

# Biochar: from archaeology to a sustainable future!



Making the *char*.

*Ancient Arts* funded by Annog under the Conwy Agri-Innovation project, has been trailing the farm scale, *kiln free* way of making biochar, a top quality soil enhancer.

Inspired by the farming practices of early Native American peoples for making fertile "dark earth soils" or *terra preta*, *Ancient Arts* has developed a series of experiments to replicate and study these ancient techniques.

During this early stage of research this ancient system has shown the potential to dramatically increase crop yields whilst simultaneously locking up carbon dioxide, a greenhouse gas.

The addition of charcoal and nutrients (*biochar*) to soils can in many cases dramatically increase crop yields because the porosity of the biochar acts like a "coral reef" in the soil **dramatically increasing the surface area** of the soils thus providing far greater area for water and nutrients to bond to. It also provides a great habitat for the soil flora, fauna and fungi to thrive.

The *biochar* also retains water and nutrients, making them available for plants and crops and thus reducing the need for expensive chemical fertilisers and irrigation.



Lovely! Making the nutrient rich *tea* out of horse manure!



In the Summer of 2011, *biochar* was successfully made using a bonfire-nutrient dowsing technique in which the charcoal is carefully extinguished with a nutrient enriched tea; in doing this the *char* is simultaneously charged with nutrients and retrieved from the burning process. Un-burnt wood is scraped of char and thrown back on the fire to be re burnt to charcoal.

Biochar has a great potential to help farmers with the fight against climate change and world hunger.



Dowsing the *char* with the *tea*.



Mixing in the biochar during an open day

