Should I char it?

A brief presentation on biochar for C management

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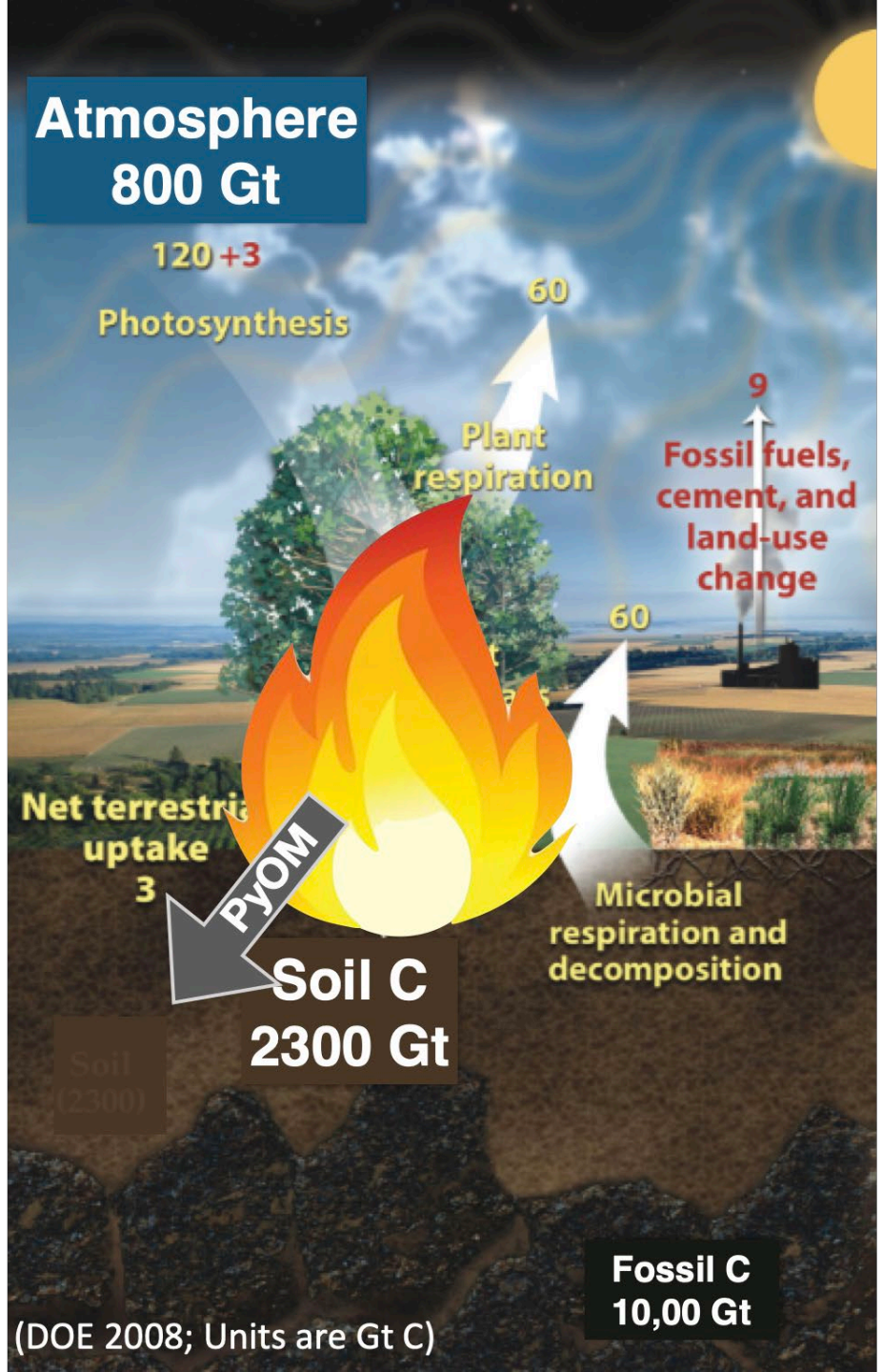
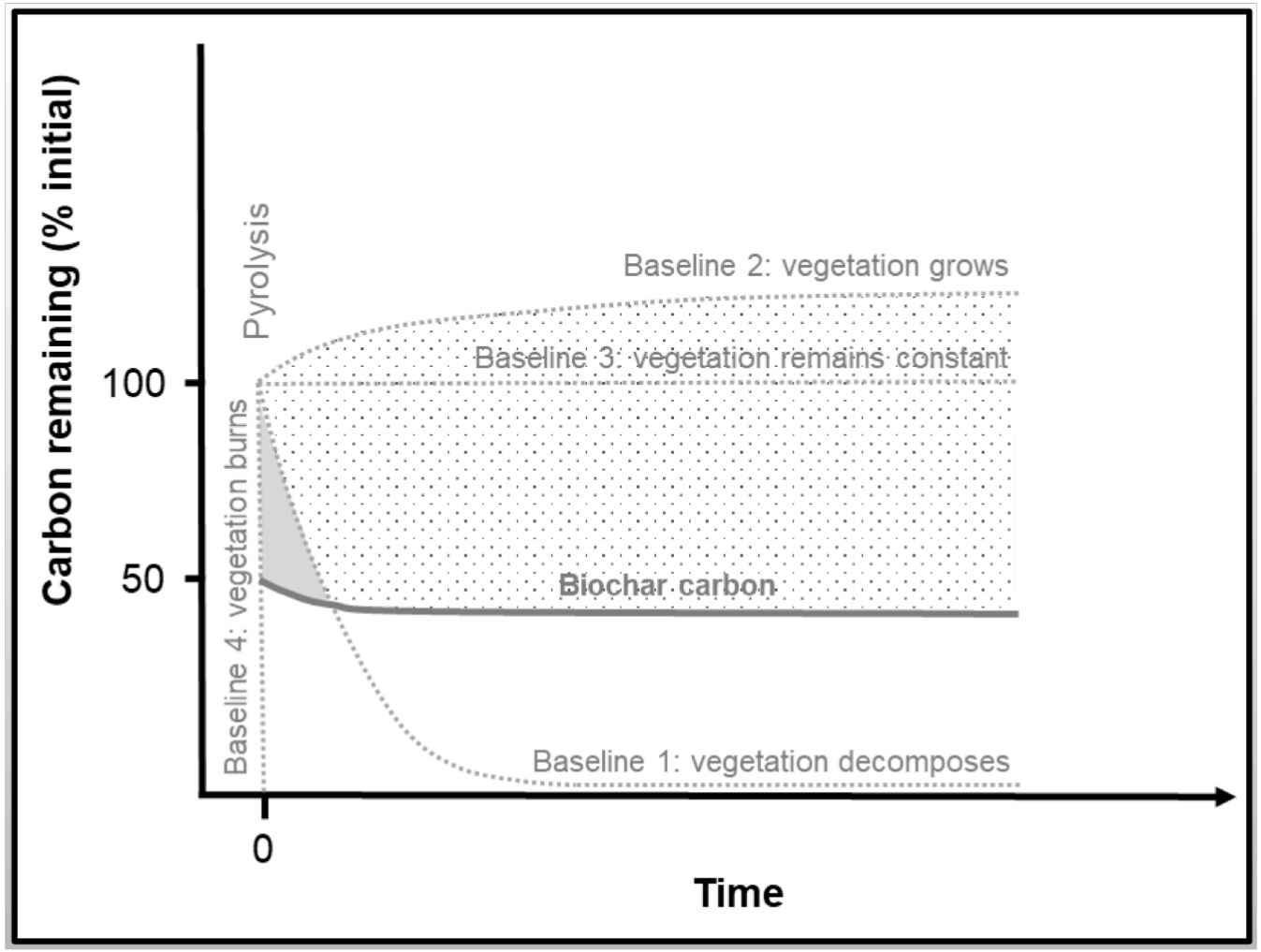


What are PyOM and biochar?

Pyrogenic organic matter

- Incomplete combustion of biomass under low O_2: Pyrolysis
- “Biochar”: PyOM produced intentionally for agricultural amendment or C management

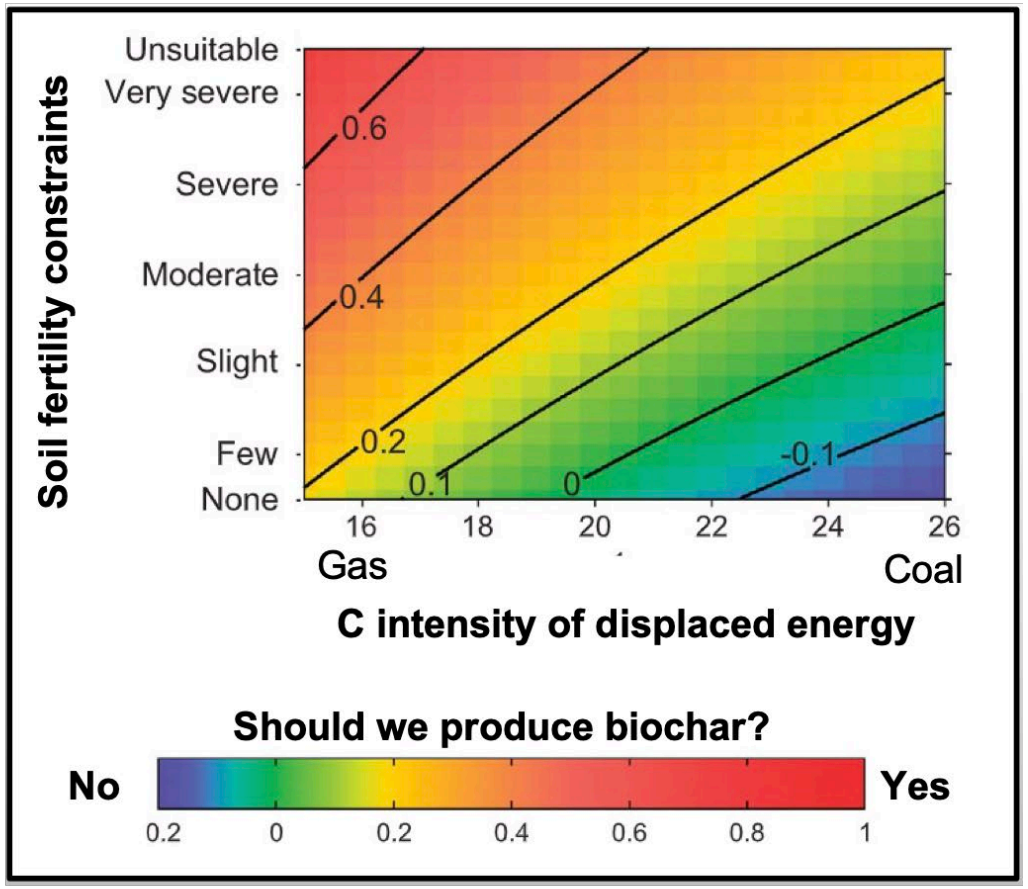
Biochar systems can produce net C drawdown… if designed correctly



(Lehmann *et al*., 2022)

Should I char it?
Biochar vs. bioenergy

- Capture energy during biochar production
- What is the C intensity of the energy that is displaced?
  - Best when displaced energy source is not C-intensive
- Is there an effect on soil fertility?
  - Best for low-fertility soils
- What effects are there on non-pyrogenic SOC?
  - Increased mineralization in the short term often offset by decreases in the longer term



(Modified from Woolf *et al*., 2010)

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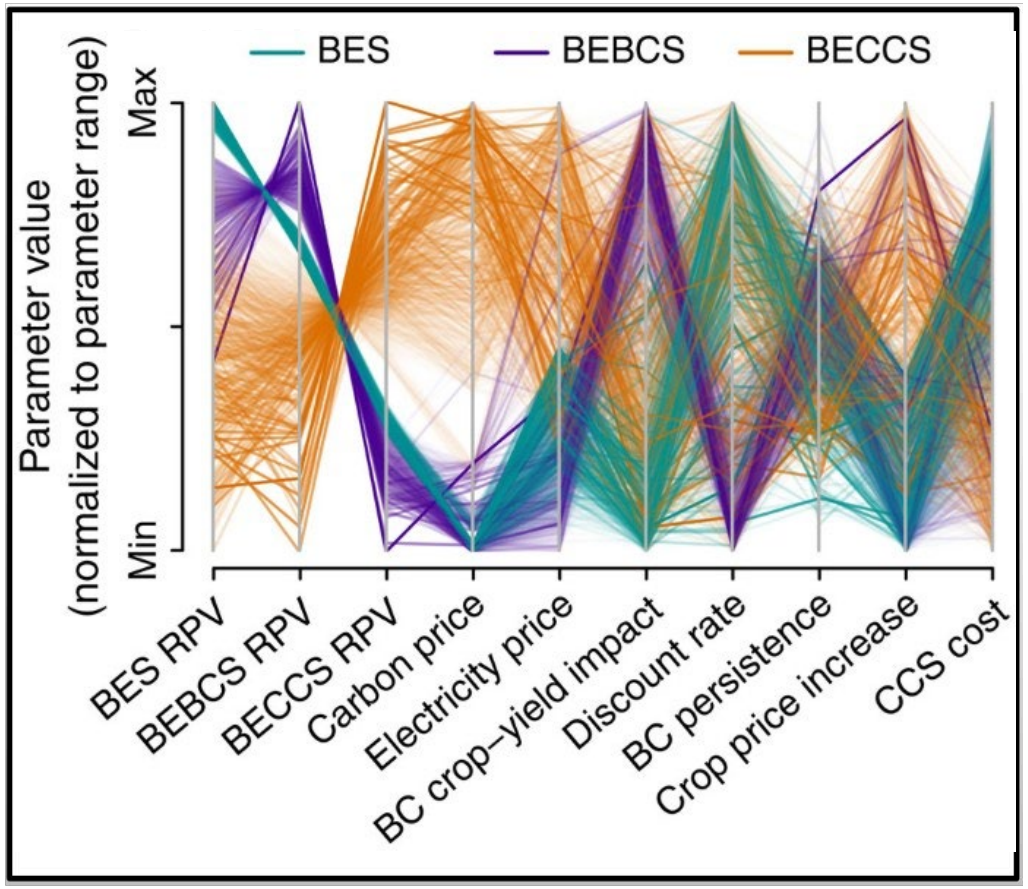

(Woolf *et al.*, 2016)