A Novel Technology for Stable Soil Carbon Sequestration

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Key Findings:

- "*Terra Preta de Indio*": soils discovered in Amazon Basin, unusually large, stable carbon reservoirs, created 2-3,000 years ago
- TP soils: 150gC/kg; surrounding soils: 20-30gC/kg
- "*Terra Preta Nova*": scientists are re-creating these soils via pyrolysis of agricultral and forestry biomass
- Biomass C is captured in 2 product streams: "char", used as soil amendment, and bio-energy; *carbon-negative* process
- A stable, significant soil carbon sink offers a short-term mitigation solution, with multiple agricultural and societal co-benefits
- International consortium pursuing "biochar"/"agrichar" RD&D and commercialization agenda: global warming mitigation, rural and agricultural sustainability, waste biomass utilization (livestock or poultry manure, stover, hulls, forest biomass)
- Determination of basis of stability of char C in soils, and standardized measurement protocols can benefit role of soil carbon as global climate change mitigation option, and in GHG markets