

This is an unspecified version of the following published document and is licensed under All Rights Reserved license:

Ingram, Julie and Mills, Jane and Dibari, Camilla and Ferrise, Roberto and Bahadur Ghaley, Bhim and Grønbech Hansend, Jens and Iglesias, Ana and Karaczun, Zbigniew and McVittie, A and Merante, Paulo and Molnar, Andras and Sánchez, Berta (2016) Communicating soil carbon science to farmers: incorporating credibility, salience and legitimacy. Journal of Rural Studies, 48. pp. 115-128. ISSN 07430167

Official URL: <http://dx.doi.org/10.1016/j.jrurstud.2016.10.005>

DOI: <http://dx.doi.org/10.1016/j.jrurstud.2016.10.005>

EPrint URI: <http://eprints.glos.ac.uk/id/eprint/4151>

Disclaimer

The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.

For the next two weeks at COP22 in Marrakesh¹ the discussion will be about how governments can achieve their climate change commitments. As well as reducing emissions they will be thinking about how to sequester greenhouse gas emissions to meet their mitigation targets.

One way of doing this is by sequestering carbon in the soil. As the OECD pointed out just prior to Paris COP21 in 2015 “soil organic matter, essentially made of carbon, is not only one of the determining factors of agricultural productivity, and a powerful support to crop resilience and adaptation to climate change, but also a promising option to sequester atmospheric CO₂ captured by photosynthesis”.

We know that organic carbon content in agricultural soils can be enhanced through improved farm practices such as cover crops, minimum tillage, and residue management. However we are less certain about how to manage soils to optimise soil carbon storage *and* productivity. This was the issue at the heart of the SmartSOIL project (www.smartsoil.eu), an interdisciplinary project that aimed to provide scientifically grounded decision support to the farming community about managing soil carbon effectively.

This paper draws on research from this project. It discusses the difficulties in communicating scientific evidence about managing soil carbon to the farming community, as revealed when involving representatives from the farming community in the project. The uncertainties and complexity associated with soil carbon dynamics creates some problems in terms of making the scientific information credible, relevant and considerate of everyday lives and priorities of farmers and their advisers.

The paper highlights the need for researchers to pay attention to how they produce information, and to be more attuned to the requirements of the users and their decision context. It also notes the different stakeholders’ perceptions of what is credible and relevant information that need to be considered when devising any decision support guidance.

¹ The 22nd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change