



# Master of Science Programme in Mediterranean Organic Agriculture

## Academic Year 2024 - 2025

### DESCRIPTION

The Master of Science Programme in Mediterranean Organic Agriculture (MOA) provides a two-year curriculum aiming at creating the next generation of professionals able to foster development of organic agriculture and meet sustainability goals. The master programme proposes a system-oriented approach in organic agriculture as a complex and dynamic process that requires careful management to ensure long-term sustainability and resilience. It integrates knowledge and methods from multiple disciplines to create sustainable organic food systems that match with the needs of local communities and territories in a range of bio-physical and socio-economic contexts. Innovative learning and teaching strategies are combined to advance students technical and analytical skills together with the important soft skills of communication, collaboration, creativity and critical thinking.

At the end of the course, MOA students will be able to promote processes for the development of organic sector aimed at agroecological transition and sustainable food systems development.

In particular, students will be able to:

- Master the principles and practices of organic agriculture, encompassing areas such as crop management, soil health, and pest and disease control;
- Develop strategies for planning and advocating the transition to organic agriculture, while embracing a holistic view of the entire value chain;
- Evaluate organic farming and food production from environmental, social, and economic perspectives;
- Gain a comprehensive understanding of the policy and regulatory frameworks governing organic agriculture at local, national, and international levels;
- Employ innovative solutions to enhance the sustainability and resilience of organic farming and food systems;
- Cultivate collaborative problem-solving skills and adopt a system thinking approach to tackle main challenges within organic sector.

The programme involves CIHEAM Bari staff, international scientists and practitioners with an exceptional contributions to the organic sector. The first year of the MOA programme is composed of eight thematic units and an applied project activities. During the second year, students will carry out the research project on specific topics. The teaching and learning methods are hands-on and experiential, involving peer education, field trips, technical visits, and active participation. The master's programme fosters strong partnerships with diverse enterprises, effectively connecting the worlds of academia and industry. This connection enriches students' educational journey, providing them with a comprehensive learning experience and boosting their professional opportunities.

### ORGANIZATION

**First Year: 60 ECTS**

**Diploma: Master**

**Duration: October 2024 - June 2025**

**Second Year: 60 ECTS**

**Diploma: Master of Science**

**Duration: November 2025 - October 2026**

### CANDIDATES' PROFILE

The course is addressed to new graduate students and young professionals with a university background related to agronomic, horticultural, agricultural marketing and socio-economic issues.

**Applicants should hold a university degree awarding minimum 180 ECTS, or they must have completed four out of five years of studies, upon agreement between the sending university and CIHEAM Bari** (the year attended at CIHEAM Bari is recognized as final to graduate at the university of origin). Work experience and other qualifications will be evaluated and are considered as an added value in the selection process. Applicants must have a good knowledge of spoken and written English and access to computer facilities.

### ADMISSION

Selection of students is based on:

1. Screening of application-supporting documents
2. Online interviews

**Applications: through an online procedure**

**Deadline: 31 May 2024**

### COSTS

**Registration fee:** 200.00€/year

**Tuition fee:** 500.00€/month (travel, accommodation and insurance expenses not included)

### SCHOLARSHIPS

CIHEAM Bari grants full or partial scholarships to selected candidates according to a ranking list.

Priority is given to students coming from CIHEAM Member countries and other Mediterranean, Western-Balkan, African and Middle Eastern Countries.

**LANGUAGE OF INSTRUCTION:** English

For more details about MOA:

[www.iamb.it/education/masters/moa](http://www.iamb.it/education/masters/moa)

For further information about the application procedure:

[www.iamb.it/education/application](http://www.iamb.it/education/application)

## First-year programme

**Unit I - Sustainability and resilience in agrifood systems (distance learning):** the unit frames the concepts of sustainability, sustainable development and resilience of agrifood systems; describes elements and activities from food production to consumption; and presents policies, strategies and initiatives to foster transformation and transition processes. A multi-dimensional framework for sustainability assessment is introduced with real-life examples. The organic food system is considered a pilot model and driver for sustainable food production and consumption.

**Unit II - Agroecology:** the unit focuses on the ecological processes and principles to design a sustainable farming system that promotes agroecological transition; describes the range of ecosystem services from an agroecosystem perspective; provides tools and approaches to quantify and understand the value of ecosystem services that influence the sustainability; and explains interconnections between organic agriculture and agroecology.

**Unit III - Organic agriculture principles, concepts and frameworks:** the unit provides an overview of the history of organic agriculture and philosophy and principles; explains legislation governing the production, processing, distribution and marketing of organic food products; and describes the certification schemes and inspections under specific regulations and standards.

**Unit IV - Soil management and fertility:** the unit provides principles and practices for soil management and fertility in organic farming system; considers organic farms as a potential self-sustaining biological system that adopt practices to improve soil health and fertility and boost productivity by reducing external inputs; explains what are the differences between organic vs regenerative vs carbon farming practices; offers hands-on experiences on nutrients dynamic in soil and plant under different management systems; and describes the principles of circular economy and demonstrates technological approaches for biomass recycling and nutrient cycling on a farm scale.

**Unit V – Pests and diseases management:** the unit emphasizes the importance of a holistic approach to pest and disease management in organic agriculture, where prevention, monitoring, and the use of multiple control methods are key to achieving sustainable and healthy crop production; describes innovative approaches to prevent and control common pests and diseases that affect organic crops; and applies the multi-level approach to agroecosystem health as essential for a successful plant healthcare strategy in organic agriculture.

**Unit VI – Sustainability management in agribusiness:** the unit provides principles of agricultural economics, financial accounting and business planning with a focus on improving sustainability; integrates methods for sustainability assessments as decision-making tools towards more competitive and sustainable organic agribusiness; uses the case studies to assess multi-dimensional and multi-scale sustainability; introduces environmental certification schemes for more sustainable and inclusive organic agribusiness.

**Unit VII - Organic food value chain:** the unit focuses on developing short, transparent and sustainable organic value chains by analysing their components, actors and services fostering interactions; analyses organic food consumption, consumer demands and markets focusing on marketing strategies; provides a holistic approach to define and evaluate organic food quality; exploits innovative technologies that create values during entered value chains.

**UNIT VIII - Policies and rural development:** the unit provides a comprehensive understanding of national and international policy frameworks and rural development opportunity in organic sector; focuses on relations between territorial and socio-economic features and importance of community participation and stakeholder networking for future development; demonstrates successful organic agriculture initiatives in rural development contexts.

### **Applied Project: Collaborative problem solving and system thinking**

Applied project addresses the main problems of local organic enterprises. Project aims to develop the collaborative problem-solving competencies of students to effectively engage in a process to solve a problem by sharing the understanding, pooling their knowledge and effort required to come to a solution. The activities are designed to develop the students' capacity to observe, analyse and propose solutions to complex problems by applying combined approaches from different disciplines.

## Second-year programme

Students who have successfully completed their first year are eligible for admission to the second-year programme, where they engage in research activities under the guidance of CIHEAM Bari staffs in collaboration with national and international research and innovation institutions, as well as enterprises. Students have the flexibility to choose projects aligned with their interests, facilitating future career development. The key focus areas for the Master of Science programme include cropping systems, soil fertility, by-product management; biological control and natural compounds for plant health; organic food systems and sustainability assessment; consumer, marketing and business model; socio-economic aspects and support policies; organic food and value-added processes and product.

**UNIT I - Research methodology and tools:** the unit aims at providing students with a thorough comprehension of the fundamental principles, methodologies, and instruments employed in conducting scientific research across diverse disciplines. Students will acquire proficiency in analyzing and handling research data, as well as mastering the art of scientific writing and the creation of effective scientific communication.

**UNIT II - Advanced research in organic food and farming systems:** the unit provides the students at understanding of cross-disciplinary collaboration in research and innovation, along with the ability to design research projects. Students will be equipped with the knowledge and skills necessary for designing and managing the project proposals as well as identifying the most promising funding programmes.