

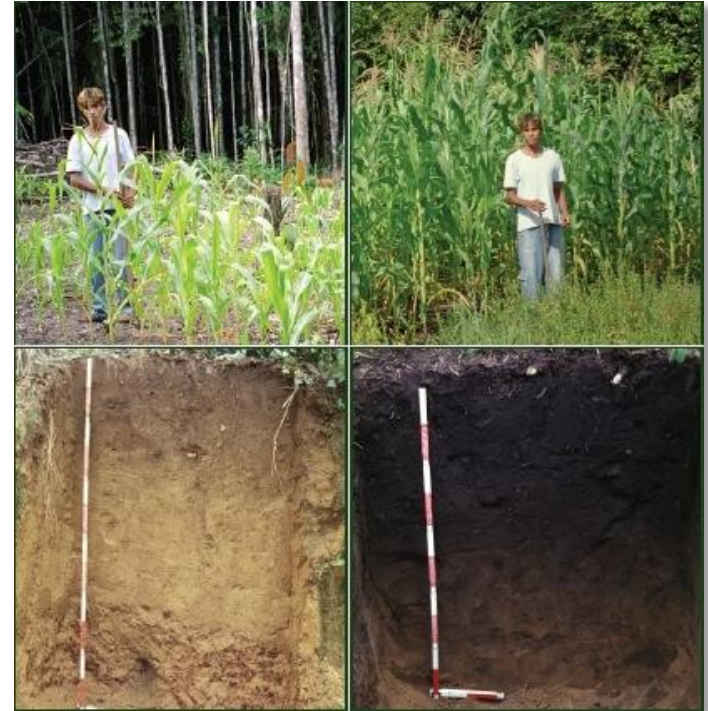
EXPLORING THE POTENTIAL OF BIOCHAR TO SUPPORT SUSTAINABLE HORTICULTURE IN THE NT



WHAT IS BIOCHAR?

- An ancient practice – *Terra preta* “Black soil” sites in the Amazon
- Form of highly stable charcoal
- High carbon content (70-90%)
- High surface area
- Long lasting

Biochar is chemically and biologically more stable than the original carbon form it comes from giving it the potential to remain stable in soil for hundreds to thousands of years



HOW IS BIOCHAR PRODUCED?

- Produced in low oxygen burning environments at a temperature range between 500-600°C
- Can be produced from a wide range of organic inputs including
 - Wood and plant matter (plantation waste, woody weeds, greenwaste, commercial timber waste, etc)
 - Horticulture waste (below grade fruits etc)
 - Animal wastes (manure, bones etc)
 - Wastewater bio-solids (sewage wastes)
- BioChar units range from the home unit “Char-B-Cue” to the full scale commercial CharMaker MPP20



BENEFITS OF BIOCHAR

In soils that are low in organic carbon BioChar can:

- Increase water holding capacity
- Improve nutrient retention and transfer (making more nutrients available to plants)
- Increasing cation exchange capacity
- Reducing soil acidity
- Encouraging the growth of beneficial soil microbes
- Reduces occurrence of disease
- Enhancing the effectiveness of fertilizers
- Reduced soil emissions

BioChar is a **disease free** means of introducing additional carbon to the soil



WHY BIOCHAR?

Key challenges limiting horticultural production potential

- Poor soils
 - highly erodible
 - low natural fertility
 - low water holding capacity
 - low in carbon (most less than 1% SOC)
- Under significant pressure for accelerated development



BIOCHAR DEMONSTRATION SITES

Soil Application Demonstration Sites



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Expanding our networks and partnerships

- Building industry and research sector partnerships
- Strengthening partnerships with producers



Answering key questions

- How does BioChar interact with NT soils?
- What is the optimal BioChar “recipe” for BioChar in our various horticulture systems?
- How do we use different BioChar types to address different soil capacity issues?
- How does BioChar support microbiology in soils in NT production systems?
- What is the economic value of BioChar in NT production systems?
- What applications does BioChar have in NT Pastoral Production systems?

MOVING FORWARD

Watch this space!

