

Climate Change Negotiations on Agriculture must focus on Smallholder Farmers

By Jim Cornelius, Executive Director, Canadian Foodgrains Bank

Agriculture has long been a neglected partner in the fight to combat climate change.

Now as negotiators meet in Copenhagen for the UN's climate change conference in Copenhagen, it's time to put sustainable agriculture firmly on the table. Sustainable agricultural practices, such as conservation agriculture, not only slow climate change, but they also help in adaptation, and improve food security for the poorest in the world.

As Kanayo F. Nwaze, president of the International Fund for Agricultural Development, has recently put it: "Agriculture is the vital link between the two burning issues of feeding a growing population and preserving the planet we live on."

Never have these issues been more pressing. In 2009, the number of hungry people in the world passed the 1 billion mark for the first time in human history. That equals one-sixth of all humanity.

More than 75 percent of people who suffer chronic hunger live in rural areas in developing countries, and most of these are small-scale farmers. It is widely accepted that the worst impacts of climate change will be felt in developing nations, in the form of increased droughts, greater flood damage, stronger storms, sea level rise, and spread of human and livestock diseases. For smallholder farmers whose livelihoods are vitally linked to the natural resource base, such changes in rainfall, temperature and declining yields will make them even more vulnerable to hunger.

The Intergovernmental Panel on Climate Change (IPCC) in 2007 estimated that food production from rain-fed agriculture in Africa (the dominant method) could decrease by 50 percent by 2020. Another UN report suggests 600 million more people could be at risk of hunger worldwide because of climate change by 2080.

These numbers are clearly sobering.

But the two billion rural women and men in Africa, Asia and Latin America who farm on small plots of land could also be a significant part of the solution.

Agriculture currently contributes 14 percent of global greenhouse gas emissions – about 6.8 Gigatonnes of CO₂ equivalents per year (Gt CO₂ eq/yr) in 2005. But there is potential to reduce that dramatically. Soil carbon sequestration alone has the mitigation potential of up to 5.3 Gt CO₂ eq/yr by 2030, according to the IPCC. Up to 70 percent of this carbon sequestration potential could be realized in the developing world.

Conservation agriculture is an excellent example of a sustainable land-use solution that sequesters carbon. It entails minimum soil disturbance through reduced or no tillage; use of cover crops, mulch and residues; and diversified crop rotations. Conservation agriculture increases soil water retention, reduces soil erosion and improves nutrient recycling.

It not only sequesters carbon in the soil, but also improves productivity and resilience, and thus contributes to food security and adaptation.

Though the specific practices may differ, the principles of conservation agriculture can be applied to farming at any scale.

A Canadian Foodgrains Bank-supported project introducing conservation agriculture techniques to smallholder farmers in the drought-prone Nkayi district of Zimbabwe is illustrative. The Nkayi farmers who have embraced conservation agriculture have seen their maize crops flourish, often yielding five times more than their plots of maize grown under more conventional techniques.

While these farmers have taken big strides in improving food security, they could benefit further if they were rewarded for carbon sequestration.

The head of the World Bank recently stated that agricultural carbon sequestration could generate annual revenues of close to \$1.5 billion for Africa through carbon markets.

This could become a reality. There is increasing enthusiasm for the inclusion of agriculture in a Copenhagen agreement. Climate change negotiators should make a concerted effort to ensure smallholder farmers are fairly compensated for good soil management in such an agreement.

It is imperative that such an agreement should not increase financial burdens on smallholder farmers. Rather, it should ensure that smallholders have access to carbon trading systems while also maintaining control over the management of their land. This agreement must necessarily go hand-in-hand with increased funding for mitigation and adaptation efforts in developing countries.

There is scepticism that the world will come to a comprehensive agreement on climate change at Copenhagen. However, agreeing to a framework that would fairly include and reward smallholder farmers for sustainable farming practices would be a giant step forward.

Improved food security, mitigation, and adaptation represent a win-win-win for all of us. Wouldn't it be nice to finally have some good news emerging from the climate change negotiations?