

Dr **Beppe Benedetto CONSENTINO**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Life Cycle Assessment of Tomatoes Cultivated in an Innovative Soilless System: A Case Study in Sicily, Italy

Dr **Simona PRESTIGIACOMO**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Synergistic Effect of a Plant-Derived Protein Hydrolysate and Arbuscular Mycorrhizal Fungi on Eggplant Grown in Open Fields: A Two-Year Study

Dr **Lorena VULTAGGIO**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Exploring factors affecting *Medicago intertexta* L. seed yield in the Mediterranean Environment: an evaluation

Dr **Lucia DINOLFO**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Using native Mediterranean plants to mitigate anthropogenic impacts in urban areas

Dr **Simona APRILE**, Research Centre for Plant Protection and Certification, Italy

Preliminary studies on somatic embryogenesis from floral explants of *Sulla coronaria* L.

Dr **Monica AUTERI**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Estimating leaf and plant water status with phylloclip, a new low-cost sensor to estimate leaf vapor condensation

Dr **Alessandro CARELLA**, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Vegetable protein hydrolysates and mycorrhizae inoculation to cope water stress effects on nursery potted *Corylus avellana* L. young plants

Dr **Giuseppe Carlo MODARELLI**, Department of Agricultural Sciences, University of Naples Federico II, Portici, Italy

Growing Genovese basil in a Mediterranean environment: influence of multiple pre-harvest factors on production and functional and sensory quality

Dr **Michele CIRIELLO**, Department of Agricultural Sciences, University of Naples Federico II, Portici, Italy

Wine to Power: produzione di metano sintetico sfruttando la CO₂ di fermentazione dei vini

Dr **Mario RAGUSA**, Istituto Regionale Vini e Oli di Sicilia - IRVOS

20:30 **CONFERENCE DINNER, “Viridarium trecentesco”** of the Complesso Monumentale dello Steri, Piazza Marina, 60, 90133 Palermo PA

Thursday, 13 July 2023

9:00 **SESSION 3 - Sustainable Production and Consumption Models**

Chair: Prof Pietro COLUMBA, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Keynote lecture

Credence Goods and the Formulation of an African Commodities Sustainable Strategy

Prof Vincenzo PROVENZANO, Dipartimento di Scienze Economiche, Aziendali e Statistiche, University of Palermo

Invited speaker

Environmental sustainability and economic viability in Mediterranean agriculture

Prof Gioacchino PAPPALARDO, Department of Agriculture, Food and Environment, University of Catania, Italy

Enzymatic activity like a crucial indicator of the soil health

Prof Geanina BIREESCU, Institute of Biological Research, Romania

Consumer preferences and attitudes toward Mediterranean production: Arancia Rossa di Sicilia PGI

Dr Carla ZARBÀ, Department of Agriculture, Food and Environment, University of Catania, Italy

Consumption patterns and supply of food markets in the Mediterranean

Prof Francesc FUSTÈ-FORNÈ, University of Girona, Spain

11:30 **SESSION 4 - Advances in plant diseases and arthropod pests management in a context of climate change**

Chair: Prof Salvatore Walter DAVINO, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Keynote lecture

Can global warming accelerate virus evolution and emergence of resistance-breaking isolates

Prof Luis RUBIO, Instituto Valenciano de Investigaciones Agrarias, Valencia, Spain Invited speaker

Invited speaker

Application of innovative techniques for the detection of plant pathogens

Dr Slavica MATIC, Institute for Sustainable Plant Protection, CNR, Italy

Tomato brown rugose fruit virus outbreak in Sicily: the evolution of its management after its first introduction in 2018

Dr Andrea G. CARUSO, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Effects of abiotic stresses and climate change on plant-fungi symbiosis

Dr Livio TORTA, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Climate change and insects in agroecosystems

Prof Gabriella LO VERDE, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

14:00 **Light Lunch**

15:00 **SESSION 5 - Sustainable horticultural crops for greenhouse production: presentation of INTESA project results**

Chair: Prof Leo SABATINO, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Keynote lecture

Redefinition of sustainable vegetable production through the exploration of cutting-edge cultivation management practices and DSS application

Prof Georgia NTATSI, Department of Crop Science, Agricultural University of Athens, Greece

Invited speaker

Use of the solar energy for sustainable environmental solutions

Prof Zied DRISS, Ecole Nationale d'Ingénieurs de Sfax, Tunisia

Agriponic: a sustainable cultivation model for soilless tomato production

Dr Giovanni GUGLIUZZA, Research Centre for Plant Protection and Certification, Italy

Sustainable Approaches of Protected Vegetables Cultivation in Indian Arid and Semi-arid Regions

Dr Pradeep KUMAR, Central Arid Zone Research Institute of Jodhpur, India

Climatic change and development of new horticulture models in Tunisia

Dr Slim ZOUARÌ, Union tunisienne de l'agriculture et de la pêche, Tunisia

17.00 **Short presentation**

Chair: Prof Riccardo LO BIANCO, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy

Tuta absoluta potential vector of the emerging Tomato Brown Rugose Fruit Virus

Dr Roberto RIZZO, *Research Centre for Plant Protection and Certification, Italy*

Use of solar seawater distiller to provide clean water for irrigating tomato-cultivated greenhouses

Dr Ridha BOUDHIAF, Laboratory of Electro-Mechanic Systems (LASEM), National School of Engineers of Sfax (ENIS), University of Sfax, Tunisia

Consumer preferences regarding beef consumption: an analysis in the Mediterranean area

Dr Federico MODICA, *Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy*

The Correlation between the Economic Development of Agriculture and Tourism: the Case Study in Southern Sicily

Dr María José LÓPEZ-SERRANO, *Department of Economics, Business and Statistics, University of Palermo, Italy*

Biodesinfection in Spanish horticultural crops as a profitable and efficient alternative: a step towards circular economy

Dr Ana BATLLES-DELAFUENTE, *Department of Economics and Business, University of Almería, Spain*

Sustainability in precision irrigation

Dr Manlio GRUTTADURIA, *Netafim Italia S.r.l.*

Nectar-inhabiting bacteria: effects on egg parasitoids of invasive stink bugs

Dr Evgenia SARAKATSANI, *Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy*

Biological control strategy in Sicily: the Biofactory of Ramacca (CT, Italy)

Dr Giuseppe GRECO, Ente di Sviluppo Agricolo della Regione Siciliana

Functional food: our experience with mineral biofortification

Dr Sonya VASTO, Department of Biological, Chemical and Pharmaceutical Sciences and Technologies,
University of Palermo, Italy

19:30 CONCLUSION

Notes

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