

Online Advanced Course
**RECENT TRENDS IN CONSERVATION AGRICULTURE IN
MEDITERRANEAN ENVIRONMENTS**
14-23 February 2022

PROGRAMME

- 1. Introduction/Overview (2 hours)** (M. Rinaldi)
 - 1.1. Principles and concepts of Conservation Agriculture (CA) and its role in sustainable agriculture in dry areas
 - 1.2. Overview of CA farming systems in Mediterranean environments and current status
- 2. Bases of CA under Mediterranean environments (4 hours)**
 - 2.1. Soil properties and functions change under CA (2 h) (J. Álvaro)
 - 2.1.1. Soil biodiversity
 - 2.1.2. Soil erosion
 - 2.1.3. Soil organic matter dynamics and its role in CA
 - 2.2. Water use efficiency and water productivity (2 h) (M. Rinaldi)
- 3. Technical challenges and advances in crop management under CA (11 hours)**
 - 3.1. Crop residues (3.1 and 3.2: 1 h) (C. Cantero)
 - 3.2. Crop fertilization (C. Cantero)
 - 3.3. Cropping systems
 - 3.3.1. New breeding approaches for CA adapted plant material (3.3.1 and 3.3.2: 1 h) (P. Annicchiarico)
 - 3.3.2. The importance of legumes in cropping systems (P. Annicchiarico)
 - 3.3.3. Rotation, associations, sequences and cover crops (3.3.3 and 3.3.4: 2 h) (M. Marguerie)
 - 3.3.4. Integration of CA in organic farming systems (M. Marguerie)
 - 3.4. Crop-livestock integration under CA (1 h) (H. Cicek)
 - 3.5. Crop protection under CA: weeds, herbicide resistance, pests and diseases (2 h) (V. Bodas)
 - 3.6. Equipment and machinery in different CA systems (2 h) (L. Sartori, M. Benetti)
 - 3.7. Discussion: transition from conventional to CA systems (1 h) (C. Cantero, P. Annicchiarico, M. Marguerie, H. Cicek, V. Bodas, L. Sartori, M. Benetti, M. Rinaldi, J. Álvaro)
- 4. Socioeconomic and environmental implications (4 hours)**
 - 4.1. Farmer benefits at short and long term (productivity, efficiency, output benefit, income, resilience) (2 h) (Y. Yigezu)
 - 4.2. Environmental benefits (1 h) (J. Álvaro)
 - 4.3. Social, cultural and economic barriers for CA adoption (1 h) (G. Cruz)
- 5. Policy and institutional options (2 hours)** (D. Marandola)
 - 5.1. Need for knowledge integration in education, research and extension services
 - 5.2. Strategies to promote CA adoptions in Mediterranean environments
 - 5.3. The role of the main stakeholders (farmer organizations, policy-makers, extension services, private sector, NGOs, etc.)
- 6. Case studies (7 hours)**
 - 6.1. ICARDA's experiences in promoting CA farming in CWANA region (1 h) (M. Devkota)
 - 6.2. Reasons for adopting conservation agriculture in a specific irrigated and rainfed cereal farm in Alentejo, Portugal (0.5 h) (G. Cruz)
 - 6.3. Practical case on integration of crops and livestock under CA in Tunisia (0.5 h) (S. Abidi)
 - 6.4. Fixing CA based on living covers with and without irrigation in southern France (0.5 h) (M. Marguerie)
 - 6.5. Cereal-legume rotation in rainfed cropping systems in southern Italy (0.5 h) (G. D'Alessandro)
 - 6.6. Cereal-legume intercropping in a rainfed cropping system in Algeria (0.5 h) (M. Latati)
 - 6.7. Effects of CA on soil properties and productivity under a dryland cereal-based system in Morocco (0.5 h) (R. Moussadek)
 - 6.8. Irrigated and rainfed crop rotations in Greece (0.5 h) (T. Gitsopoulos)
 - 6.9. Case study discussions (2.5 h)
- 7. Virtual technical visit**