XII MASTER IN OLIVE GROWING AND OIL TECHNOLOGY

Cordoba | Spain | September 2017

www.masterolivicultura.org
INTRODUCTION

The world productions of olive oil and table olive, the two main products of some 10 million hectares of olive groves, reach 2,800,000 t and 1,700,000 t respectively. More than 98% of this production is to be found in the Mediterranean Basin, where this agricultural system has been developing for thousands of years, characterised by its adaptation to the environment and its empiricism.

Several factors have modified the olive production and processing systems in the last decades. The crisis of traditional agriculture and the valorisation of olive oil, due to its organoleptic attributes and its beneficial influence on health, are probably the two most important features. As a consequence great advances have been made in olive growing and olive oil technology.

Spain is the main olive producing country. The average olive oil production in Spain has increased in recent years and its productive potential can be estimated at 1,100,000 t of olive oil. The volume exported has also increased to approximately 400,000 t. Spain is also at the forefront of table olive production and exportation with 500,000 t and 300,000 t respectively. Besides the economic importance of olive products, the R&D efforts made over the last decades have placed Spain among the leading countries in the technological progress of olive groves and their products.

The existence in Córdoba of long-standing teaching and research institutions such as the Universidad de Córdoba (UCO), the Instituto Andaluz de Investigación y Formación Agraria, Pesquera, Alimentaria y de la Producción Ecológica (IFAPA) and the Instituto de Agricultura Sostenible (IAS), and their proximity to Sevilla and Jaén, the home of other prestigious institutions working in the subject: the Instituto de la Grasa (IG), the Instituto de Recursos Naturales y Agrobiología de Sevilla (IRNAS) and the Estación de Olivicultura y Elaiotecnia de Jaén (EOE), provide an excellent venue at which to develop an international programme on olive growing and on the processing of olive oil and table olives, contributing to train professionals and researchers in these fields and to develop cooperation relationships between the participants.

OBJECTIVES

The objective of the Master is to train professionals whose profile responds to the growing demand for specialists at the highest level in olive growing and olive oil technology. Hence, the training, both theoretical and practical, is characterised by:

- An updated content of the fundamental scientific aspects and the most innovative technologies
- Orientation towards the obtention of quality productions
- Knowledge of the economic framework of the sector, so that it can be increasingly more competitive, in both traditional and new markets.

Furthermore, a period of initiation into research in the field of olive growing and olive oil technology is introduced, leading to a Master Thesis.
ORGANISING INSTITUTIONS

The Master programme is jointly organised by the Universidad de Córdoba (UCO), the Consejería de Agricultura, Pesca y Medio Ambiente de la Junta de Andalucía (CAP), the Instituto Andaluz de Investigación y Formación Agraria, Pesquera, Alimentaria y de la Producción Ecológica (IFAPA), the International Olive Council (IOC), the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) through the Mediterranean Agronomic Institute of Zaragoza (IAMZ), the Spanish Higher Council for Scientific Research (CSIC) and the Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA).

The Master is an official Master of the Spanish university system awarded by the University of Córdoba. It is likewise a Master of the CIHEAM, approved by its Governing Board and recognised by the State of Spain as equivalent to the official Master degree of the Spanish university system.

STRUCTURE

The Master programme is spread across two academic years, the first year covers the Postgraduate Specialisation Course and the second year, of initiation to research, leading to the preparation of the Master of Science thesis, with a total of 120 ECTS.

First year

The Specialisation course (60 ECTS) is held during the first year, and is made up of theoretical lectures, practical field and laboratory work and technical visits. The course will take place from the end of September 2017 to the end of May 2018 mainly in morning sessions. Full time commitment is required for this course.

With the objective of satisfying the demand of professionals from the sector to attend part of the Specialisation course, as it is difficult for them to participate in the entire course, it has been structured in weekly modules which they can attend and thus complete a retraining period.

The modules of the Specialisation course that professionals from the sector may attend are specified later in the Programme.

Second year

The participants that have passed all the subjects in the Postgraduate Specialisation Course may opt to complete the Master programme. In order to do so, 60 ECTS must be earned through initiation to research work and a written Thesis with the results of a research project, to be presented publicly before an examining board. However, only those participants that have obtained an average score of 7/10 or higher in the Postgraduate Specialisation Course may opt for the second year scholarships awarded by the organising institutions.
The Master of Science Thesis will be prepared following approval of a project presented by the candidate under the supervision of a Thesis Tutor. The subject will be chosen by the candidate in accordance with his or her training interests, following the acceptance of the Thesis Tutor, who should be a Doctor of renowned experience.

ORGANISATION

Admission

The Master caters for a maximum of 30 participants satisfying the following conditions:

a) University degree, preferably in agronomy, biology, agricultural industry or food technology.

b) Proficiency in Spanish, which will be the working language of the course. For those candidates admitted whose first language is not Spanish, courses to perfect their knowledge will be organised from July to September 2017. The Instituto Cervantes (http://www.cervantes.es) has a virtual classroom to teach Spanish through the internet. Information can be obtained at http://ave.cervantes.es, available in several languages.

c) Reading knowledge of English, necessary to follow part of the material distributed during the course.

The admission of professionals from the sector as participants in given modules, once the programme has commenced, should be approved by the Director of the course.

Diplomas

Upon completion of the Postgraduate Specialisation Course, the participants who have passed the stipulated control tests will receive the Postgraduate Specialisation Diploma in Olive Growing and Oil Technology awarded by CIHEAM.

Those participants that have completed the whole cycle will obtain the University Master Degree in Olive Growing and Oil Technology. The official Spanish degree will be awarded by the University of Córdoba, and CIHEAM will award its Master of Science Degree.

The professionals from the sector who attend the modules will receive a Certificate of attendance and success for the module or modules completed. If all the modules of the Areas of Production or Industrialisation are completed, they will receive a Diploma of University Expert in Olive Growing or in Oil Technology, in accordance with the part followed.
Registration

Application forms attached to this leaflet should be completed and sent to the Director of the Programme:

Prof. Ricardo Fernández Escobar
Departamento de Agronomía
Universidad de Córdoba
Campus de Rabanales, Edificio C4
Carretera de Madrid km. 396
14071 Córdoba (Spain)
Fax: +34 957 218569
E-mail: masterolivicultura@uco.es

Application forms should be sent by ordinary mail or through the website http://masterolivicultura.org. The deadline for the submission of applications from non-Spanish candidates that require the Spanish language course and/or that need a visa to enter Spain is 15 April 2017. Applications from Spanish candidates may be submitted up until the dates determined by the University of Córdoba for the first preliminary registration phase, in order to resolve the admission procedure before the start of Specialisation course. For further information consult the website https://www.uco.es/idep. A copy of the following documents should be submitted together with the application form:

- National Identity card (or passport if applicable)
- University degree
- Transcript of records
- Curriculum vitae
- Letter stating reasons for participating in the Master

When selecting participants, consideration will be given to the merits of applicants, and prior knowledge of Spanish will be valued. Provisional acceptance will be duly notified together with instructions for registration and enrolment at the University of Córdoba.

Registration fees

Registration fees for students of all nationalities amount to 2,200 euro for each academic year of the Master. This amount is orientative and may vary once the official rates of postgraduate programme credits have been set by the University of Córdoba. This amount includes teaching fees only. In cases of partial participation in modules or parts of the Programme of the Specialisation course, the registration fees will be established by the Social Council of the University of Córdoba.

Participants must show proof of health insurance cover before the beginning of the course. The Direction can provide information if required.
Scholarships

The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) may award a limited number of scholarships to participants from member countries of this organisation. Scholarships will be awarded according to academic merit.

Non Spanish candidates may also apply for scholarships to the Spanish Agency for International Cooperation for Development (AECID). Those interested may consult the website www.becasmae and send an application through the same site or they may contact the Embassy of Spain in their country or the nearest Consulate.

More information on scholarships may be obtained at the following sites:

http://www.uco.es/idep/masteres/principal/becas-ayudas

http://www.fundacioncarolina.es/formacion/
PROGRAMME OF THE POSTGRADUATE SPECIALISATION COURSE

PRODUCTION

I.- THE PLANT (8 ECTS)
- Development, growth and physiology of the olive tree (Module 1)
- Flower and fruit set. Structures and processes (Module 2)
- Plant material and breeding (Module 3)
- Propagation (Module 4)

II.- CULTIVATION TECHNIQUES (17 ECTS)
- Design and establishment of plantations (Module 5)
- Pruning (Module 6)
- Nutrition and fertilisation (Module 7)
- Soil management (Module 8)
- Irrigation (Module 9)
- Irrigation methods and systems (Module 10)
- Harvest (Module 11)
- Experimental methods in olive growing (Module 12)

III.- CROP PROTECTION (4 ECTS)
- Pests (Module 13)
- Crop diseases and health (Module 14)

INDUSTRIALISATION

I.- PROCESSING OF TABLE OLIVES (6 ECTS)
- Green olives (Module 15)
- Black olives (Module 16)

II.- OIL PROCESSING AND QUALITY (19 ECTS)
- Preliminary operations. Separation systems (Module 17)
- Control of the process. Storage (Module 18)
- Quality. Bottling of virgin olive oil. Quality in management (Module 19)
- Practicals: Placements in industries. Tasting course (Module 20)
- Industrial projects (Module 21)
- Olive oil and human health (Module 22)

ECONOMICS (6 ECTS)

- Production systems, demand and consumption (Module 23)
- Commercialisation and marketing (Module 24)
- International trade, industrial group strategies, cooperatives (Module 25)
- Information systems for characterising the olive oil sector (Module 26)
CALENDAR

In order for the lectures of the Postgraduate Specialisation Course to coincide with the annual cycle of the crop, the *Industrialisation* part of the programme will be given in the first term of the course in Seville, except the modules "Industrial projects" and "Olive oil and human health", which will be given in Córdoba. The parts that correspond to *Production* and *Economics* will be given in Córdoba from January to May 2018, except the module on "Harvesting", which will be developed in the first term of the course.

ADDITIONAL INFORMATION

Secretariat of the Master in Olive Growing and Oil Technology
Universidad de Córdoba
Campus de Rabanales, Edificio C4
Carretera de Madrid km. 396
14071 Córdoba (Spain)
Telephone: +34 957 218351
Fax: +34 957 218569
E-mail: masterolivicultura@uco.es
http://www.masterolivicultura.org

LECTURERS

The programme will be given by highly experienced lecturers from the organising institutions and guest lecturers belonging to teaching and research institutions, government departments and private entities. The following experts will undertake the teaching coordination of the Specialisation course:

**Director of the Programme:**

Ricardo Fernández Escobar  
Professor of Plant Production, Universidad de Córdoba

**Area Coordinators:**

Juan Manuel Caballero Reig  
Principal Researcher, IFAPA Centro "Alameda del Obispo", Córdoba

Fernando Martínez Román  
Specialist in R&D&I, Instituto de la Grasa, Sevilla

Felisa Ceña Delgado  
Professor of Economics and Agricultural Policies, Universidad de Córdoba
Module Coordinators:

Miguel Alcaide García
Tenured Lecturer in Hydraulic Engineering, Universidad de Córdoba

Octavio Arquero Quílez
Principal Technical Specialist. IFAPA Centro “Alameda del Obispo”, Córdoba

Diego Barranco Navero
Professor of Plant Production, Universidad de Córdoba

Juan Manuel Caballero Reig
Principal Researcher, IFAPA Centro "Alameda del Obispo", Córdoba

Mercedes Campos Aranda
Professor of Research, Estación Experimental del Zaidín. Granada

Felisa Ceña Delgado
Professor of Economics and Agricultural Policies, Universidad de Córdoba

José Antonio Cortés Martín
Agriculture and Fisheries Department, Junta de Andalucía

Elias Fereres Castiel
Professor of Plant Production, Universidad de Córdoba

Ricardo Fernández Escobar
Professor of Plant Production, Universidad de Córdoba

Rosa Gallardo Cobos
Tenured Lecturer in Economics and Agricultural Policies, Universidad de Córdoba

Jesús Antonio Gil Ribes
Professor of Mechanisation, Universidad de Córdoba

Tomás de Haro Jiménez
Professor of Economics and Agricultural Policies, Universidad de Córdoba

Francisco Hidalgo Casado
Specialist in R&D&I, Instituto de la Grasa, Sevilla

Francisco Jesús López Jiménez
Professor of Mechanisation, Universidad de Córdoba

José López Miranda
Professor of Internal Medicine, Universidad de Córdoba

Blanca Lucena Cobos
Head of Córdoba Province Service, Agencia de Gestión Agraria y Pesquera de Andalucía

Fernando Martínez Román
Specialist in R&D&I, Instituto de la Grasa, Sevilla

Francisco de Paula Montes Tubio
Professor of Graphic Engineering, Universidad de Córdoba

María José Moyano Pérez
Specialist in R&D&I, Instituto de la Grasa, Sevilla

Francisco Pérez Jiménez
Professor of Medicine, Universidad de Córdoba

Enrique Quesada Moraga
Professor of Plant Production, Universidad de Córdoba

Hava Rapoport
Scientific Researcher, Instituto de Agricultura Sostenible, Córdoba

Milagros Saavedra Saavedra
Researcher, IFAPA Centro "Alameda del Obispo", Córdoba

Antonio Higinio Sánchez Gómez
Tenured Scientist, Instituto de la Grasa, Sevilla

Dª Auxiliadora Soriano Jimenez
Lecturer in Plant Production, Universidad de Córdoba

Antonio Trapero Casas
Professor of Plant Protection, Universidad de Córdoba
APPLICATION FORM

Personal Information

Family Name------------------------ First Name------------------------
Date of Birth------------------------ Place of Birth------------------------
Nationality------------------------------------------------------------------

Professional Information

Background (University Degree)-----------------------------------------------------
Place of Work (Institution/Firm)-----------------------------------------------------
Present Position --------------------------------------------------------------------
Duties-------------------------------------------------------------------------------

Address for Correspondence

Street and Number---------------------------------------------------------------------
City---------------------Post Code---------------------Country---------------------
Telephone----------------------Fax--------------------------
E-mail-----------------------------------------------------------------------------
Languages

(C = correct, W = well, F = fair, P = poor)

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Financial Support

Do you request a scholarship?
☐ Yes ☐ No

Would you attend the course if you were not granted a scholarship?
☐ Yes ☐ No

Accompanying Documents

☐ University degree
☐ Transcript of records
☐ *Curriculum vitae*
☐ Letter stating reasons for applying
☐ Others (indicate) __________________________

1A copy of the documents will suffice. Upon registration, the selected participants should present the original documents together with a copy. The university degree and transcript of records issued outside Spain should be legalised through diplomatic channels following the instructions that will be duly provided.