

## **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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## CARBON SEQUESTRATION BY ORGANIC CONSERVATION TILLAGE – A COMPREHENSIVE SAMPLING CAMPAIGN IN NINE EUROPEAN LONG-TERM TRIALS

Maike Krauss<sup>1</sup>, Marco Chiodelli Palazzoli<sup>1</sup>, Fogelina Cuperus<sup>2</sup>, Axel Don<sup>3</sup>, Andreas Gattinger<sup>4</sup>, Sabine Gruber<sup>5</sup>, Wiepie Haagsma<sup>2</sup>, Frank Hegewald<sup>3</sup>, Joséphine Peigné<sup>6</sup>, Franz Schulz<sup>7</sup>, Marcel van der Heijden<sup>8</sup>, Laura Vincent-Caboud<sup>6</sup>, Martin Wiesmeier<sup>9</sup>, Raphaël Wittwer<sup>8</sup>, Sabine Zikeli<sup>10</sup>, Markus Steffens<sup>1</sup>

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**Abstract:** Conservation tillage is suggested to sequester carbon although a stratification of soil organic carbon rather than a total increase is mostly observed.

It is not clear whether conservation tillage in combination with organic farming practices has a higher potential. Beyond, many datasets are biased in terms of sampling depth.

A joint sampling campaign in nine European long-term trials considered soil organic carbon stocks until 100 cm soil depth comparing reduced tillage with ploughing under organic farming conditions.

First results show a significant increase of carbon stocks in 0-30 cm and also in 0-100 cm depth with the conversion to reduced tillage.

**Keywords:** Carbon sequestration, climate change, Conservation tillage, soil organic carbon