

## **US Biochar Conference Boulder August 9-12, 2009**

This 3 day conference was held at the Law School, University of Colorado in Boulder. There were around 325 attendees. A very high percentage of whom were from the US. Perhaps only around 10% non-US attendees, but that small group represented around 20 different countries. There were three Australian-based attendees (Stephen Joseph (IBI, AnthroTerra and UNSW), Paul Munroe (UNSW) and Jane Lynch (IBI and UNSW). The US attendees were from a diverse range of backgrounds, research scientists, venture capitalists, farmers, those representing start-ups and funding agencies. Overall there were around 80 oral presentations and 40 posters.

The keynote presentation on first morning was given by Dr Susan Solomon, a climatologist, who has chaired one of the UN IPCC panels (and was this co-awarded the Nobel Peace Prize with Al Gore). She mainly spoke about, unsurprisingly, climate change. In particular the time that would be taken for CO<sub>2</sub> levels to decrease, and the role of the oceans etc in controlling greenhouse gas levels. This was followed by shorter presentations by Johannes Lehmann and Jim Amonette addressing the role of biochar as a carbon sink. One comment from Johannes that resonated was the difficulty in engaging with government due to the multi-faceted nature of biochar. That is, the departments for Climate Change, Agriculture, Energy, Science were all happy to pass the buck and say that biochar did not fall into their portfolio.....sounds familiar.

On the Monday evening there was a second keynote given by the Federal Secretary of Agriculture, Tom Vilsack, a former state governor and senator for Iowa. He spoke broadly about the objectives of the Obama administration with respect to agriculture. He noted that when Obama asked him to step into this role, he was surprised when the President indicated that one of his priorities should be enhancing the role of agriculture in reducing fossil fuel dependence. He spoke broadly about initiatives to rejuvenate rural and regional areas, improving the economic conditions for farmers etc. He spoke more specifically about biochar, and appeared reasonably knowledgeable about the prevailing issues with respect to biochar. He took a range of questions for around 30 minutes and answered them, for the most part, candidly. He accepted criticism that funding for biochar in the current budget round was not good, because that budget process was done in a hurry, but anticipated that future funding round would expend more on research initiatives.

Many of the sessions focused on aspects of biochar research, such as characterization and structure, interaction with soils, greenhouse gas mitigation, life cycle assessments. Many of the presentations were focused on biochars from local American feedstocks (Switchgrass seemed very popular, pinenuts, hardwoods etc, with some looking at chicken manure (there are 1.8 billion chickens in the state of

Georgia!). Much of the ground covered was not indistinct from those covered at recent biochar conferences (what is the structure and composition of the char, does it promote plant growth, is the production carbon negative etc). A continuing theme left over from the Gold Coast conference was the need to achieve on agreed standards for defined characteristics for biochar. Some very interesting presentations on the composition of the labile fraction of carbon.

On the Tuesday, there was a moderated panel discussion entitled “Bringing Biochar to Market”. About 6 people involved in, mostly, biochar start-ups discussed and shares issues they were facing. Most were at any early start-up stage and still cash negative. The exception was an Italian company that had been successful solely because of changes in EU legislation which changed the regulations for biomass disposal. A broad conclusion was that successful commercial outcomes for biochar require legislated change to drive market engagement. Mantria Llc, who were at the May conference, had a high profile at the meeting and announced that they had nearly complete commissioning and were planning to sell biochar in the next month.

On Wednesday, there was a second panel discussion focusing on the international state of biochar and the likelihood of it being included in the Copenhagen meeting. IBI Executive Director, Debbie Reed, joined the meeting via a phone link from Bonn. She felt there was a 50-50 chance of success in gaining inclusion for biochar in the protocols being prepared ahead of the Copenhagen conference. Biochar is currently in draft legislation, but entrapped within three sets of nested brackets of yet to be agreed upon wording. Any or all of these brackets could be cut at any time. The success story was again from Italy. The Italian government was working to install 10,000 small capacity stoves into impoverished parts of Africa, especially those at risk of desertification, to help families and farmers. Early signs were showing positive results in terms of land use, but also unintended consequences such as a marked increase in the number of children attending school.

The take home messages were, to some degree, unsurprising:

1. At present biochar needs external support (through carbon credits, changes in legislation). Statutory changes will help find markets for biochar
2. There is a pressing need for “standards” in characterizing biochar
3. Biochar converts “get it”, but there is still considerable ignorance in broader areas of government regarding what biochar can do
4. The holy grail is still a ‘designer’ biochar. An entirely homogenous high quality product with predictable (and uniform) results for a given crop.

E-versions of some of the presentations will be made available through the conference website. However, they can be provided by any of the Australian attendees of this conference.