EJP SOIL
European Joint Programme

TARGET STAKEHOLDERS

DOES SOIL HEALTH IMPROVE UNDER MULTI-CROPPING SYSTEM?

BEST SOIL PROPERTIES

Multi-cropping systems play an important role in improving the quality of soil properties.

Multi-cropping reduces nutrient leaching into deeper layers of the soil, as well as the abundance of pathogens and weeds.

HIGHEST ORGANIC CARBON CONTENT

Results indicated that the highest organic carbon content was in the third year of caraway cultivation with peas and white clover.

HIGHEST SOIL ENZYME ACTIVITY

The highest soil enzyme activity was found where caraway was grown with spring barley and white clover.

AUTHORS

Aušra Rudinskienė, Aušra Marcinkevičienė, ... Rimantas Vaisvalavičius (2022)

Multicropping offers multiple benefits

Experiments show that multiple soil properties significantly improved after only 3 years of the multi-cropping compared to other systems.

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.

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

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

EJP SOIL STUDY - OUTPUT
MULTI-CROPPING EXPERIMENT IN LITHUANIA

The results of the study suggest that multi-cropping is important for soil conservation and the sustainability of agro-ecosystems.

The total nitrogen content was significantly higher in binary and trinary crops (8.5% and 17.4%, respectively).

TARGET EJP SOIL EXPECTED IMPACT AND EU MISSION SOIL OBJECTIVES

Fostering understanding of soil management and its influence on climate change mitigation and adaptation, sustainable agricultural production and environment.

SOIL MISSION: Conserve SOC stocks, improve soil structure to increase soil biodiversity

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

HIGHLIGHT FACTS FROM:

Detailed findings from multi-crop farming system can be found here

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