

Shifting the Paradigm: Unlocking wider use of biochar for agriculture, forestry and carbon sequestration.

Thoughts on the shift from conventional thinking to carbon smart thinking. Based on the work of Thomas Kuhn, “The Structure of Scientific Revolutions” and Achebe, Hyden, Magadza, Okeyo. 1990. *Beyond Hunger in Africa—Conventional Wisdom and an African Vision*. London, UK: James Currey.



Conventional Paradigm

- Monocultures
- Product focus
- Standardized, fossil fuel powered systems
- Commodity Supply
- Corporate Control
- University based research
- Production first
- Large scale, uniform
- Chemical inputs – suppression
- Market driven
- Bank and loan based
- Capital intensive



Raised beds with biochar/compost



On the left is a new lettuce bed enhanced with a biochar and compost mix. On the right is a bed of Swiss chard also using the biochar compost mix.

Avalon Acres Farm System



On the left is the production unit with the heavy piano hinged door open to show the firebrick insulation and the pyrolysis barrel inside. Note also the 12 cm high water tank that makes up the roof of the burn chamber. On the right is the back of the unit next to the house where the send and return pipes are seen. These are protected from the heat with reflective aluminum insulating tape.

Biochar post burn and crushed



On the left is eastern red cedar biochar and on the right is the ground up biochar before mixing with manure and compost.

Carbon Smart Paradigm

- Locally appropriate polycultures
- Health focus
- Ecological solar powered systems
- Local use
- Farmer control
- On-farm & ecosystem research
- Soil comes first
- Small scale, highly variable
- Biological inputs, diversity enhanced
- Community driven
- Community based
- People intensive

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