



## The I International Emerging Crops Symposium (IECS) **NutriCrop Network**

Exploring the Role of Artificial Intelligence in Agricultural Innovation

This international forum will be dedicated to emerging crops and the transformative role of Artificial Intelligence (AI) in agriculture. The symposium will bring together researchers, industry experts, and professionals from the agri-food and health sectors to exchange knowledge and foster collaboration.

Highlights include:

- Plenary session on AI in the agri-food sector
- Thematic sessions on agronomy, nutrition, and biomedicine
- Focus on underutilized crops to promote biodiversity, sustainability, and resilience against climate change

Discover how AI can enhance productivity, improve crop management, and support sustainable practices. Be part of this transformational event addressing global challenges like food security and climate change through the potential of emerging crops.

### COLLABORATORS



Access the event website  
by **scanning the QR**



**27-29 May 25**

Residencia La Cristalera UAM  
Miraflores de la Sierra - Madrid

# I International Emerging Crops Symposium

NutriCrop Network:  
Exploring the Role of Artificial Intelligence in Agricultural Innovation



**UAM**  
Universidad Autónoma  
de Madrid

**FUAM**  
Fundación  
Universidad Autónoma  
de Madrid

**NUTRI**  
**Crop**

## 📅 Day 1: Tuesday May 27, 2025

### Agri-food Innovations for a Sustainable Future

2- 2.30 pm

Registration and Welcome

2.30 – 3.00 pm

Opening Session  
Opening speech by academic authorities

3.00 - 4.30 pm

Plenary Session  
Em. Prof dr. ir. Josse De Baerdemaeker,  
Department of Biosystems,  
Division MeBioS, Belgium.  
"Future crops powered by AI"

4.30 pm - 5.00 pm

Coffee and Networking

5.00 - 6.30 pm

Session Artificial Intelligence and its potential use in the cultivation of emerging species

Juan Francisco Delgado Morales Vicepresidente de la Fundación Europea para la Innovación y Desarrollo Tecnológico INTEC; Senator World Business Angels Investment Forum (WBAF), Spain. "Artificial Intelligence in the Development of Emerging Crops: Innovation and Sustainability"

Masahiro Ryo, Professor of Environmental Data Science, Brandenburg University of Technology Cottbus-Senftenberg & Group Leader of "Artificial Intelligence for Smart Agriculture" Unit, Leibniz-Centre for Agricultural Landscape Research (ZALF), Germany  
"Deep learning for jointly

analyzing agricultural big-data and small-data"

Rocío Hernández Clemente, Investigadora Ramón y Cajal, Universidad de Córdoba, Spain. "Quantifying functional traits for precision control and management of agroforestry systems using radiative transfer models (MTR) and machine learning from hyperspectral and thermal data. Exploring new challenges in Argan management"

8.30 pm Dinner

## 📅 Day 2: Wednesday, May 28, 2025

### Emerging Crops and Their Impact on Food and Health

9.00 – 10.30 am

Agronomy Session 1 - Cultivation, management and genetic improvement techniques

Susana Vilariño, Directora I+D+i ALGOSUR SA, Seville, Spain. "Emerging Crops: Pioneering a New Agronomy"

Ana María Molina Olmo, CEO, GrodiTech, Almería, Spain. "Robotics with artificial vision and drones for productive improvement in emerging crops"

Two 15-minute presentations on innovative agronomic techniques for growing emerging crops (selected from those registered)

10.30 – 12 pm

Coffee and Networking  
Poster Session

12:00 pm – 13.30 pm

Agronomy Session 2 - Emerging crops in a context of climate change

Prof. Dr. Markus Stetter, Ecological Plant Genomics, University of Cologne, Institute for Plant Sciences, Germany. "Ancient crops for future agriculture - the evolution and adaptation of grain amaranth"

María Reguera Blázquez, Universidad Autónoma de Madrid, Spain. "Climate-smart agriculture: integrating crop diversification to enhance food quality under stressful conditions"

Two 15-minute presentations on the impact of the environment on emerging crops (selected from those registered)

13.30 pm Lunch

3.00 – 4.30 pm

Food Session - Nutritional Value and Food Security  
Dr Proestos Charalampos, Professor in Food Chemistry, Director of Food Chemistry Laboratory Director of Sector II of the Department of Chemistry, National and

Kapodistrian University of Athens, Greece. "Application of "green" extraction techniques to obtain Bioactive Compounds from Plant By-Products to Produce Skin Cosmetics by nanoencapsulation"

Prof. Reikia Belahsen IUNS Past Secretary General Training and Research Unit on Nutrition & Food Sciences Chouaib Doukkali University School of Sciences El Jadida, Morocco. "Contribution of the valorization of underused or wasted food to food and nutritional security: the case of wild edible plants"

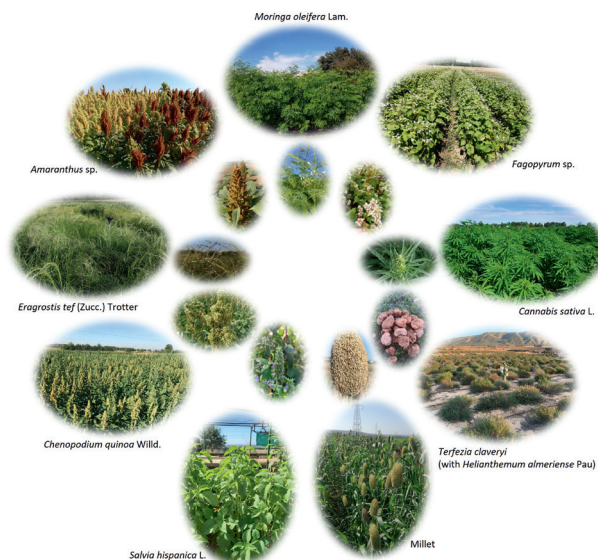
Two 15-minute presentations on the impact of the environment on emerging crops (selected from those registered)

4.30 – 5.30 pm

Coffee and Networking  
Poster Session

5.30 - 6.30 pm

Health Session - Impact on Human Health



Antonio Carrillo, Universidad de Sevilla, Spain. "Bioactivity of protein hydrolysates in the key components of the metabolic diseases"

Two 15-minute presentations on the impact of emerging crops on human health.

6.45 - 8 pm

Roundtable - Innovation and Challenges in Emerging Crop Agriculture Discussion between experts and industry representatives on innovation and challenges in the agriculture of emerging crops: Representative ALGOSUR SL, Representatives of Farmer Cooperatives, Representative of the Association of Women in the Rural World, Expert in agronomic research, Expert in food research and Expert in health research".

8.30 Dinner

## 📅 Day 3: Thursday May 29, 2025

An international event dedicated to agronomic innovation with the participation of the Biotechnology Spanish Network of Beneficial Plant-Microorganism Interactions and the NutriCrop Spanish Network

9.00 – 10.40 am

Agronomy Session 2 – Plant-Microorganism Interaction in agricultural systems of emerging crops

Shaun Ferguson, Researcher, Department of Molecular Biology and Genetics - Plant Molecular Biology, Aarhus University, Denmark.  
"Investigating the microbial genetic traits involved in plant

colonisation and community interactions, to enhance crop production and resiliency"

José David Flores Félix, Universidad de Salamanca  
Two 20-minute presentations on the function of microorganisms associated with emerging species and/or pest control strategies (selected from those registered). "Bacterial biostimulants for the improvement of bioactive compounds in fresh edible crops"

10.40 – 11.45 am

Coffee and Networking  
Poster Session

11.45 am – 12.25 pm

Two 20-minute presentations on the function of microorganisms associated with emerging species and pest control strategies (selected from those registered)

12.30 pm – 13.30 pm

Closing Session

Final summary of the event, conclusions and next steps by the organizers, presentation of awards and closing remarks by the academic authorities

14.00: Lunch