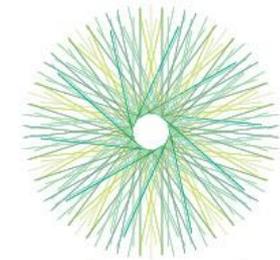


# EIP-AGRI Workshop Cropping for the future

4-5 June 2019 – Almere, the Netherlands



eip-agri  
AGRICULTURE & INNOVATION





# Programme

**TUESDAY 4 JUNE**

#EIPAgri  
#croprotection  
#cropdiversification



08:00-09:00 Registration

## Introduction to the workshop

### **09:00-09:15 Welcome by the host and by DG AGRI**

- *Martijn Weijtens, Ministry of Agriculture, Nature and Food Quality, the Netherlands*
- *Anikó Seregélyi, Unit B2 – Research and Innovation, DG AGRI, European Commission*

### **09:15-10:30 Getting to know each other and setting the scene for the workshop**

Introduction of the programme and getting to know each other (Impromptu Networking)

*Niels Rump, EIP-AGRI Service Point*



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## Setting the scene and preparing interaction

- *Edoardo Costantini, EIP-AGRI Service Point*
- *Bhim B. Ghaley, ERA-NET 'FACCE SURPLUS' project 'SustainFARM'*
- *Paolo Mantovi, Operational Group 'Agroecological Cover'*
- **Roberto Garcia-Ruiz, PRIMA project 'SUSTAINOLIVE'**
- *Judith Treis, Operational Group 'Organic vegetables'*

## Networking for crop rotation & crop diversification

10:30 – 11:15 **Discovering diversity** – getting familiar with projects represented at the workshop

Sharing projects with a cup of coffee – interactive session (Project Mesclun)

11:15 – 12:30 **Building common ground**

Looking for shared challenges and opportunities – interactive session (World Café)

Dr. Roberto Garcia-Ruiz (Professor of Ecology, University of Jaén) and responsible of the Functional Unit of Ecology of the Center for advances studies in olive groves and olives oil)



## SUSTAINOLIVE: Novel approaches to promote the SUSTAINability of OLIVE cultivation in the Mediterranean



The overall objective of SUSTAINOLIVE is to enhance the sustainability of the olive oil farming sector throughout the implementation and promotion of a set of innovative sustainable management solutions that are based on agro-ecological concepts, and on the exchange of knowledge and co-creation involving multiple actors and end-users.

Olive crop diversification, throughout the introduction of cover crops in the inter-row of olive trees is a essential part of SUSTAINOLIVE

# The context/The problem



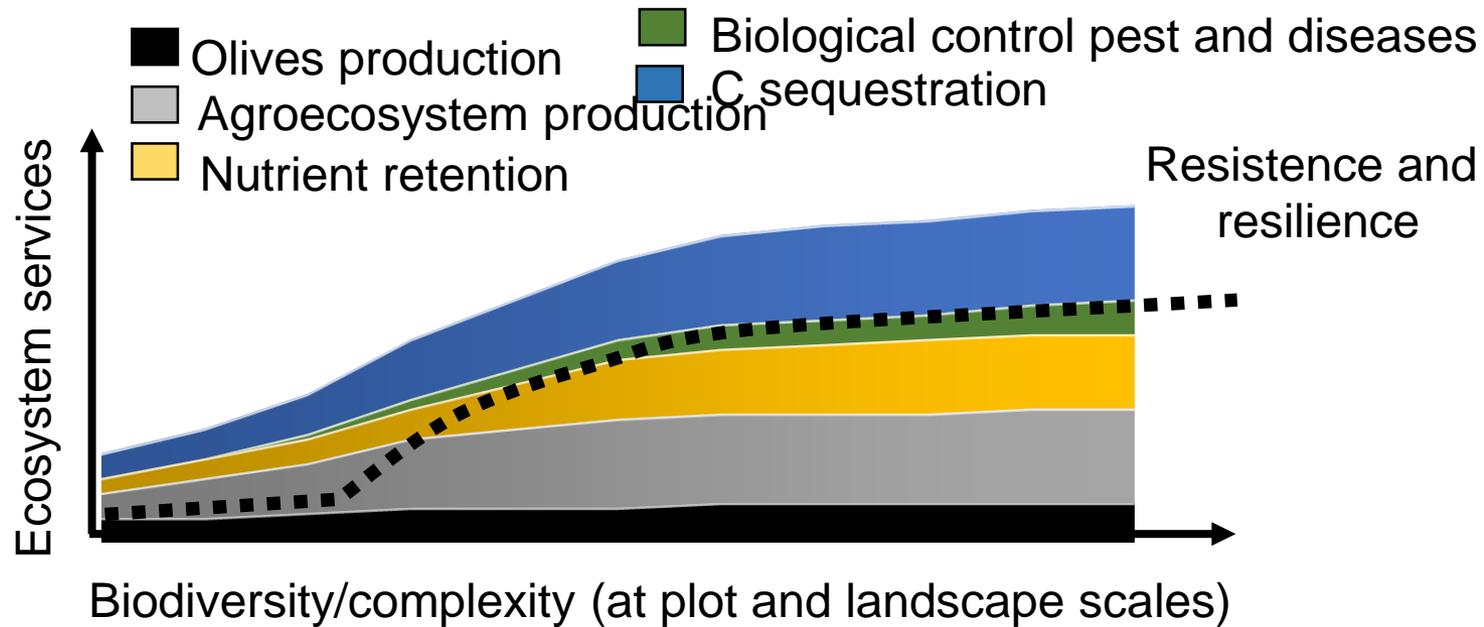
Olive cultivation consist  
of between 80 -220  
trees ha<sup>-1</sup>  
with about 40 – 60 % of  
the ha under bare soil

Soil  
degradation.  
No  
ecosystems  
services



Google

Benefits from crop rotation and/or crop diversification that **SUSTAINOLIVE** wants to implement



- Soil loss reduction
- Increase SOM and other soil fertility indicators
- Biological control of pest and diseases
- Nutrient retention
- C sequestration.
- Esthetical (Oleotourism)
- Increase and diversified



AGRO<sub>ECOSYSTEM</sub> Crop diversification/rotation AGROECOSYSTEM



According to  
the landscape,  
pedoclimatic,  
socio-  
economic and  
technological  
knowledge



Enhancing a  
diversified production

Olive + cereals (for beer industry)  
Olive + cereals (for livestock)  
Olive + rotation (cereals and legume)  
(for livestock)  
Olive + saffron (*Crocus sativus*)

Enhancing ecosystems  
services

Olive + spontaneous herbaceous plants  
Olive + seeded legumes  
Olive + (rotation of seeded legumes  
and cereals)  
Olive + (polyculture of seeded legumes,  
cereals and cruciferous)

## Lessons, pros and cons

### Pros

- In general, olive farmers are open to crop diversification, but they need clear “rules”
- Spontaneous plant cover crops is well implemented by olive farmers
- Between 80-95 % of soil erosion reduction
- Higher soil water availability (if cover crops is adequately controlled)
- Soil fertility indicators increase significantly at the medium term
- In most cases effective pest and disease control
- Significant C sequestration

### Cons

- Spontaneous plant and seeded crops do not establish well under most of the degraded soils
- Very high inter-annual and pedoclimatic variability hinders the establishment of “rules”
- Secondary crops or cover crops must be well adapted to low rainfall and the main management practices calendar
- Cost of the seeded crops and lack of clear markets are handicaps for the farmers

## Main perspective for a smart agricultural vision for woody crops are:

1.- For most of the rainfed olive groves: mature spontaneous cover crops, controlled by alternating different techniques.



2.- In areas with livestock (mainly sheep): polycultures of legumes and cereals.

