

## **From its roots, organic inspires science, and vice versa**

**Book of Abstracts of the Science Forum at the Organic World  
Congress 2021, September 8-10, 2021**

**Rennes, France**

**Gerold Rahmann, Frédéric Rey, Reza Ardakani, Khalid Azim, Véronique  
Chable, Felix Heckendorn, Paola Migliorini, Bram Moeskops, Daniel Neuhoff,  
Ewa Rembiałkowska, Jessica Shade, Marc Tchamitchian (eds.)**

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# Organic World Congress 2021

FRANCE

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## FIRST RESULTS OF EXPERIMENTS FOR CARBON ENRICHMENT WITH DIFFERENT LAND USE TECHNIQUES UNDER ORGANIC AND CONVENTIONAL FARMING

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**Abstract:** Since agricultural soils are far from saturation (Vaccari et al.2011), there is a potential of carbon (C) sequestration with land use change. At the Thuenen-Institute of Organic Farming in Germany several stationary field experiments were established to increase soil organic carbon (SOC) content with different land use techniques.

On the sites no differences in initial SOC and total nitrogen (N<sub>tot</sub>) contents of soils, before implementation of the trials were detected. In the first year significant lower yield and also chlorophyll contents were found in organic spring wheat on plots without ploughing.

Compared to the use of wood-chips and seed treatment with N-binding bacteria organic manures improved the yields. Undersown crops in organic faba beans and conventional rapeseed caused no significant yield effects.

**Keywords:** C sequestration, N-bacteria, organic manure, ploughing, undersown crop, wood chips