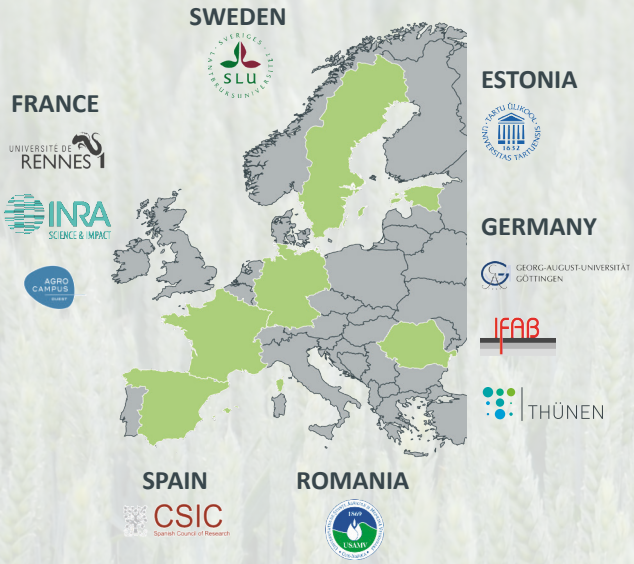
## Project partners:

SoilMan brings together a wide spectrum of expertise in soil biology, soil science, ecology, and socio-economic sciences from six EU Member States.

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Cover picture: R.G. Jörgensen

**Website:**

www.soilman.eu

## Project tasks:

SoilMan conducts a systematic ecological, economic and political assessment of soil biodiversity in typical European agricultural systems.

SoilMan assesses the impact of soil management practices on the provision of ecosystem services by soil organisms.

SoilMan identifies indicators to quantify soil functions and multiple soil-related ecosystem services in different European regions.

SoilMan provides ways how to incentivise farmers for a better soil protection of and how to further valorise soil-based ecosystem services through policy.

SoilMan develops recommendations for the agriculture sector on sustainable soil management practices to make the best use of soil biota with regards to profitability and societal demands.

SoilMan is funded by:

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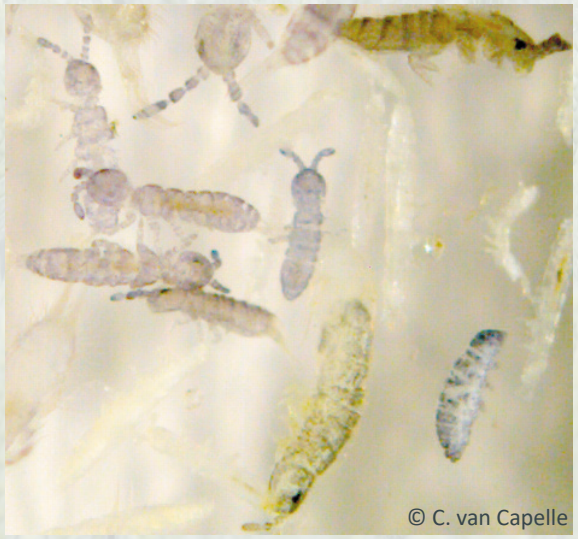
biodiversa

# SoilMan

Ecosystem services of soil biota in agriculture

**Life in soils is essential for healthy and fertile soils, which is the backbone of agricultural production**. It is widely acknowledged that soil biodiversity positively affects agricultural productivity and sustainability. But below-ground biodiversity is not immune to the observed ongoing decline in biodiversity on agricultural land. Our understanding, however, of how the diversity and abundance of soil biota is linked to soil functions, ecosystem services and economic implications is still very limited.

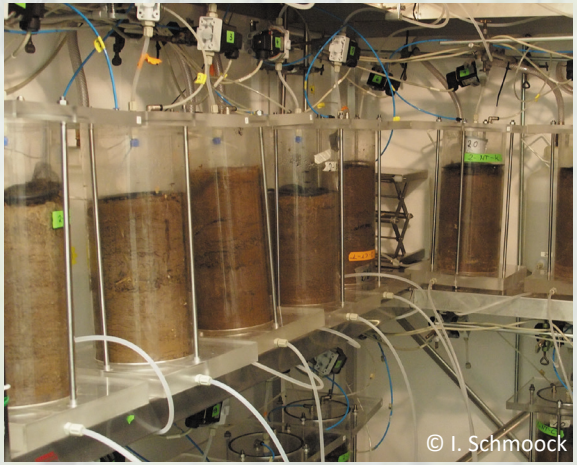



Collembola, ubiquitous members of soil ecosystems

Within the SoilMan project, a broad range of **soil biota** involved in plant decomposition, soil formation or disease repression will be analysed on agricultural land.


Soil sampling on a rainy day

**Lab and field experiments** will be conducted using state-of-the-art methods and tools to gather new knowledge on soil-related ecosystem services, i.e. nutrient availability, plant health, water infiltration, carbon sequestration and emission reduction, and to determine their socio-economic value.




Soil respiration experiment in laboratory

To gather insights into the strong interfaces between environmental responses to farming activities and vice versa, **farmer discussion groups** and **stakeholder interviews** will be conducted in Brittany (France), Northern Andalusia (Spain), north-west Romania, Lower Saxony (Germany), and east-central Sweden.


An earthworm, soil engineer at work in crop field

With the help of **farm-based ecologic-economic models**, the effects of changing practices on environmental sustainability and economic competitiveness will be quantified at a regional scale. In addition, a market model will be used to assess possible impacts on agricultural trade under various policy options. Finally, policy recommendations will be derived from the results of SoilMan targeting national and European decision makers.