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BEST PRACTICE FOR BIOCHAR

With just six months left to go, all sectors are vying for a place at the table in Copenhagen, where negotiators will begin sketching what should eventually become an all-embracing climate deal. While some players are seeking assistance in adapting to the impacts of climate change (page 68), others are hoping to stake a claim in the emerging green economy (page 72). The prospects of the latter are bright for those involved in the nascent biochar industry, which plans to sequester vast quantities of carbon in soil using an ancient Amazonian agricultural practice and to sell the latent emissions as credits on a global carbon market.

The concept is simple: if *terra preta* — or charcoal-enriched soil — was re-created globally, as much as 6 billion tonnes of CO₂ could be prevented from entering the atmosphere annually, a substantial fraction of the 8–10 billion tonnes emitted each year by humans. Proponents, who include no small number of world-class climate scientists, say that burying biochar not only would slow the rate of warming, it would enhance soil fertility — and the charcoal-making process could produce sustainable biofuels to boot.

In late May, the United Nations released its draft negotiating text for Copenhagen (UNFCCC document FCCC/AWGLCA/2009/8; <http://tiny.cc/GnvBQ>), which specified that biochar should be considered eligible as an advanced mitigation option under a post-Kyoto treaty. Should negotiators — who will discuss the document over the coming weeks in Bonn and again in Copenhagen — find the suggestion favourable, the biochar industry will unavoidably become a legitimate source of tradable carbon credits. And why not? Burying biochar could be the closest contender yet for a silver-bullet solution to climate change (*Guardian* 13 March 2009; <http://tiny.cc/ETEHv>), in which case its deployment can't come quickly enough.

But despite its astounding potential, caution is warranted in implementing biochar on any sizeable scale. Though re-creating *terra preta* sounds simple, recent research suggests that modern-day soils may respond less well to the treatment and that the carbon may escape sooner than anticipated. On these questions alone, all of the evidence is not in. Yet we clearly don't have the luxury of time to answer them definitively.

The recent exuberance over biochar is reminiscent of the earlier fervour over biofuels, as critics have been eager to highlight (*Guardian* 24 March 2009; <http://tiny.cc/EfOSs>). But both face some of the same problems — most controversially, the need for land should carbon credits command a high enough price — suggesting there is scope here to learn from previous errors.

What's now needed is an international code of best practice for biochar that evolves as knowledge comes in. For a start, this would clearly define acceptable land-use policy for plantations, as well as a lower limit on carbon sequestered from those claiming certification. Inclusion in a global climate deal will certainly speed the adoption of biochar, but it can also help ensure that this solution is applied responsibly.

OLIVE HEFFERNAN, EDITOR

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