**TARGET STAKEHOLDERS** 





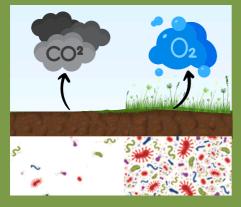


#### CLIMATE CHANGE Soils hold a great potential for carbon storage.



### TECHNIQUE

Agricultural management techniques can foster soil C sequestration



### **REDUCING**...

...soil tillage intensity facilitates microbial abundance and hence increases SOC sequestration in the top layer of agricultural soils



**AUTHORS** Orracha Sae-Tun, Gernot Bodner,... Katharina Keiblinger (2022)

### DIFFERENT TILLAGE TREATMENTS

IN WHICH WAY ARE THEY INFLUENCING SOIL INHABITANTS AND SOIL PROPERTIES?



## Tillage treatments:

Aggregate stability

Soil carbon

N pool

**Fungal biomass** 

Microbial necromass

Conservation tillage leads to greater **DOC** contents. This increased C availability facilitates **fungal abundance** which affects **soil aggregate stability** and promotes formation of **microbial necromass.** This leads to a built up of **SOC** through increased microbial C assimilation and the subsequent accelerated turnover of microbial biomass to necromass.

### EJP SOIL INNOVATION HIGHLIGHTS



# EJP SOIL CARB@SEQ

#### TOWARDS CLIMATE-SMART SUSTAINABLE MANAGEMENT OF AGRICULTURAL SOILS

EJP SOIL is a European Joint Programme on Agricultural Soil Management addressing key societal challenges including climate change and future food supply. https://ejpsoil.eu/

The goal is to improve the understanding of agricultural soil management by finding synergies in research, strengthening research communities and raising public awareness.

1100+ experts, 24 countries, addressing multiple aspects of soil management across different European agroecosystems.

### EJP SOIL FUNDED PROJECT CARBOSEQ

The aim of project CarboSeq is to estimate the feasible SOCsequestration potential taking into account technical and socio-economic constraints. The project is aligned with the current FAO activity for a "global SOC-sequestration potential map" (GSOCseq).

**PROJECT COORDINATOR:** Axel Don axel.don@thuenen.de

### TARGET EJP SOIL EXPECTED IMPACT AND EU MISSION SOIL OBJECTIVES

Understanding how soil-carbon sequestration can contribute to **climate change mitigation** at the regional level and **accounting for carbon**. **Mission SOIL:** conserve soil organic carbon stocks

**HIGHLIGHT FACTS FROM:** 

EJP SOIL funded project: CarboSeq



Applicability: all climatic zones according to Metzger et al. (2005) https://doi.org/10.1111 j.1466-822X.2005.00190.x

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