



**Programme Advanced course on Olive Growing and Climate Change**  
Videoconference, 27 September-1 October 2021

**0. Welcome from organizing institutions (0.5 hours)**

**1. Current situation and perspectives of olive growing (0.5 hours)**

- 1.1. Olive growing global distribution and trends
- 1.2. Main strengths and threats for olive growing

**2. Climate change context and policy (1 hour)**

- 2.1. Status of Climate Change and potential role of agriculture to meet Paris Agreement expectations
- 2.2. Meeting sustainable intensification with Nationally Determined Contribution targets
- 2.3. Climate change scenarios and challenges for olive growing

**3. Olive biophysical aspects affected by climate change (8 hours)**

- 3.1. Phenology
  - 3.1.1. Flowering monitoring
  - 3.1.2. Flowering patterns and temperature
  - 3.1.3. Phenology variability and plasticity
- 3.2. Evapotranspiration
- 3.3. Water use efficiency and water balance
- 3.4. Yield
- 3.5. Olive products' quality
- 3.6. Pest and diseases
- 3.7. Sensors for olive orchard and weather characterization
- 3.8. Modelling as a tool to understand processes and interactions

**4. Mitigation of climate change (3 hours)**

- 4.1. Carbon sequestration
- 4.2. Good practices to mitigate climate change
- 4.3. Environmental assessment
  - 4.3.1. Carbon Footprint
  - 4.3.2. IOC Carbon Footprint tool
  - 4.3.3. Other assessment schemes

**5. Adaptation of olive growing to climate change (6 hours)**

- 5.1. Irrigation management
- 5.2. Cover crop management
- 5.3. Pruning severity
- 5.4. Variety adaptation
  - 5.4.1. Selection and breeding for adapted varieties
  - 5.4.2. Adaptation of selected varieties in new olive growing areas

**6. Case studies (6 hours)**

- 6.1. How to forecast flowering and production using models in the context of global warming
- 6.2. Application of a process-based model: OliveCan
- 6.3. Integration of experimentation and modelling for assessing impacts of climate change in Southern Spain
- 6.4. Simulation of olive yields in Portuguese areas under climate change scenarios
- 6.5. Adaptation challenges of olive growing in new climates

**7. Round table discussion: adaptation and mitigation measures in local, regional and national level and international coordination (2 hours)**

