

# Biochar and Efficient Use of Water and Fertilizers

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# Outline

- What is biochar
- How to make biochar
- Why/How to use biochar

# Biochar



- Biochar, Agrichar, Biomass-Derived Black Carbon

# Biochar

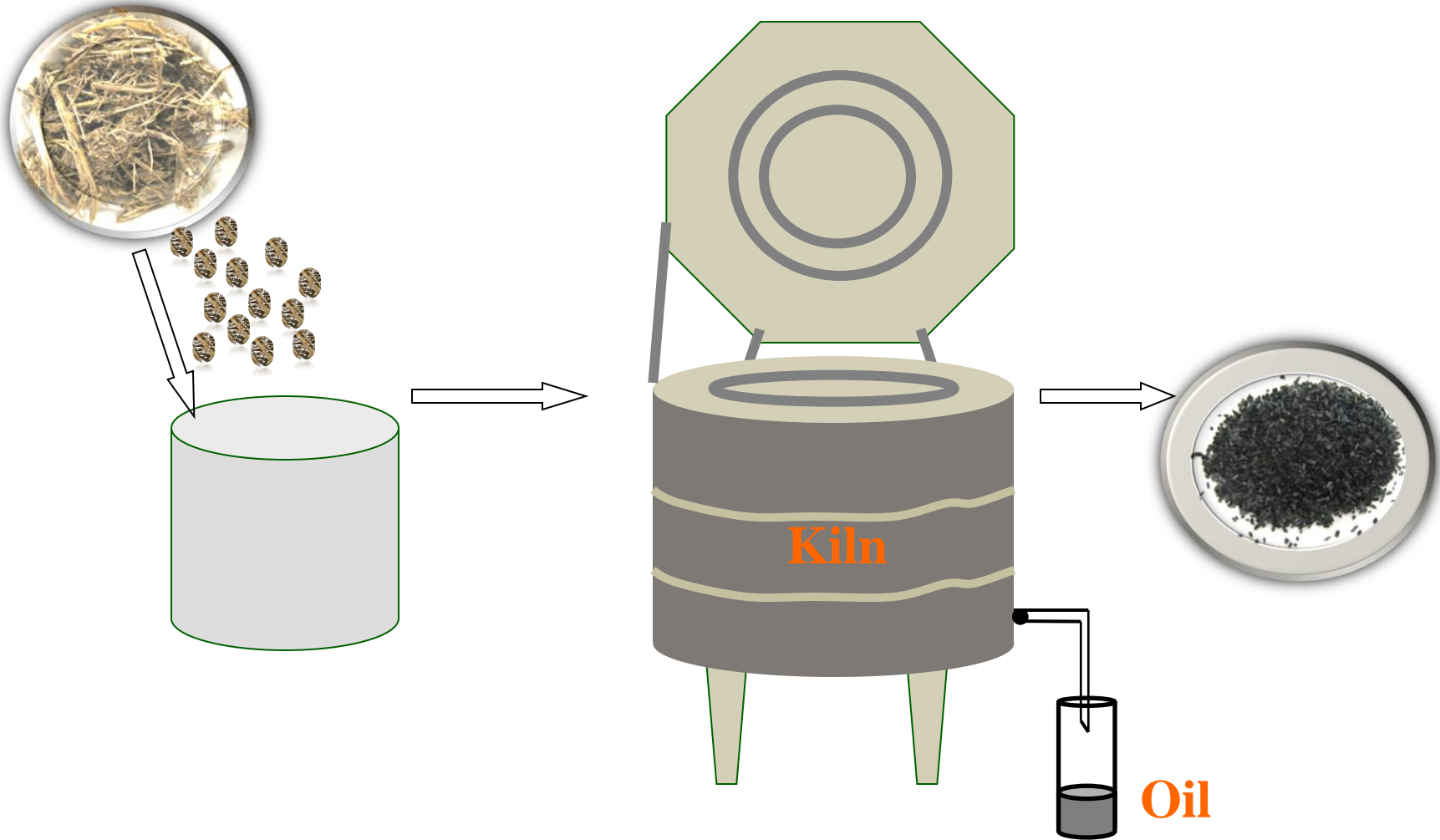


- A black carbon derived from *Thermal Pyrolysis* of carbon-rich biomass in an inert atmosphere.
- Soil & other applications.

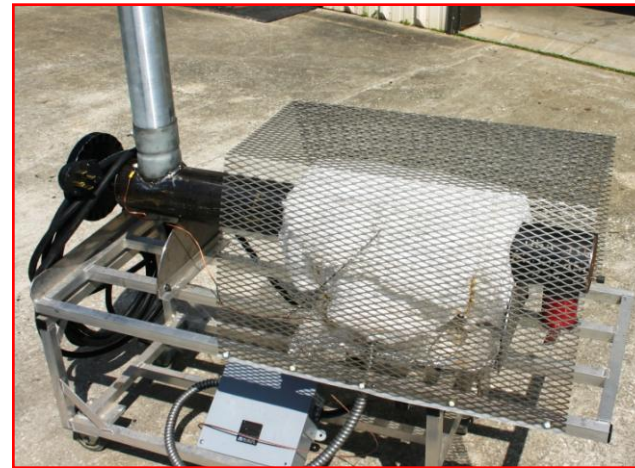
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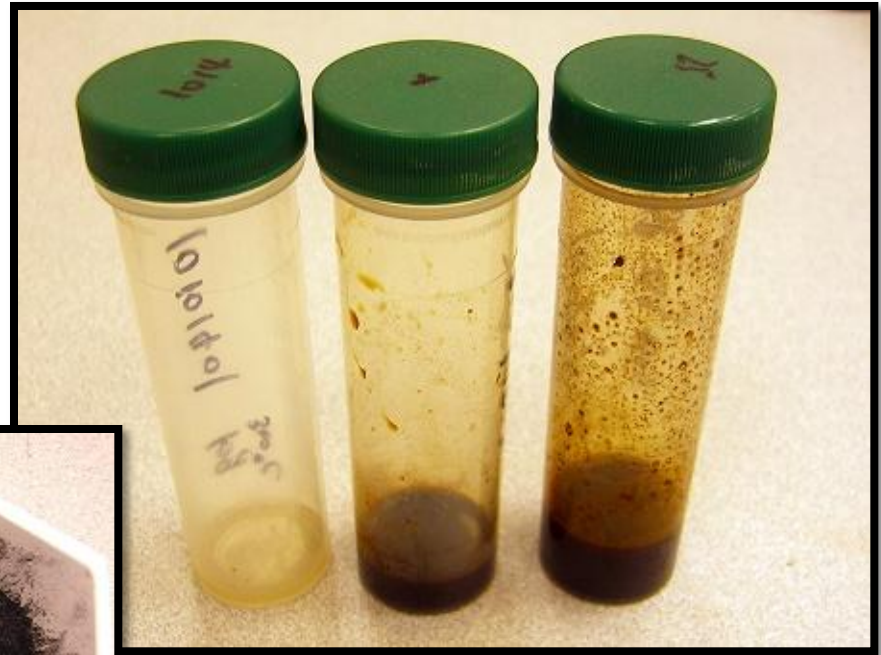
# How to make biochar



# Biochar Reactors



# Biochar & Biooil



# How to make biochar



# Outline

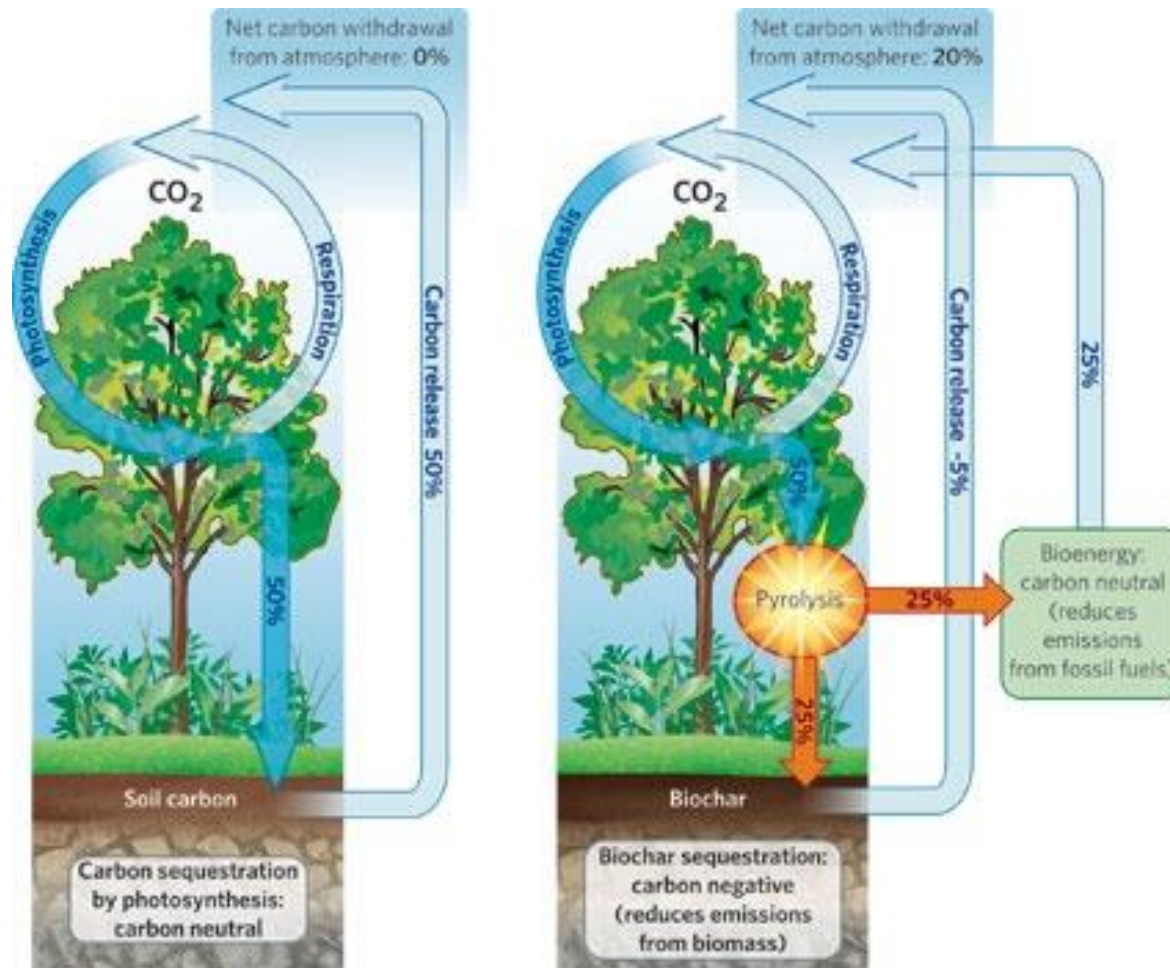
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# Soil Improvement



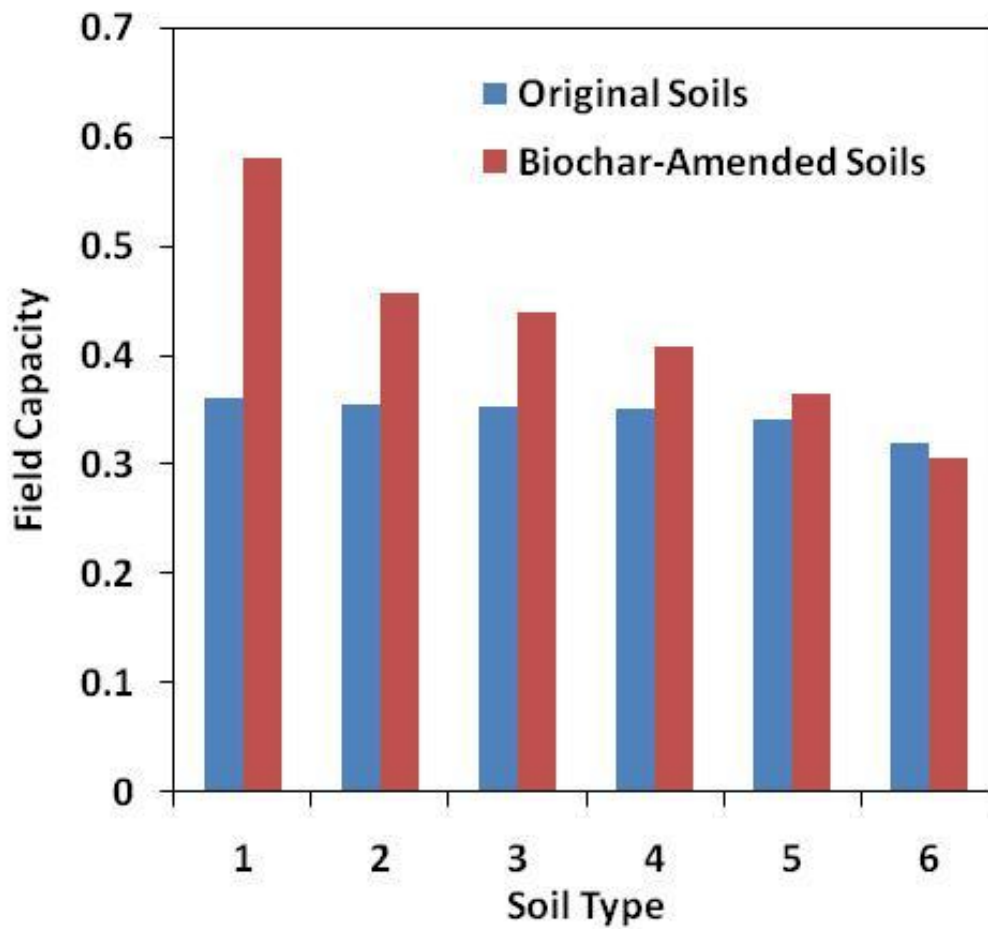
Biochar Soil Amendment (from *IBI*)

## Carbon Sequestration



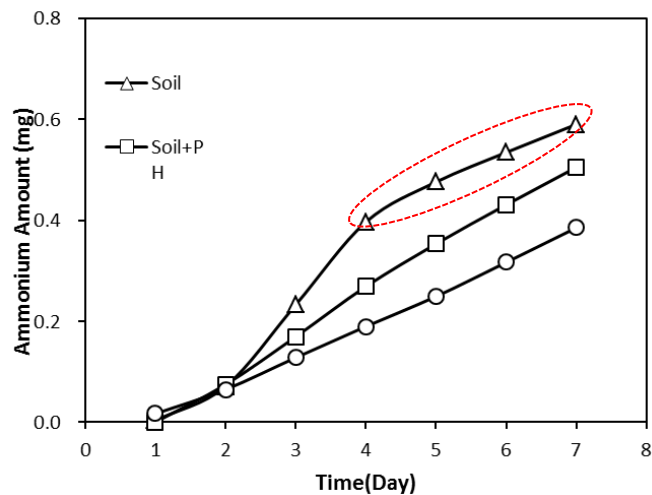
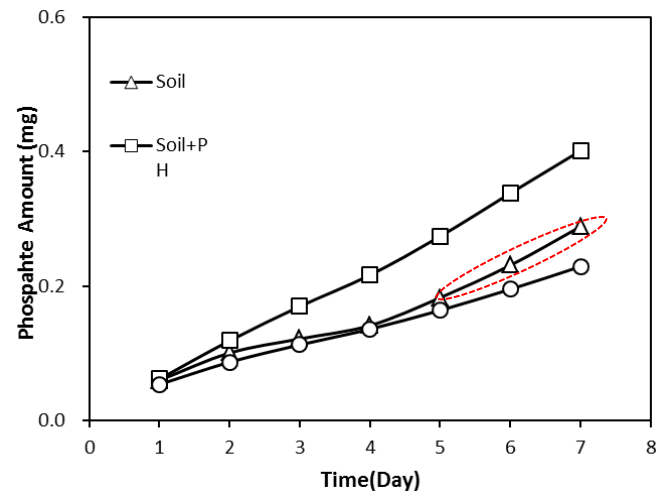
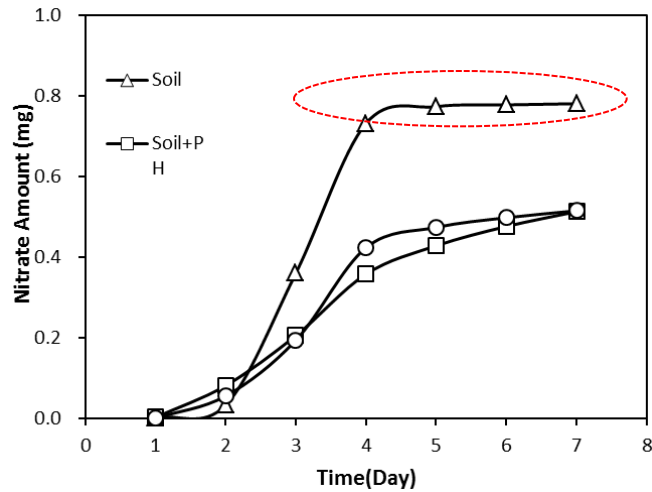
Carbon sequestration mechanisms of land application of biomass and biochar (from *Nature*, 447, 2007)

# Water Conservation



**Improve Water Holding Capacity**

# Fertilizer Conservation



**Improve Nutrient Holding Capacity?**

# Soil Amendment



# Thank You

