Development of a Pacific Northwest Biochar Atlas Translating the Results of Biochar Studies into Usable Information for Growers

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BIOCHAR: a definition

"the product of heating biomass in the absence (or limited presence) of air to at least 250°"

- Johannes Lehmann, Biochar for Environmental Management, 2015

• Biochar *specifically* refers to soil amendments or carbon used for environmental management



BIOCHAR: feedstock origin impacts physiochemical properties



BIOCHAR: feedstock origin and production conditions impacts physiochemical properties



Difficult to predict how biochar will interact with soils and plants

BIOCHAR: How do we synthesize information?

- Builds healthy soil
- Sequesters carbon
- Reduced acidity
- Increases soil water holding capacity
- Retains nutrients
- Increases soil microbial abundance



BIOCHAR: Barriers to adoption



- No general recommendations
- One-plant one-biochar studies have limited impact
- No predictive tools
- No standard labeling requirements
- Lack of communication from early adopters
- Price and source

How can we move from inception to adoption?

BIOCHAR: Moving beyond barriers

The four goals of the PNW Biochar Atlas

- Synthesis studies that measure how water behaves in different soil types amended with commonly available chars.
- Facilitate communication from early adopters
- Build predictive and decision support tools
- Connect biochar suppliers with growers

BIOCHAR: overcoming barriers with decision support tools

HOME ABOUT BIOCHAR CASE STUDIES TOOLS FIND BIOCHAR ABOUT THE ATLAS

Pacific Northwest Biochar Atlas

Development of a Pacific Northwest Biochar Atlas: Translating the Results of Biochar Studies into Usable Information for Growers

Future of the PNW Biochar Atlas

 Synthesis studies that measure how water behaves in different soil types amended with commonly available chars.

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- Surveys to evaluate the online tools.
- Build more case studies



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The discovery of **BIOCHAR:** coupling soil science & waste utilization



Bioenergy { · Heat · Syngas

- - Char





Will adding charcoal to soils improve soil health and increase crop productivity?