



eip-agri  
AGRICULTURE & INNOVATION

funded by



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Commission

**Edoardo Costantini**  
**Academy of Georgofili**



**13-14 April 2021**

**EIP-AGRI Seminar 'Healthy soils for Europe:  
sustainable management through knowledge and practice'**

# **EIP-AGRI Workshop** 'Cropping for the future: networking for crop rotation and crop diversification'

4-5 June 2019– Almere, the Netherlands

## Boosting Agroecology through the development of Crop Rotation and Diversification (CR&D)

- What have we understood about using CR&D to sustain crop ecosystem services?
- Which are the promising techniques and innovations?
- Which are the main knowledge gaps and open issues?
- Which are the possibilities and opportunities for future collaboration and knowledge exchange?

## **The process:**

- Exchanging experiences
- Identifying common challenges
- Presenting ideas for future collaborations
- Field visit in two farms

## **The clusters:**

- i) tree crops and agroforestry,
- ii) arable lands,
- iii) grasslands & meadows,
- iv) farm strategies,
- v) ecological infrastructures,
- vi) ecosystem services provided by CR&D.

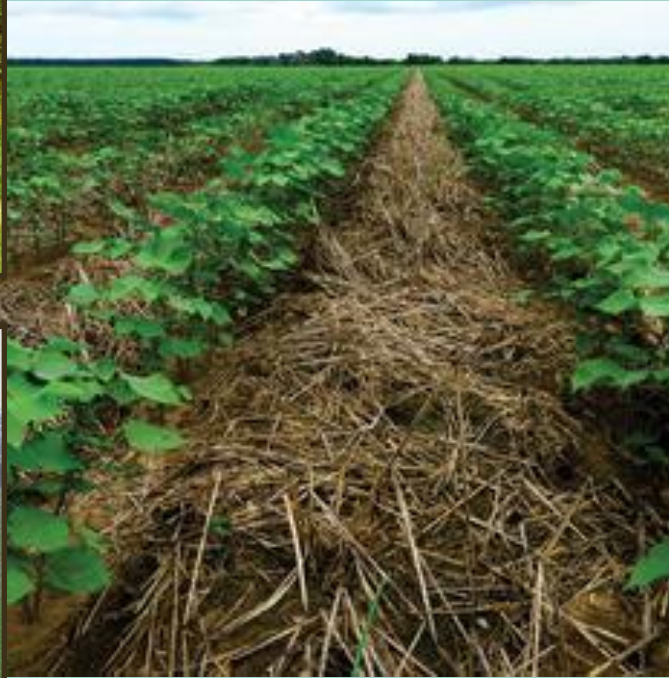
# CR&D: enhancing the complexity of biological cycles



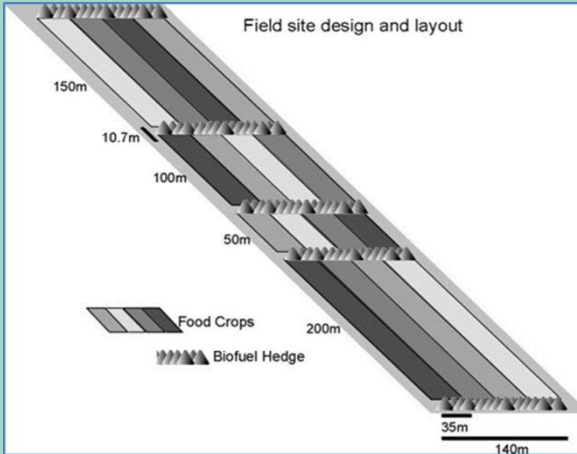
- Rotation
- Intercropping
- Agroforestry
- Spatial arrangement of ecological infrastructures in the landscape

# Ecological infrastructures to reduce water pollution and soil water and wind erosion:

buffer zones, water ways, cover crops, grass strips, and shelterbelts



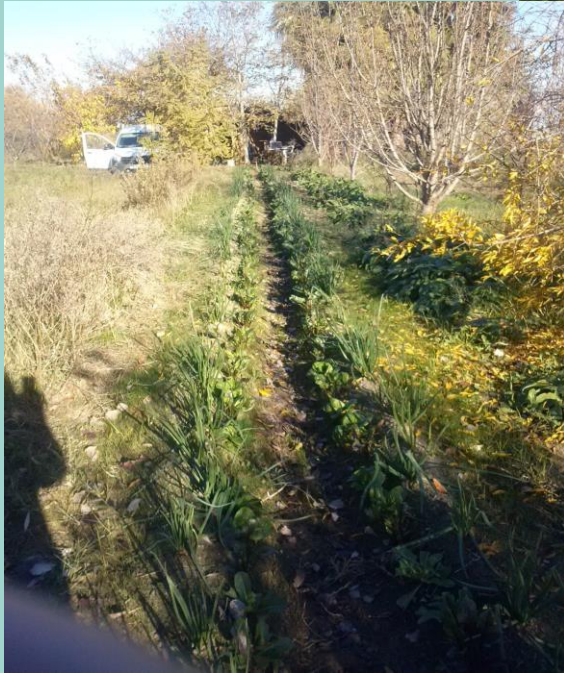
# Integrated food and non-food systems (IFNS)



# Enhancing ecosystem services, beyond crop yield

- Maximizing C capture through multiple crops: trees+shrubs+grasses+vegetables

Cropping along the drains



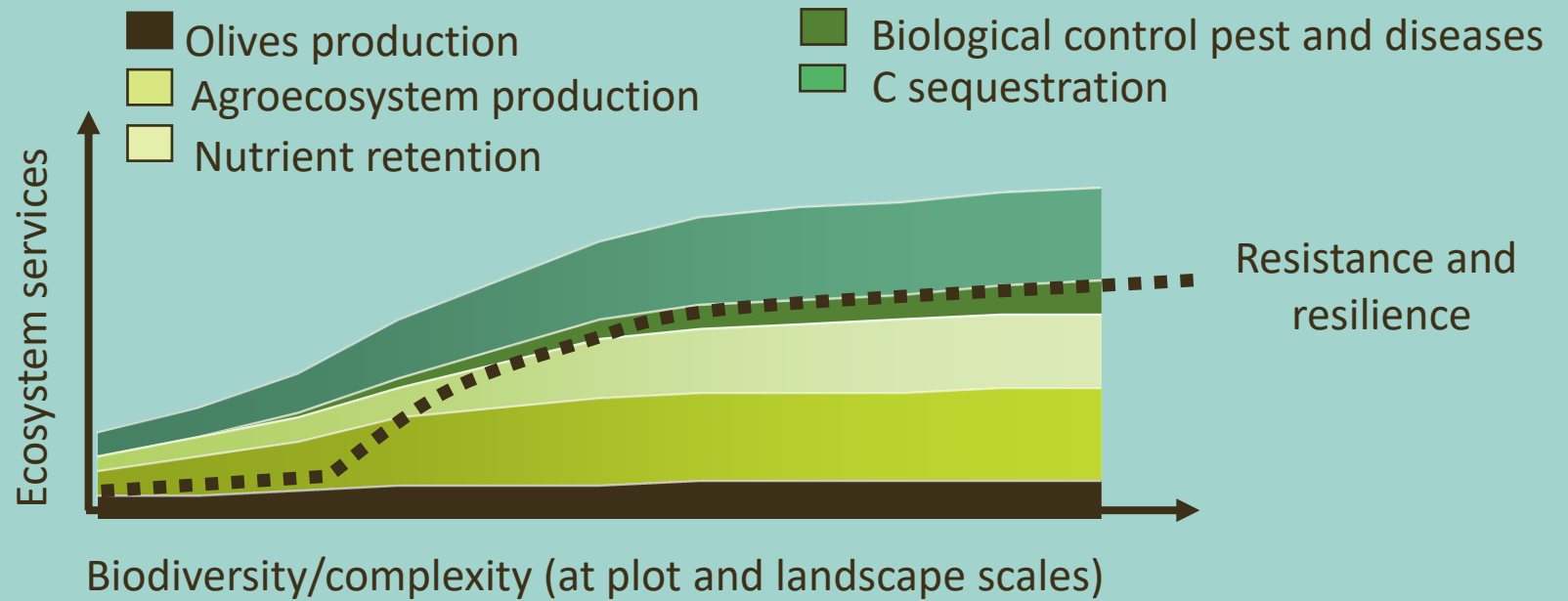
Intercropping



Multi-storey cropping

# Enhancing ecosystem services in olive tree groves

- Soil loss reduction
- Increase of SOM and soil fertility
- Biological control of pest and diseases
- Nutrient retention
- C sequestration.
- Esthetical improvement
- Increased and diversified production



AGRO<sub>ECOSYSTEM</sub>

Crop diversification/rotation

AGROECOSYSTEM





# EIP-AGRI seminar

## Healthy soils for Europe: sustainable management through knowledge and practice

### Online – 13-14 April 2021

All information of the seminar is available on  
[www.eip-agri.eu](http://www.eip-agri.eu)

On the event webpage  
<https://ec.europa.eu/eip/agriculture/en/event/eip-agri-seminar-healthy-soils-europe-sustainable>

