



### SOILS ARE SOUR

40–50% of the arable soils worldwide are acidic, having a pH of below 5.5. Liming can increase soil pH and improve plant productivity



### REDUCTIONS

The study found that liming reduced nitrous oxide emission, as it promotes microbial reduction from N<sub>2</sub>O to N<sub>2</sub> in denitrification and stimulates N uptake by plants



### INCREASED CO<sub>2</sub>

Increased CO<sub>2</sub> emissions under liming may be linked to improved plant and microbial growth and thus respiration



### AUTHORS

Hui-Min Zhang, Zhi Liang, ...  
Diego Abalos (2022)

## LIMING'S IMPACT ON SOIL GREENHOUSE GAS FLUXES: A META-ANALYSIS OF BIOLOGICAL DRIVERS



### Climate impact

Liming exerts a strong impact on microbial communities involved in the production and consumption of GHG emissions. This strong relationship processes can be used to identify strategies to reduce the emissions.

# 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:

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## 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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