Geophysical Research Abstracts
Vol. 16, EGU2014-15583, 2014
EGU General Assembly 2014


# The stability and functional properties of charcoal in Ghanaian agriculture

Tom Maxfield and Saran Sohi

University of Edinburgh, UK Biochar Research Centre, School of GeoSciences, Edinburgh, United Kingdom (saran.sohi@ed.ac.uk)

Weathering of biochar will lead to its eventual mineralisation to $CO_2$, but how does this happen and how quickly will the biochar break down?

This study focuses on the fate of charcoal, as an analogue for biochar, over a ten year period in rural Ghana. The objectives of the work were to determine the stability of charcoal over this timeframe, the change in its functional properties and to calibrate or validate recently established approaches to age biochar artificially.

The study showed that the oxygen-to-carbon ratio of charcoal surfaces generally increases over time. Gradually the oxidation penetrates the subsurface layers, causing surface layers to erode and exposing previously un-aged surfaces to degradation.