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V E R A - S E M I N A R

von

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**$^{14}\text{C}$  and soil carbon dynamics**

Carbon stored in soils represents the largest terrestrial carbon pools, and carbon sequestration in soils is vital for future food security and climate change mitigation. Through the understanding of the dynamics of this pool and the mechanisms of C stabilization, accurate model predictions of future climate changes as well as agricultural production assessment will be possible.

Over the past years, research has clarified the mechanisms involved in stabilizing organic matter in soil. Organo-mineral association, zonal model of organo-mineral interactions, stacks of organic compounds, long-term preservation of microbial body material, priming effect and so on have been invoked as new concepts in soil carbon dynamics. However, we still lack quantitative constraints to formally integrate these new conceptual mechanisms into mechanistic models. Here I will present some examples to illustrate how  $^{14}\text{C}$  can tackle this issue and provide quantitative constraints. I will look at lab work as well at meta-analysis of soil  $^{14}\text{C}$  datasets.

**Dienstag, 14.11.2017, 14:30 Uhr**

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",  
1. Stock, Victor-Franz-Hess-Hörsaal**