



DIFFERENT TILLAGE TREATMENTS

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



Tillage treatments: Conventional vs. Conservation

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.



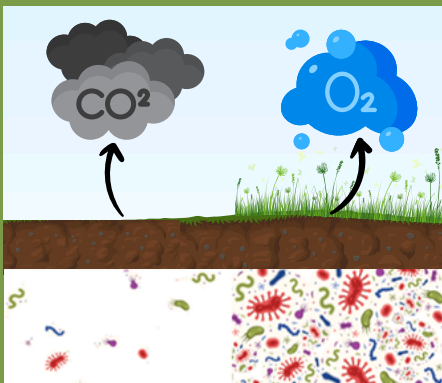
CLIMATE CHANGE

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)

EJP SOIL INNOVATION HIGHLIGHTS



EJP SOIL CARBOSEQ

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 SOIL MISSION 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



EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695

