

# D-Lab Development

2009.10.05

## Charcoal History

Discovering the idea

Haiti

Using waste (paper then agriculture)

Forming briquettes by hand

- fell apart when burned

Figuring out best way to form: COMPACTION

Field Test -> Haiti

- then tried in Pakistan (banana leaves)

- Ghana (corn cobs)

Water Soluble Binder

- Sand to stop burning

- Trust community partner knowledge + familiarity

Traditional Charcoal - bad for environment

X chopping tree

X sterilize ground

X seal ground

- no regrowth

Chemicals are being released

INDOOR or OUTDOOR

Better to release outside not in home

"cleaner" than wood charcoal (or dung) in house

3 Things that are required:

1. biomass

2. drive off volatiles (high temp)

3. control oxygen (eliminate oxygen)

Direct Method - burn material we are CARBONIZING

Experiments with waste heat

Gassification requires more complex materials/devices

55 gal. oil drum is very cheap/simple



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