

Intervention by Ms. Molly Anderson  
International Partners for Sustainable Agriculture  
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*In response to Question 3. What can agriculture do to face the new challenge posed by climate change?*

**The main issues implicit in this question are:**

- Climate change has the potential to impede agricultural production seriously, not just above 3 degrees Centigrade but at smaller average temperature increases as extreme weather events occur more frequently. Many agricultural practices contribute to greenhouse gas emissions.
- Trade-offs exist between various mitigations and between adaptations and mitigation, as has been discussed by several people in relation to conflict between biofuel development and food security.

**Recommendations that NGOs have highlighted include:**

- o Reduce greenhouse gas emissions from agriculture through a variety of practices in cropping systems and livestock management. These have been analyzed and compared in the Fourth IPCC Assessment and include increasing C sequestration in soil OM, increase quantify of land in agro-forestry, restore organic soils; restore degraded land, set aside land from production, manage manure and bio-solids better, use breeds and feed that reduces production of methane by cattle. Highest increases in CO<sub>2</sub> equivalents per ha are available by restoring organic soils in warm climates, next from restoring degraded land, next from set-asides. NGOs in the US have championed the Conservation Stewardship Program, which rewards farmers for implementing conservation practices on working lands. These include various soil conservation practices and effective nutrient management, the importance of which was introduced by Dr. Colien Hefferan in her keynote address.
- o Focus crop and livestock breeding on adaptability to water scarcity, higher temperatures, greater frequency of extreme weather events. NGOs have highlighted the importance of ensuring access to these breeds by poor people. This is especially important for poor small-holders producing food in Africa, the majority of whom are women.
- o Encourage a diversity of supply chains, and in particular shorter, more direct supply chains that also provide benefits congruent with sustainability goals (reducing rural poverty, improving soil fertility), both as preparation for disruption imposed by extreme weather events and as mitigation by reducing greenhouse gas emissions accrued in transporting food long distances.

Thank you.