

Climate debate: a voice for the organic movement

The Intergovernmental Panel on Climate Change (IPCC) believes that farming is not making full use of its opportunities for climate change mitigation. Yet many of the recommended measures are already taken for granted in organic agriculture.

“Our objective is to specify the contributions that organic farms make to climate protection and to quantify them as accurately as possible”, explains Andreas Gattinger, who coordinates research into climate issues at FiBL. This would provide the foundation for a future climate certification system and enable organic farms to join the international trade in carbon emissions certificates.

Before that can happen, however, methodological requirements and formal criteria must be met; there is the accreditation process of the United Nations Framework Convention on Climate Change to complete. “This is the subject of our project “Carbon Credits for Sustainable Landuse Systems”, or CaLas in brief”, says Gattinger.

Meta-analysis of carbon sequestration

A key question concerns the quantity of carbon that can be sequestered in organically farmed soils and how this compares with sequestration on conventionally managed land.

To obtain as broad a range of evidence as possible, Andreas Gattinger and his team conducted a meta-analysis of 463 individual readings from twelve published studies.

Carbon stocks on organically farmed land were found to average 37.4 tons per hectare – significantly more than the 26.7 tons stored in a hectare of conventionally managed soils. These values apply to soil depths of up to 25 cm; the studies that were reviewed were published between 1988 and 2010 and relate to soils in Europe, North America and Asia. The next task is to evaluate further studies, especially those from developing countries, and to calculate sequestration effects separately according to location and type of use (arable, grassland, fruit and vegetable growing).

Pooling strengths and resources internationally

The development work carried out by Urs Niggli and Andreas Fliessbach in recent years has enabled FiBL to ensure that the voice of the organic movement is heard in the international





A lively debate: what are the potential opportunities and risks if CO₂ certificates are issued for organic farming practices?

climate debate. The broad foundation thus laid is now proving useful “because many underlying political and scientific issues need to be clarified in a broadly based process aimed at arriving at a common view”, says Gattinger.

In April 2010 the CaLas team therefore organised a workshop with key climate specialists. The experts confirmed that reliable figures on carbon sequestration are urgently required, but stressed that the other services of organic farming must not be overlooked. Hence CaLas is exploring and developing already recognised measures such as avoidance of mineral fertilizers, the use of composting and biogas production. The experts called for accreditation to involve the use of new instruments better suited to agriculture rather than the usual Clean Development Mechanisms (CDM). It was also necessary to clarify for which farms and under what conditions participation in the carbon emissions market would make economic sense.

To make progress on these issues, the organic movement must pool its strengths and resources. At the climate change conference in Copenhagen in 2009 organic researchers and IFOAM therefore set up the Round Table on Organic Agriculture and Climate Change (RTOACC). It is supported by the Food and Agriculture Organization (FAO) and aims to facilitate and coordinate international research and development in the field of organic agriculture and climate change. “Through the CaLas project we can fill specific knowledge gaps”, is Gattinger's firm view. *ta*

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Funding: Mercator Foundation Switzerland



Experts discuss the potential role of organic farming in climate change mitigation. From left to right: Christoph Sutter, South Pole (top); Markus Arbenz, IFOAM; Alberte Bondeau, Potsdam Institute for Climate Impact Research, PIK; René Estermann, MyClimate (top); Nina Buchmann, ETH; Andrea Ries, Swiss Agency für Development and Cooperation SDC (top); Andreas Gattinger, FiBL; Helmy Abouleish, Sekem.