



All the carbon present in all plants  
starts as carbon in CO<sub>2</sub>

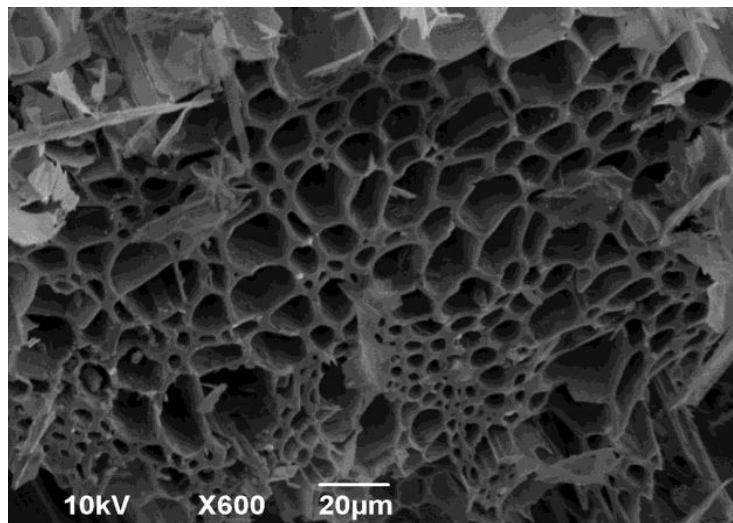
Biochar locks up CO<sub>2</sub> Permanently



## What is Biochar?



## Biochar



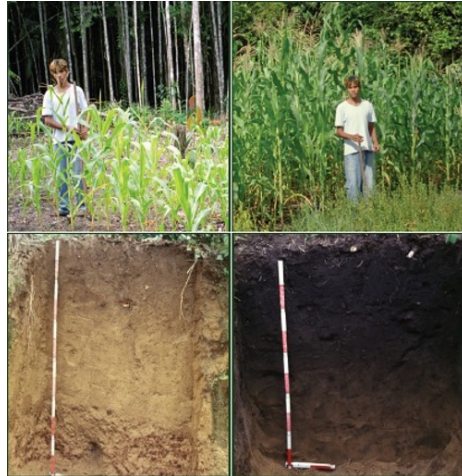
## What is Biochar good for?



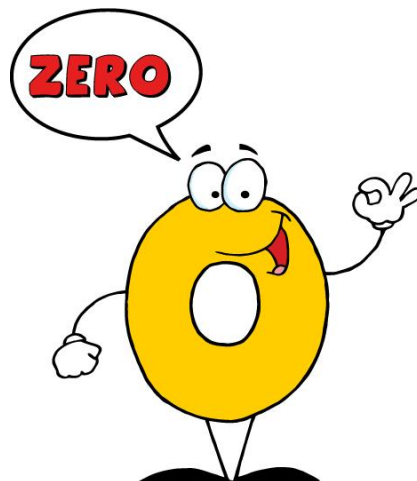
### Biochar - Old Technology Rediscovered

- Terra Preta
- Black Soils of the Amazon
- Highly Productive soil enhanced with charcoal
- Discovered by the Spanish Explorer Francisco de Orellana

## Natural Soil vs Terra Preta Soil



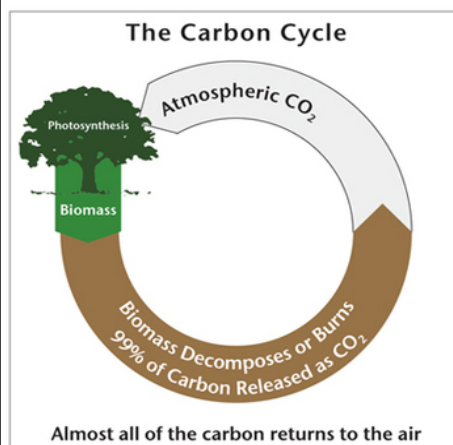
## Biochar nutrient analysis



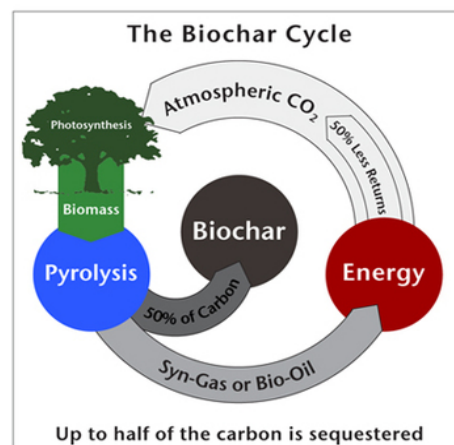
Then Why?



## Short term vs Long term



Green plants remove CO<sub>2</sub> from the atmosphere via photosynthesis and convert it into biomass. Virtually all of that carbon is returned to the atmosphere when plants die and decay, or immediately if the biomass is burned as a renewable substitute for fossil fuels.

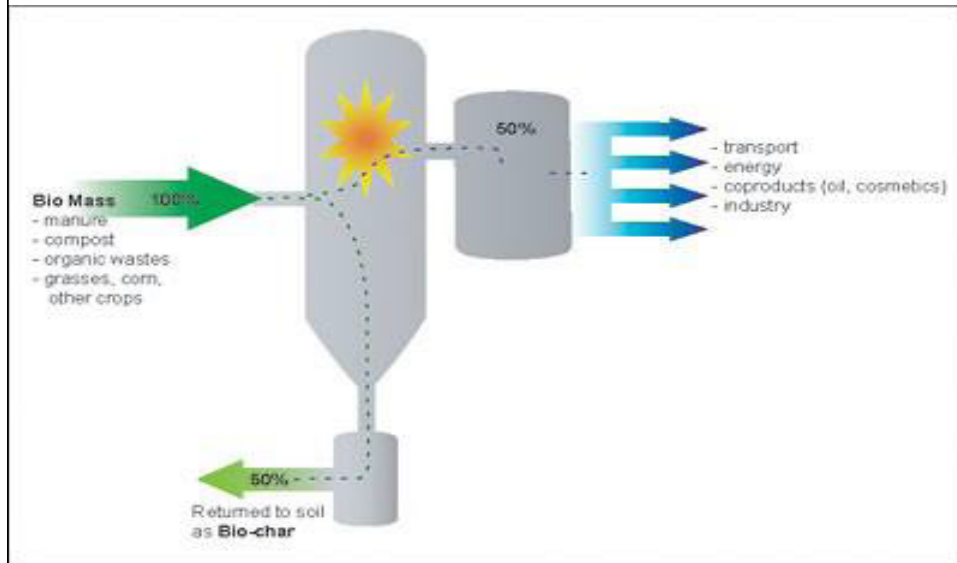


Green plants remove CO<sub>2</sub> from the atmosphere via photosynthesis and convert it into biomass. Up to half of that carbon is removed and sequestered as biochar, while the other half is converted to renewable energy co-products before being returned to the atmosphere.

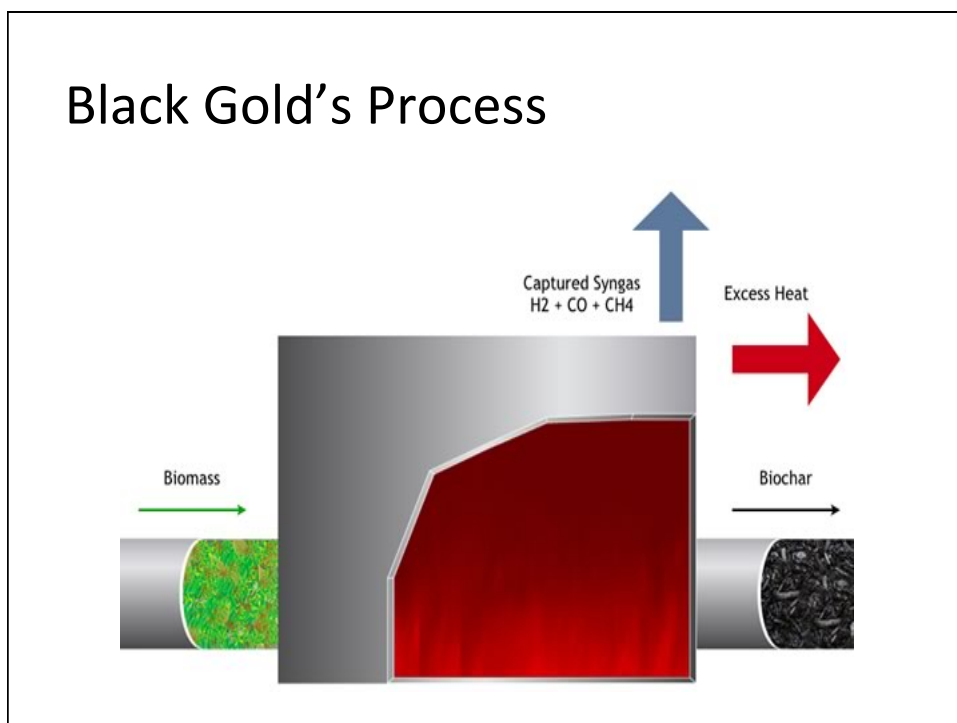
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## Cover Crops Vs Biochar

## Making of Biochar



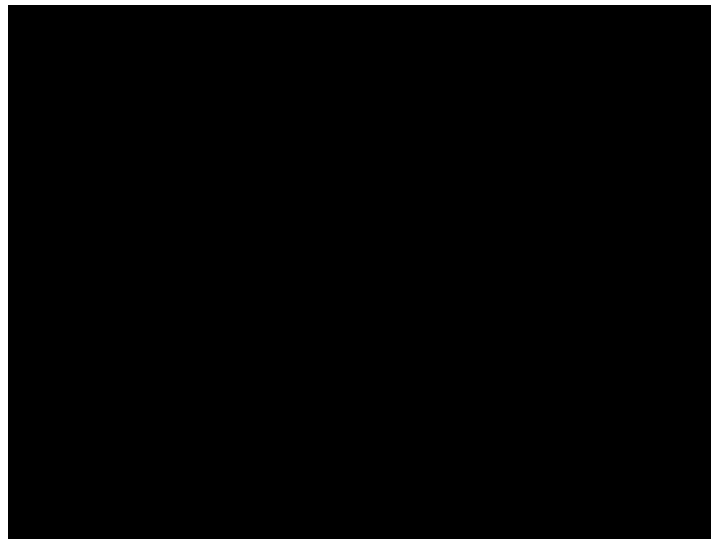
## Black Gold's Process



## Mobile Biochar #1



## Syn-gas production in action



## Biochar machine #2



## Why biochar ?

- New homes for biological activity
- Excellent Nutrient holding Capacity
- Filters and holds stuff
- Long term carbon sequestration (Carbon Farming)
- Increases Water and air holding capacity
- Proven yield increases
- Excellent livestock bedding

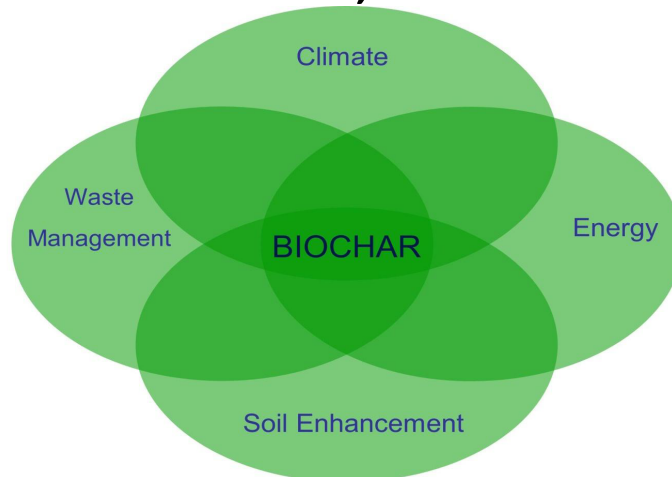
## Why on farm biochar production

- Utilization of on farm waste
- Reduced transportation
- Energy Energy Energy
- Free Heat
- Sale and use of additional by-products
- Future of carbon and organic plastics

## Black Gold Biochar, LLC

Owner/Developers

**Monte Bertsch, Steve Gruhn**



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