

CHAB Camp 2010:

Hands-on Development of “Combined Heat And Biochar” Devices

A weeklong workshop will be held in western Massachusetts on 8-13 August 2010 to study and develop CHAB (Combined Heat And Biochar) devices. The fundamentals of biomass pyrolysis, biochar characterization, carbonization conditions (that promote higher performing biochars) and heat capture and transfer will be examined in technical and practical terms. The daily schedule has flexibility, with mainly a series of morning study groups and afternoons and evenings devoted to the design, fabrication and testing of prototype CHAB devices. The only criteria for the CHAB devices are that they must A) generate a useable form of heat, B) provide for the recovery of biochar, and C) produce acceptably low emissions for untreated discharge at the intended application or via flues to the outside environment.

The goal of the CHAB Camp is to explore multiple technologies and device configurations, including TLUD cookstoves, retorts, greenhouse heaters, home furnaces, and combination cooking/water heaters. Cooking and heat recovery for residential space heat and hot water are the most likely heat applications, exemplified by simple “Top-Lit UpDraft” (TLUD) pyrolytic gasifier cookstoves, such as shown at www.bioenergylists.org/andersontludconstruction. Current designs and new prototypes will be constructed and operated at the Camp. CHAB performance, both in terms of heat recovery and biochar properties, will be measured and evaluated.

CHAB Camp 2010 will be held 8-13 August 2010, with an opening social on Sunday 7 August and a closing “CHAB Demonstration Day” open to the public on Friday 13 August (which is the opening date of the summer conference of NOFA - Northeast Organic Farmers Association – in Amherst).

The Camp leaders are Drs. Paul Anderson, Thomas Reed, and Hugh McLaughlin. The host location is the New England Small Farm Institute (NESFI), Belchertown, MA USA. (10 miles SE of Amherst) www.smallfarm.org Visit that Website for further information and updates. It is anticipated that CHAB Camp will become an annual event.

Cost: US\$250 (includes CHAB supplies, fuel, fire, cold breakfast, liquids throughout, occasional food sampling, etc.) Participants can use free camping space at NESFI (no hook ups), or arrange for nearby lodging, food, etc. in Belchertown or Amherst.

Interest in the CHAB Camp is strong among “Stovers” (hands-on fabricators of stoves for Developing Societies) who will explain, instruct, and conduct prototype experiments with retorts, TLUDs, and other CHAB devices. Pre-registration by 15 July is highly recommended because of the need to plan for such a participatory workshop. Spaces are likely to be limited, so e-mail your contact info to: neba-biochar@charter.net

Why CHAB? Society has hundreds of reasonably priced devices that use wood and other biomass as fuel, deliver useable heat, and generate ash. A similar selection of devices could be developed to consume biomass, provide useable heat, and create a solid residue that would perform as an acceptable biochar. Distributed biochar production by CHAB devices in affluent and impoverished societies worldwide can make an important contribution to the diverse biochar objectives.