



**Centre name:**

Research Centre on Mediterranean Intensive Agrosystems and Agrifood Biotechnology

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## The research programmes of your centre

**Specie: Pepper**

**Person of contact for this programme: Tomás Cabello-García**

Email: [tcabello@ual.es](mailto:tcabello@ual.es)

Vegetal material	Integrated protection	Agrobiology
<ul style="list-style-type: none"> <li>- Plant materials available by the collaborating companies in joint research projects.</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment and mathematical modelling of pest dynamics in greenhouse-grown pepper cropping systems.</li> <li>- Evaluation of oxamyl against homoptera pests in greenhouse-grown pepper.</li> <li>- Biological invasion by <i>Tuta absoluta</i>: Ecology, geographic expansion and prospects for biological control.</li> <li>- Predation of <i>Bradysia</i> sp, <i>Liriomyza trifolii</i> and <i>Bemisia tabaci</i> by <i>Coenosia attenuata</i>.</li> </ul>	<ul style="list-style-type: none"> <li>- Technical efficiency of plant protection.</li> <li>- Economic and environmental impact of plant protection strategies in greenhouse cropping systems.</li> </ul>

**Specie: Zucchini**

**Person of contact for this programme : Manuel Jamilena-Quesada**

Email: [mjamille@ual.es](mailto:mjamille@ual.es)

Vegetal material	Technical itinerary	Agrobiology
<ul style="list-style-type: none"> <li>- In-house genetic material available at the research centre's own seed bank.</li> <li>- Seed materials available by the</li> </ul>	<ul style="list-style-type: none"> <li>- Cell wall metabolism and chilling injury during postharvest cold storage.</li> <li>- Postharvest quality traits.</li> <li>- Sources of parthenocarpy for Zucchini breeding.</li> </ul>	<ul style="list-style-type: none"> <li>- Interaction of breeding and genetic data with phenotypic traits.</li> <li>- Relationships between abiotic factors during postharvest and physiological variables in</li> </ul>

collaborating companies in joint research projects.	- Differential response of zucchini varieties to low storage temperature.	zucchini breeding programmes.
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**Specie: Tomato**

**Person of contact for this programme : Rafael Lozano-Ruiz**

Email: rlozano@ual.es

Vegetal material	Technical itinerary	Agrobiology
<ul style="list-style-type: none"> <li>- In-house genetic material available at the research centre's own seed bank.</li> <li>- Seed materials available by the collaborating companies in joint research projects.</li> </ul>	<ul style="list-style-type: none"> <li>- Genetic and molecular assessment of flower formation and fruit development.</li> <li>- Physiology and genetic and hormonal interaction with fruit development.</li> <li>- Tomato breeding for fruit quality: flavor, parthenocarpy, nutritional qualities.</li> </ul>	<ul style="list-style-type: none"> <li>- Relationship between biotic and abiotic stress factors and physiological variables in joint breeding programmes.</li> <li>- Interaction of breeding and genetic data with phenotypic traits.</li> </ul>

**Specie: Tomato**

**Person of contact for this programme: Diego Luis Valera-Martínez**

Email: dvalera@ual.es

Vegetal material	Integrated protection	Technical itinerary
<ul style="list-style-type: none"> <li>- Plant materials available by the collaborating companies in joint research projects.</li> <li>- In-house vegetable material available at the research centre's own seed bank.</li> </ul>	<ul style="list-style-type: none"> <li>- Microclimate evaluation of new designs of insect-proof screens.</li> <li>- Effect of insect-proof screens on pest population dynamics in Mediterranean greenhouses.</li> <li>- Interactions between physical barriers, pest dynamics and crop productivity and quality.</li> <li>- Effects of microclimatic conditions and crop protection methods in Mediterranean greenhouses on fruit yield and quality.</li> </ul>	<ul style="list-style-type: none"> <li>- Effects of the optimisation of greenhouse ventilation parameters on plant phenotypic traits.</li> <li>- Impact and modelisation of climate-control strategies on crop productivity and sustainability variables.</li> <li>- Analysis of cooling ventilation efficiency in naturally ventilated greenhouses and its effect on fruit quality and productivity.</li> </ul>

**Specie: Green bean + watermelon**

**Person of contact for this programme: Francisco Camacho-Ferre**

Email: fcamacho@ual.es

Technical itinerary	Integrated protection	Agrobiology
<ul style="list-style-type: none"> <li>- Differential response to environmental and nutritional factors of high-quality tomato varieties.</li> <li>- Effect of genetic and phenotypic factors on the composition of commercial tomato varieties.</li> <li>- Vegetable development of grafts.</li> </ul>	<ul style="list-style-type: none"> <li>- Household processing factors of acrinathrin, fipronil, kresoxim-methyl and pyridaben residues in green beans.</li> <li>- Influence of plant density on yield and quality in soil infested with necrotic spot Virus.</li> <li>- Effect of the application of monosilicic acid fertilizer on yield and quality.</li> </ul>	<ul style="list-style-type: none"> <li>- Diversity and health traits of local landraces of bean varieties.</li> <li>- Grafting as an alternative to soil disinfection with methyl bromide.</li> <li>- Evaluation of different rockwool fiber in greenhouses: effects on production and quality.</li> <li>- Effect of dose and kind of compost on the quality of seedlings.</li> </ul>

**Specie: Tomato**

**Person of contact for this programme: Rodney Thompson**

Email: Rodney@ual.es

Vegetal material	Technical itinerary	Agrobiology
<ul style="list-style-type: none"> <li>- In-house plant material available at the research centre's own seed bank.</li> <li>- Plant materials available by the collaborating companies in joint research projects.</li> </ul>	<ul style="list-style-type: none"> <li>- Decision support system based on a comprehensive simulation model to calculate nitrogen and water requirements for tomato in greenhouse conditions.</li> <li>- Simulation model of daily crop growth, nitrogen uptake, evapotranspiration and nitrate leaching.</li> <li>- Threshold values of canopy reflectance indices and chlorophyll meter readings for optimal nitrogen nutrition of tomato.</li> <li>- Simulation of tomato growth, water and N dynamics using the EU-Rotate-N model in greenhouses with drip irrigation and fertigation.</li> </ul>	<ul style="list-style-type: none"> <li>- Effect of N uptake concentration on nitrate leaching from tomato grown in free-draining soilless culture under Mediterranean conditions.</li> <li>- Effects of salinity on fruit yield and quality of tomato.</li> <li>- Effects of increasing salinity on fruit development and growth of tomato grown in soilless culture.</li> </ul>

**Specie: Green bean**

**Person of contact for this programme: María-Teresa Lao-Arenas**

Email: mtlao@ual.es

Vegetal material	Technical itinerary	Agrobiology
<ul style="list-style-type: none"><li>- In-house plant material available at the research centre's own seed bank.</li><li>- Plant materials available by the collaborating companies in joint research projects.</li></ul>	<ul style="list-style-type: none"><li>- Proline, Betaine, and Choline Responses to Different Phosphorus Levels in Green Bean .</li><li>- Biomass production and yield of green beans in response to phosphate fertilization.</li><li>- Influence of salinity and fertilization level on yield and quality.</li><li>- Nutrient solution and nutrient soil solution parameter evolution in tomato with dynamic fertigation under saline conditions.</li></ul>	<ul style="list-style-type: none"><li>- Effect of controlling the leaching fraction on the fertigation and production under soilless culture.</li><li>- Influences of nitrogen and potassium fertigation on nutrient uptake, production, and quality.</li><li>- Dry-matter allocation and nutrient uptake dynamic by different nitrogen and potassium rate.</li><li>- Phosphorus levels influence plasma membrane H<sup>+</sup>-ATPase activity and K<sup>+</sup>, Ca<sup>2+</sup>, and Mg<sup>2+</sup> assimilation in green bean.</li></ul>

**Specie: Sweet pepper**

**Person of contact for this programme: Miguel Guzmán-Palomino**

Email: mguzman@ual.es

Vegetal material	Technical itinerary	Agrobiology
<ul style="list-style-type: none"><li>- In-house plant material available at the research centre's own seed bank.</li></ul>	<ul style="list-style-type: none"><li>- Determination of nutrient diagnostic parameters in crop production.</li><li>- Effects of saline stress and Ca<sup>2+</sup>/K<sup>+</sup> interaction on biomass and mineral contents.</li><li>- Daily rhythmic model for pH and volume from xylem sap.</li><li>- Effect of evolution in the increase the nutrient solution E.C. on quality parameters of plant seedlings.</li></ul>	<ul style="list-style-type: none"><li>- Influence of nitrate and calcium increments on development, growth and early yield in sweet pepper plants.</li><li>- Comparison of qualitative and quantitative productivity parameters between a sweet pepper crop growing on different soil systems.</li></ul>

## Current partnership with other research centres (national or international)

### SHORT SELECTION OF CURRENT PARTNERSHIPS

Specie: Tomato

Nature of the project: 7FP

Length of the project: 2008-2014

Partner names and countries: Universidad Politécnica de Valencia, Spain

Specie: Green bean

Nature of the project: Spanish Research Plan

Length of the project: 2010-2014

Partner names and countries: Misión Biológica de Galicia, Spain

Specie: Tomato + watermelon

Nature of the project: 7FP

Length of the project: 2009-2014

Partner names and countries: University of Evora, Portugal

Specie: Tomato

Nature of the project: 7FP

Length of the project: 2010-2013

Partner names and countries: UR Wageningen, Netherlands

Specie: Pepper

Nature of the project: Iberoeka

Length of the project: 2010-2014

Partner names and countries: Universidad Pontificia de Valparaiso, Chile

Specie: Corn

Nature of the project: Spanish International Cooperation Framework

Length of the project: 2010-2012

Partner names and countries: National Agricultural University La Molina, Peru

## Are you searching for more European partnerships with other research centres?

On what species: Tomato

What kind of projects are you searching for: H2020 Societal Challenges (SC2) RIA and IA projects

What kind of partners are you searching for? Both public research centres and companies

From which countries? EU-wide

On what species: Protein crops

What kind of projects are you searching for: H2020 Societal Challenges (SC2) RIA and IA projects

What kind of partners are you searching for? Both public research centres and companies

From which countries? EU-wide

On what species: Tomato

What kind of projects are you searching for: Public-private market-oriented R&D cooperation projects.

What kind of partners are you searching for? Companies

From which countries? EU-wide, Israel, Turkey

On what species: Pepper

What kind of projects are you searching for: Public-private market-oriented R&D cooperation projects.

What kind of partners are you searching for? Companies

From which countries? EU-wide, Israel, Turkey