

MONDAY, AUGUST 22ND

8:30am	Conference Registration available
9-11am; 1-3pm <i>Cascade Ballroom A</i>	Preparing Biochar for use in Soil David Yarrow
9-11am; 1-3pm <i>Cascade Ballroom B</i>	Garden Alchemy...Turning BIOCHAR into Tomatoes...? Mike "The Worm Guy" Flynn
1-4pm <i>Cascade Ballroom C</i>	North American Biochar Working Group Meeting All are welcome to attend...
5-7pm	Welcome Reception (Registration Available) Cascade Ballroom

TUESDAY, AUGUST 23RD

7:30am	Conference Registration <i>Breakfast available</i>
8:30-10:30am <i>Cascade Ballroom</i>	Opening Plenary Welcome with Tom Miles, Conference Chair and Jim Johnson, College of Forestry
8:45-9:15am	Keynote Speaker: Jen Kucera, USDA Natural Resources Conservation Service Soil Health: Opportunities and Challenges
9:15-9:30am	Plenary Table Discussion Instructions with David Smith
9:35-9:45am	Table Discussion
9:45-10:20am	Keynote Speaker: Jim Amonette, Pacific Northwest National Laboratory Potential Use of Biochar to Drawdown Atmospheric Carbon: A Preliminary Assessment for Washington State
10:20-10:30am	Table Discussion
11am-12:15pm	Concurrent Sessions: See the schedule on page 6 for Tuesday's sessions
12:15-1pm	LUNCH Plenary Presentation: Alberta Biochar Initiative and Introduction to the North American Biochar Working Group Presented by Don Harfield, Alberta Innovates
1-4:20pm	Concurrent Sessions continued: See the schedule on page 6 for Tuesday's sessions
4:30-6pm <i>Cascade Ballroom</i>	Poster Session
6-8pm <i>Lawn and Courtyard</i>	BBQ Dinner

WEDNESDAY, AUGUST 24TH

7:30am	Conference Registration <i>Breakfast available</i>
8:30am-10am <i>Cascade Ballroom</i>	Plenary: Group Discussion Report and Panel Discussion with David Smith, Oregon State University
	Panel: Jim Amonette , Pacific NW National Laboratory, Marcus Kauffman , OR Department of Forestry, Jen Kucera , Natural Resources Conservation Service, John Miedema , BioLogical Carbon, LLC, and Tom Miles , TR Miles Technical Consultants
10:30am-4:45pm	Concurrent Sessions: See the schedule on page 7 for Wednesday's sessions
4:50-5:15pm	Closing Plenary

THURSDAY, AUGUST 25TH

Post Conference Field Tours (pre-registration required) and Burn Boss Demonstration	
9am-1pm	Morning Biochar Field Day - From Production to Practice <i>Meet at the Alumni Center at 8:45am</i>
10am-2pm	Burn Boss Demonstration (3450 SW Campus Way) All are welcome to attend!
Noon-4pm	Afternoon Biochar Field Day - From Production to Practice <i>Meet at National Forage Seed Production Research Center at noon</i>

TUESDAY, August 23rd

TUESDAY, AUGUST 23RD Concurrent Sessions

Track: 1 - Agriculture & Horticulture
Location: Willamette Room
Moderator: Claire Phillips, USDA ARS

11-11:25am
Suduan Gao
 USDA Agricultural Research Service
 Effects of soil amendment with biochar and irrigation on the fate of nitrogen fertilizer

11:25-11:50am
David Olczyk
 Environmental Protection Agency
 Corn, Lettuce and Soybean Nutrient Contents are Affected by Biochar

11:50am-12:15pm
William Lynn
 Washington Department of Ecology
 Adding Biochar to Capture Compost Emissions

12:15pm
LUNCH

Plenary Presentation: Alberta Biochar Initiative and Introduction to the North American Biochar Working Group
 Presented by Don Hairfield, Alberta Innovates

Concurrent Sessions

1-1:25pm
Moderator: Kristin Trippe, USDA ARS
Abdulrasoul Alomran
 King Saud University
 Impact of Biochar and Compost on Hydro-physical Properties and Yield Grown on Sandy Soil

1:25-1:50pm
M. Bayan
 Lincoln University in Missouri
 Biochar's Effects on Water Consumption by Soybean on Claypan and Cultivated Allsols from Central Missouri

1:50-2:15pm
Boris Merlain Djousse Kanou
 Quantifying the influence of Eucalyptus bark and concomb biochars on the physical properties of an oxisol under maize cultivation

2:15-2:40pm
Rick Lentz
 USDA Agricultural Research Service
 Long-term influences of biochar, manure, or sawdust additions on soil water retention in silt loam

2:40-3:00pm
BREAK
Moderator: Kristin Trippe, USDA ARS
Gilbert Sigua
 USDA Agricultural Research Service
 Ameliorating Effects of Biochar Application in Hard-Setting Subsoil Layer: Quality of Leached Water and Soil Chemical Properties

3:05-3:30pm
Kurt Spokas
 USDA Agricultural Research Service
 Biochar: Is it inert or reactive?

3:55-4:20pm
No scheduled talk

2 - Forestry & Biomass
 Elle/Burlingham Room

2.1
James Archuleta
 USDA Forest Service
 Forestry Operations, Soil Management Needs, and Biochar Applications

2.1.1
John Field
 Colorado State University
 Beetle-kill to biochar carbon: good climate sense?

2.1.2
Maureen Puettmann
 WoodLife Environmental Consultants
 LCA of Biochar- How feedstocks and production systems stack up

2.1.3
David Carter
 Schatz Energy Research Center
 Biochar Production Using Multiple Feedstocks, Lessons Learned

2.2
Darren McAvoy
 Utah State University
 Scale-up and Demonstration of a Mobile Pyrolysis Klin and Other Activities of the Utah Biomass Resources Group

2.2.1
Don Morrison
 Planning and Implementation of a Forest Service Stewardship Contract to Produce Biochar from Vegetation Management Using Hand Crews and Simple Kilns

2.2.2
Sean Thomas
 University of Toronto
 Long-term effects of biochar additions in a managed deciduous hardwood forest

2.2.3
Dusty Moller, Washington State University
Paul Sicurezza
Brad Thompson Company
 Project Development: Identifying a Path Through Obstacles and Risks

2.2.4
Jim Dooley
 Forest Concepts, LLC
 Reactor-Ready Biochar Feedstocks from Forest Biomass

2.3
Greg Shipley
 BioEnergy Development, LLC
 Engineered and Designed Biochar for Specific Soils and Crops

2.3.1
Erich J. Knight
 The Civilization of Soil: Hall Marks of The Unintended and Intended Anthropocene

2.3.2
Patrick Binns
 Westbrook Associates, LLC
 Possible pathways for establishing sequestration credits in Carbon Cap and Trade Markets for biochars produced from PNW forest and agricultural wastes

2.3.3
David Timmons
 University of Massachusetts Boston
 Biochar Economics: A Cost-Effectiveness Analysis

3 - Policy & Production
 Trysting Tree Room

3.1.1
Ghasideh Pourhashem
 Rice University
 Reducing public health cost through agricultural soil application of biochar

3.1.2
Jeff Hollowell
 Biomass Controls
 Policy Requirements and Challenges for Commercial Biochar Producers

3.1.3
Raymond Baltar
 Sonoma Ecology Center
 Closing the Circle: Using Biochar for an Integrated Response to California's Critical Environmental Challenges

3.2.1
Jerry Adams
 Evaluation and Development Institute
 How We Can Make Forests to Farms Work?

3.2.2
Peter Huntington
 University of Massachusetts Amherst
 Green Mountain Biochar: An exploration of the potential for biochar production to help Vermont achieve zero-waste by 2020

3.2.3
Ronal Larson
 Larson Consulting
 Discussions on the Valhoo Biochar-Policy List

3.2.4
Tom Miles
 TR Miles Technical Consultants
 Is it time for a Biochar Industry Association?

3.3.1
Erich J. Knight
 The Civilization of Soil: Hall Marks of The Unintended and Intended Anthropocene

3.3.2
Patrick Binns
 Westbrook Associates, LLC
 Possible pathways for establishing sequestration credits in Carbon Cap and Trade Markets for biochars produced from PNW forest and agricultural wastes

3.3.3
David Timmons
 University of Massachusetts Boston
 Biochar Economics: A Cost-Effectiveness Analysis

4 - Stormwater & Remediation
 Johnson Lounge

4.1.1
Jeff Novak
 USDA Agricultural Research Service
 Overview of designing biochars to improve soil health characteristics at two Superfund mine sites

4.1.2
Mark Johnson
 Environmental Protection Agency
 Effects of biochar amended metal-contaminated mine soil on germination of Blue Wildrye

4.1.3
Kristin Trippe
 USDA Agricultural Research Service
 Biochar amendments influence the microbial community dynamics in mine soils

4.2.1
Mark Johnson, Environmental Protection Agency
Christopher Peltz
 Research Services LLC
 Biochar for Mine Lands Reclamation

4.2.2
Matthew Smith
 Washington State University
 Spectroscopic Determination of the Chemical Structure of Biochar

4.2.3
Myles Gray
 Geosyntec Consultants
 Biochar for Stormwater Treatment: Technology Overview and Case Study

4.2.4
Bridget Ulrich
 Colorado School of Mines
 Biochar for Enhanced Trace Organic Contaminant Retention in Stormwater Biofilters

4.3.1
Sarah Burch
 Oregon State University
 Evaluating Biochar in Sustainable Stormwater Treatment of Heavy Metals

4.3.2
Waled Suliman
 Washington State University
 Role of Biochar Surface Properties on the Removal of Waterborne Pathogenic Escherichia coli from Stormwater

4.3.3
Seokyoung Oh
 University of Ulsan
 Polymer/biomass-derived biochar for environmental application: Sorbent and electron transfer mediator

WEDNESDAY, August 24th

WEDNESDAY, AUGUST 24TH Concurrent Sessions

Track: 1- Agriculture & Horticulture		2- Forestry & Biomass		3- Policy & Production		4- Stormwater & Remediation	
Location: Willamette Room		Elle/Burlingham Room		Trysting Tree Room		Johnson Lounge	
Moderator: Steve Vaughn, USDA ARS		Chuck Hershey, WA State Dept of Natural Resources		Hugh McLaughlin, NextChar, LLC		Sarah Burch, Oregon State University	
10:30-10:55am	1.4.1 Niles Brinton Charbon LLC Biochar and Compost Blends for Enhancing Crop Production in California	2.4.1 John Sessions Oregon State University Opportunities for biochar production to reduce forest wildfire hazard, sequester carbon, and increase agricultural productivity of dryland soils	2.4.2 Maresh Talwar Karr Group Sustaining Human Life with Biochar - Karr Solution	3.4.1 Michael Low Vermont Biochar Biochar as the keystone for regenerative agriculture and industry	4.4.1 Kathleen Hall University of Minnesota Understanding mechanisms to predict and optimize biochar for agrochemical sorption	4.4.2 Stefanie Gugolz University of Georgia Evaluation of a Biochar Enhanced Constructed Treatment Wetland for the removal of Contaminants from Agricultural Wastewater	4.4.3 Mohammad Boshir Ahmed University of Technology Sydney Removal of sulfamethazine and sulfamethazole from water using modified bamboo biochar
10:55-11:20am	1.4.2 James Doten Minneapolis Health Department Growing Relationships: Biochar applications to address health disparities in the urban Native American community	2.4.3 Harry Groot Dovetail Partner's, Inc. Aggregating and Marketing Biochar from a Network of Distributed Producers	2.4.4 Marius van der Merwe NewCarbon NewCarbon Innovation to produce biochar in a novel, clean and cost effective way using biomass from forestry and sawmill waste	3.4.2 Norman Baker 55 Gallon TLUD Progress and Developments	4.4.4 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.5 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.6 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
11:25-11:45am	1.4.3 Kathleen Draper Ithaka Institute Closed-loop biochar cascades	2.5.1 Peter Hirst New England Biochar Biochar in Context: How and Why to Perform An Integrated Whole Systems Holistic Management (TM) Analysis, Evaluation and (Possible) Rejection of Biochar as Land Stewardship Tool.	2.5.2 Marco Mosciarello Biofortech Corporation Cost effective, constant, and reliable biochar production from organic waste and biosolids	3.4.3 Hugh McLaughlin NextChar, LLC NextChar Characterization Matrix - Measuring biochar properties to establish Valuation	4.4.7 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.8 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.9 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
11:45am-12:10pm	1.4.4 Isabel Lima USDA Agricultural Research Service Sugarcane residue and bagasse as biochar precursors for soil amendment applications	2.5.3 Jonah Levine Confluence Energy LLC Integrated Biochar Production - 10MMBTU/hr Thermal & Inline Biochar	2.5.4 Jerry Whitfield Whitfield Biochar Biochar Pellet Stove	3.4.4 Hugh McLaughlin (Jeff Licht) NextChar, LLC Cardboard and chipboard biochar: not a waste of energy or time	4.4.10 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.11 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.12 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
12:15pm LUNCH							
1-1:25pm	1.5.1 Claire Phillips USDA Agricultural Research Service Feasibility of biochar production and utilization at a farm-scale: a case-study in non-irrigated seed production	2.5.5 David Smith, Oregon State University	2.5.6 John Bonitz, Celebrity Goat Dairy, LLC	3.4.5 Allison Talley Engility Worldwide LLC Rotary Compression Unit: A novel technology to produce biochar in a continuous state using various biomass streams	4.4.13 Kyle Thompson University of Colorado Boulder Environmental comparison between activated carbon and biochar for tertiary wastewater treatment	4.4.14 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.15 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants
1:25-1:50pm	1.5.2 Steven Vaughn USDA Agricultural Research Service Biochar-compost mixtures added to simulated golf greens increases creeping bentgrass growth	2.5.7 Marco Mosciarello Biofortech Corporation Cost effective, constant, and reliable biochar production from organic waste and biosolids	2.5.8 John Bonitz Celebrity Goat Dairy, LLC Fast Composting of High Value Biochar	3.4.6 David Laird Iowa State University Innovations at the Epicenter of the Food, Energy, and Water Nexus	4.4.16 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.17 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.18 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
1:50-2:15pm	1.5.3 Catherine Brewer New Mexico State University Biochars in the Desert Southwest: Challenges and Opportunities	2.5.9 Jerry Whitfield Whitfield Biochar Biochar Pellet Stove	2.5.10 David Laird Iowa State University Innovations at the Epicenter of the Food, Energy, and Water Nexus	3.4.7 Timothy Ewing Washington State University From dairy farm to bio-refinery: developing technologies to produce environmentally friendly fuels, power, and value added products	4.4.19 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.20 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.21 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
2:15-2:40pm	1.5.4 Kelpie Wilson Wilson Biochar Associates On-Farm Biochar Production and Use with Manure Composting	2.5.11 Dusty Moller, Washington State University	2.5.12 Paul Taylor	3.4.8 Timothy Ewing Washington State University From dairy farm to bio-refinery: developing technologies to produce environmentally friendly fuels, power, and value added products	4.4.22 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.23 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.24 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
2:40-3:00pm BREAK							
3:05-3:30pm	1.6.1 Robin Cook PermaMatrix PermaMatrix in agricultural soils as a carbon offset to address climate change	2.5.13 Dusty Moller, Washington State University	2.5.14 Paul Taylor	3.4.9 Timothy Ewing Washington State University From dairy farm to bio-refinery: developing technologies to produce environmentally friendly fuels, power, and value added products	4.4.25 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.26 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.27 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
3:30-3:55pm	1.6.2 Lauren Deem University of Hawaii at Manoa Biochar increases temperature sensitivity of soil respiration and N2O flux	2.5.15 Dusty Moller, Washington State University	2.5.16 Paul Taylor	3.4.10 Timothy Ewing Washington State University From dairy farm to bio-refinery: developing technologies to produce environmentally friendly fuels, power, and value added products	4.4.28 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.29 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.30 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
3:55-4:20pm	1.6.3 Matt Ramlow Colorado State University Exploring the Mechanisms of Biochar: Effect on GHG Emissions across Agricultural Soils	2.5.17 Dusty Moller, Washington State University	2.5.18 Paul Taylor	3.4.11 Timothy Ewing Washington State University From dairy farm to bio-refinery: developing technologies to produce environmentally friendly fuels, power, and value added products	4.4.31 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.32 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.33 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water
4:20-4:45pm	1.6.4 Thomas Ducey USDA Agricultural Research Service Effects of manure feedstock biochars on micronutrient and heavy metal accumulations in cotton	2.5.19 Dusty Moller, Washington State University	2.5.20 Paul Taylor	3.4.12 Timothy Ewing Washington State University From dairy farm to bio-refinery: developing technologies to produce environmentally friendly fuels, power, and value added products	4.4.34 Josh Kearns Aqueous Solutions Biochar water treatment: state of the science	4.4.35 Matthew Bentley University of Colorado Boulder Ash Activation as a Means of Improving Biochars for Aqueous Removal of Organic Contaminants	4.4.36 Rob Lerner Rainforest Capital Biochar Filter Media to Mitigate Arsenic- and Fluoride-Contaminated Drinking Water