

## Course Unit: 935011 – Vegetable Raw Material Production

Year 1 Semester 2 ISCED Code: 811 ECTS: 4

Type of Course Unit: Compulsory Delivery Mode: Face-to-face

Language of Instruction: Portuguese

COURSE COORDINATOR: José Manuel Açucena Ferro Palma

### HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
100		60							40

Prerequisites (if applicable): No applicable

### LEARNING OUTCOMES (knowledge, skills and competence)

- 1 - Know the main vegetable raw materials produced in Portugal and abroad, its trade and consumption.
- 2 - Identify what are the main strengths and limitations of crop production in Mediterranean environment.
- 3 - Understand how vegetable cultivation techniques affect the composition, quality, technology and agroindustrial use of vegetable raw materials.
- 4 - Know the chemical composition and use of agro-industrial leading seeds and fruits of national production used in human consumption.
- 5 - Know the main industrial crops (cereals and oilseeds), fruit and vegetables produced in Portugal, with special emphasis on the interaction between cultivation techniques employed and their biochemical composition and agro-industrial use.
- 6 - Know some specific forms of agricultural production, in particular the "Biological Production Mode" and "Integrated Protection".

### CONTENTS

- 1 - Agriculture and food in the world and Portugal
- 2 - The climate in Portugal: its strengths and limitations to vegetable production
- 3 - The seeds
- 5 - The application of pesticides in agriculture
- 6 - Harvest, storage and conservation of vegetable raw materials
- 7 - Organic Farming
- 8 - Industrial Crops
- 9 - Vegetables and fruit crops

### DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

The program of the course consists essentially of two parts: the first covering the crop cultivation techniques of vegetable raw materials and their influence on its composition and agro-industrial use, and the second part covering the study of cultures and the raw materials produced by them, with great emphasis on issues related to its quality as a food staple and agro-industrial use by applying the knowledge obtained in the first part.

## TEACHING METHODOLOGIES

Classes will have primarily a component of theoretical exposition. For some materials those classes will be reinforced with a practical component based on the direct observation of the main vegetable raw materials and performing laboratory classes about the quality control of some commodities, particularly cereals (soft wheat and durum wheat).

## DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

The teaching methodology seems to be sufficient for students to acquire basic knowledge about field production of the main vegetable raw materials. Through the practical lessons the students will take direct contact with the vegetable raw materials, learning to recognize them, even identifying their most relevant characteristics, and master some of the processes for monitoring and evaluation of the technological quality of some raw materials.

## EVALUATION METHODS

Evaluation will be done by performing two tests and final examination.

## MAIN BIBLIOGRAPHY

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- FERREIRA, J.; STRECHT, A.; RIBEIRO, J. SOEIRO, A. E COTRIM, G. (2002). Manual de Agricultura Biológica.Ed. Agrobio - Associação Portuguesa de Agricultura Biológica, 3ª Edição. Lisboa.
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- VENTURI, G. & AMADUCCI, M. (1988) - La Soja. Ediciones Mundi-Prensa, Madrid.
- BARRANCO, D.; FERNANDEZ-ESCOBAR, R. e RALLO, L. (2004). El cultivo del Olivo. Ediciones Mundi-Prensa. Madrid.
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