



THE "CA" IMPACT

SOC accumulation due to CA was 12% greater compared to conventional agriculture. In soils with less than 40 Mg C/ha the increment reached 20%



WHAT INFLUENCES THE ACCUMULATION OF SOC UNDER CA

SOC content – clay – rainfall – temperature – latitude- experiment duration



(SOC)KING OUT DESERTIFICATION

47 studies were quantitatively summarized by using a meta-analysis. Selected areas are highly vulnerable to the risk of desertification in the future.



AUTHORS

Tommaso Tadiello, Marco Acutis,
Alessia Perego, Calogero Schillaci,
Elena Valkama (2022)

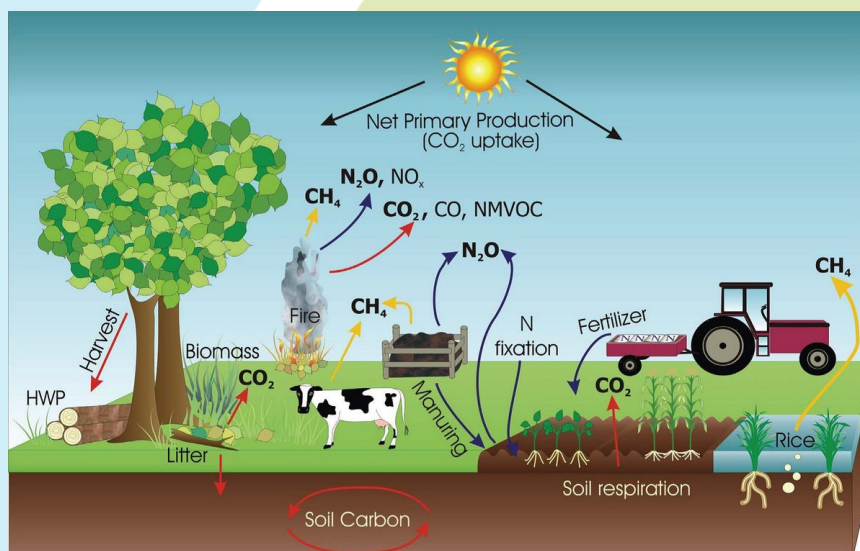
SOIL ORGANIC CARBON (SOC) UNDER CONSERVATION AGRICULTURE (CA) META-ANALYSIS IN MEDITERRANEAN AND HUMID SUBTROPICAL CLIMATES



Conservative approach

With a base annual increment of 0.48 tons carbon per hectare and year, a reasonable carbon gain can be enhanced with long term CA application. During this period, it is recommended to apply no-tillage management, retain residues on the top of the soil, and include as many (different) crops as possible in the rotation.

EJP SOIL INNOVATION HIGHLIGHTS



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 FRAMEWORK PROGRAMME ΣOMMIT

The SOMMIT project will evaluate trade-offs and synergies between soil C sequestration, nitrous oxide, methane and nitrate losses as affected by soil management options aimed at increasing soil C storage.

PROJECT COORDINATOR:

Alessandra Lagomarsino

alessandra.lagomarsino@crea.gov.it

TARGET EJP SOIL EXPECTED IMPACT AND EU MISSION SOIL OBJECTIVES

Understanding of soil management for climate change mitigation, adaptation, sust production & sustainable environment

Understanding soil carbon sequestration and its contribution to climate change mitigation

Mission SOIL: Reduce desertification, Conserve soil organic carbon stocks

HIGHLIGHT FACTS FROM:

EJP SOIL project
ΣOMMIT



Applicability:
Mediterranean South, -North and -Mountains
climatic zones according to
Metzger et al. (2005)
<https://doi.org/10.1111/j.1466-822X.2005.00190.x>

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

