

Wakelyns Biochar Course – Peni Ediker 14/3/26

Biochar is created using pyrolysis (burning at high temperatures without oxygen).

Feedstock should be approximately 5m in diameter – hedgerow cuttings ideal. Willow, hazel, maple etc. Moisture content should be around 20-25%.

With BBQ charcoal, oils, gases and resins are retained therefore it is a pollutant.

With biochar 85-90% of the carbon is stable – this is obvious when looking at the cellular structure post burn.

When combined with compost, can lead to very rich and fertile soils cf. Terra Preta soils in the amazon – we have a longstanding tradition of manipulating our soils.

Kiln types

- Kon-tiki (as used on the day)
- Kelpi
- Oil drum/tea ludd

Stages of making

- Get an even light
- For oil drum method, size of char is roughly equal to size of burn around it
- Ideally drench from bottom – “stresses” the wood less
- Leave submerged overnight – biochar is highly combustible
- Plan on where to store afterwards – biochar will act as a sponge so don’t store in e.g. a rusty wheelbarrow or will absorb iron content
- When adding inoculants, use rainwater or filtered water

Biochar uses

- Soil resilience and preventing erosion
- Fertiliser (when combined with inoculantcompost)
- Top dress with no dig method
- Water retention but also prevents waterlogging
- Increases porosity
- Holds microbes in soil
- Buffers PH and EH (redox potential)

- Can alter PH
- Faciliates catonic stage ie transferral of nutrients in plants
- Supports microbial life and disease resilience
- Speeds up germination
- Quorum sensing
- Facilitates “circular economy” within a farm

Inoculants

- Home-made fertilisers
- Medicinal properties – pre-biotic etc
- Cleaning properties e.g. - Used to soak up ammonia fromcompost loos/animal bedding

Lactobacillus – see recipe picture

Spray after 8pm overnight – this is when the plant isn’t photosynthesising and therefore the microbiology is more active]spary underside of plants

Add molasses to stabilise

Combine with leaf matter (duff) – ie look to the old woodlands as examples of master composters

Further research

Terry Gillespie – Spice mix

Jadam approach – Korean natural farming

Encouraging IMO (indigenous microorganisms)

Bokashi approach

Kelpie Wilson – Biochar Handbook

Juan Fran Lopez – Biofertiliser manual/handbook

Other