IFOAM World Organic Congress
FAO Workshop on Organic Agriculture and Climate Change
Modena, Italy, 18 June 2008

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1. The different interventions confirmed that organic agriculture does offer solutions to climate change which need to be capitalized upon because:

- Organic systems reduce greenhouse gases from 50-80% ;
- Key organic practices such as cover crops and crop rotations, used for soil fertility purposes, contribute to decreasing GHG emissions;
- The prohibited use of oil-based inputs such as fertilizers reduce energy use by 26-30%;
- The established organic certification system allows easy introduction of verifiable climate-related claims on products.

2. In agriculture, climate change adaptation and mitigation go hand in hand. For this reason, financial incentives require adjustments:

- Carbon funds, as currently formulated, encourage trade pollution rather than the polluter-pay-principle, thus rendering access to funding difficult to conscientious farmers;
- The Clean Development Mechanism (CDM) methodologies must be consider farming systems' contribution to adaptation and mitigation simultaneously;
- In assessing soil carbon sequestration, it is more appropriate to calculate net sequestration, that is, gross soil carbon sequestration minus emissions.

Organic agriculture offers economic opportunities as it entails savings on nitrogen fertilizers and energy costs, as well as improved market commodity prices.

3. Biodiversity in farming systems is key to resilience building. Temporal and spatial associations are corner stones in organic agriculture through: rotations, cover crops, green manuring, agroforestry and integration of livestock in cropping systems. Grasslands, which are so important to conserve for climate change purposes, would be converted in the absence of their economic use through animals: in this respect, organic and grass fed animals contribute to sustaining grasslands.

4. For climate change adaptation, technological advances poorly compete with the reservoir of adaptations that represent farmers' knowledge. However, farmers must be enabled to adapt. Adaptive farming systems are more efficient than individual adaptation techniques.

5. The evaluation of farming systems' impact on climate change requires a holistic view, including the sum of all impacts. For example, the Carbon footprint of afforestation may be positive but resulting in a high pesticide footprint due to the use of herbicides on seedlings. Improving ecological footprints includes landscape management (more agroforestry) and consideration of virtual water budgets of traded agricultural goods. Organic agriculture embraces an ecosystem approach that hold promises to address climate change concerns and investments in more research and training in this field are worth pursuing.

Speakers' quotes

- *In organic agriculture, every step that mitigates is a step that adapts to climate change (Vandana Shiva)*
- *Organic agriculture can at least half greenhouse gas emissions by agriculture (Claude Aubert)*
- *Cover crops sequester more carbon than no till (Paul Hepperly)*
- *Making farming systems more resilient to climate change is more efficient than engineering crops for better tolerance to water stress (Urs Niggli)*
- *The volume of organic biomass is the most important growth factor on a farm (Jean-Michel Florin)*
- *With rising fertilizers costs, organic agriculture will become easier to implement (Peter Melchett)*
- *Changing consumer behaviour offer ecological and commercial opportunities for climate-neutral agricultural products (Tobias Bandel)*
- *Strategies for increasing bioenergy use and for increasing sustainability in agriculture ought to consider trade-offs (Adrian Muller)*
- *Prairie rehabilitation in synergy with renewable energy production from native prairies could inspire agriculture to a vision of ecological farming and sustainability (Bruno Borsari)*
- *Carbon off-sets often mean heavy pesticide footprint (John Paull)*
- *Carbon markets have the potential to achieve emission reductions without compromising economic growth in developing countries but there is need to resolve problems of contract design and high transaction costs (Alexander Kasterine)*