

USBI 2012

Building the future from the ground up™



July 29 – August 1

2012 US Biochar Conference Sonoma State University, Rohnert Park, CA

HOSTED BY THE SONOMA BIOCHAR INITIATIVE ~ REDIRECTING CARBON

Conference Schedule of Events

SUNDAY, July 29, 12 noon – 7:00 pm

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Sunday	12 noon - 6:00 PM	Cooperage	Check In		
Sunday		Cooperage	Pre-Conference Meetings		<i>We will be listing pre-conference meetings and events once these times are set.</i>
Sunday	1:00 PM	Biochar Village	Cheese Tour		<i>NOTE: Space limited, prior registration mandatory</i>
Sunday	3:00 PM	Biochar Village	Wine Tour		<i>NOTE: Space limited, prior registration mandatory</i>
Sunday	6:00 PM	Lakes	Welcome Reception	David Morell, PhD, Sonoma Biochar Initiative	<i>Welcome to the 2012 Conference from SBI</i>
				Jake MacKenzie, Mayor, Rohnert Park, CA and Board Chair, Sonoma County Regional Climate Protection Authority	<i>Welcoming Remarks</i>
				Ray Gallian, Sonoma Biochar Initiative	<i>Welcoming Remarks</i>
				Erich Knight, Biochar Advocate	<i>Carbon Conservation for Home, Health, Energy & Climate</i>
Sunday	7:00 PM	Cooperage	Social Conversation		

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Monday	7:00 AM	Zinfandel Hall	Monday Breakfast		
Monday	8:00 AM	Person Theater	OPENING SESSION AND WELCOME	Raymond Baltar, Sonoma Biochar Initiative	<i>Overview -- Goals of the Conference</i>
Monday	8:15 AM	Person Theater	Introduction of Conference and First Plenary Session	Gloria Flora, USBI	<i>Biochar, Now More Than Ever</i>
Monday	8:30 AM	Person Theater	State of the Biochar Industry	Lopa Brunjes, The Biochar Company	<i>Who's Who and What's What?</i>
				Bruno Glaser, PhD, Luther University (Germany), [paper presented by Daniela Busch, University of Halle (Germany)]	<i>Current State of Biochar Development in Europe</i>
				Thayer Tomlinson, IBI	<i>Update on IBI Programs and Activities</i>
Monday	9:40 AM	Person Theater Lobby	Monday Morning Break		
Monday	10:00 AM	Person Theater	Sustainable Business Models	Josiah Hunt, Hawaii Biochar	<i>Lessons from Three Years of Practical Experience in Hawaii</i>
				Peter Hirst, New England Biochar	<i>Down on the Farm: Building Integrated Systems</i>
				Jeff Wallin, The Biochar Company	<i>Whole Systems Business Models for a Sustainable Biochar Industry</i>
Monday	10:00 AM	Salazar 2021	Special Presentations by Chinese Delegation	Xiao Yunhan, PhD	<i>Mobile Biochar Pyrolysis Technology and Equipment</i>
				Cheng Huiqiang	<i>Agricultural Residue Use in China in Recent Years</i>
				Jun Meng, PhD	<i>Biochar for Sustainable Agriculture</i>
				Zhong Zheke, PhD	<i>Two Years' Commercial Experience with Biochar: Feasibility and Benefits</i>
Monday	10:00 AM	Salazar 2016	Biochar Science: Pyrolysis	Catherine Brewer, Iowa State University [paper presented by David Laird, PhD, Iowa State University]	<i>Oxygen in a Slow Pyrolysis Atmosphere</i>
				Yanxue Han, Beijing Forestry University	<i>Switchgrass, Hardwood and Softwood with Differing Pyrolysis</i>
				Fungai Mukome, PhD, University of California, Davis	<i>Using Chemical and Physical Characteristics to Investigate Trends in Feedstocks</i>
				D. Nathaniel Mulcahy, Worldstove	<i>Biochar Production for Soil Restoration</i>

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Monday	10:00 AM	Cooperage	Tropical Soils Trials in Africa and India	<p>Jason Aramburu, re:char</p> <p>Andrew Crane-Droesch, University of California, Berkeley</p> <p>Ryan Hottle, Ohio State University</p> <p>Kevin Schreiber, University of Pennsylvania</p>	<p><i>Vegetable Production in Kenya</i></p> <p><i>Yields for Smallholders in Kenya</i></p> <p><i>Impact of Biochar Use on Nutrient Poor Soils in India</i></p> <p><i>Business Aspects of Using Sugar Cane Wastes in Uganda</i></p>
Monday	11:30 AM	Person Theater	Keynote Address	<p>Sunne McPeak, President & CEO, California Emerging Technology Fund & former California Secretary of the Business, Transportation & Housing Agency</p>	<p><i>Building a Successful Biochar Business in California: Challenges and Opportunities</i></p>
Monday	12:15 PM	Zinfandel Hall	Monday Lunch		
Monday	12:30 PM - 2:30 PM	Biochar Village	Farm-Out Session I: Valley End Farm	<p>Visit to a nearby farm to meet the farmer and discuss implications and impacts of biochar use</p> <p>Valley End Farm is a Certified Organic vegetable farm, with Community Shared Agriculture (CSA) membership.</p>	<p><i>Methods of Biochar Application: Best Practices for Applying Biochar on Small and Large Farms</i></p> <p>NOTE: Space limited, prior registration mandatory. Bus transportation will be provided.</p>
Monday	1:15 PM	Cooperage	Mid-Sized Biochar Production Technologies	<p>Jonah Levine, Biochar Solutions</p> <p>Jerry Whitfield, Whitfield Biochar</p> <p>Johannes Schneeberger, Thermal Engineer, Inventor & Entrepreneur</p> <p>Martin Olazar, PhD, University of the Basque Country (Spain)</p>	<p><i>Biochar Solutions' Machine</i></p> <p><i>Continuous Flow Biochar Reactor</i></p> <p><i>The LAURIN Engine: Electricity Generation and Biochar</i></p> <p><i>Conical Spouted Bed Reactor</i></p>
Monday	1:15 PM	Salazar 2021	Urban Agriculture	<p>Justin Beck, Biochar Advocate</p> <p>Kelby Fite, PhD and Drew Zwart, Bartlett Tree Research Labs</p> <p>Jeff Licht, University of Massachusetts at Boston</p>	<p><i>Biochar Use at Urban Farms in Germany</i></p> <p><i>Improving Urban and Suburban Landscapes with Biochar</i></p> <p><i>Using Biochar on Urban Roofs</i></p>

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Monday	1:15 PM	Salazar 2016	Biochar Science	Daniela Busch, University of Halle (Germany)	<i>Risk Evaluation using Bio Indicators</i>
				Zuolin Liu, Rice University	<i>Hydraulic Conductivity and Soil Water Potential: Impacts of Concentration and Particle Size</i>
				Daoyuan Wang, University of California, Davis	<i>Biochar Doses, Grain Diameters and Water-Holding Capacity</i>
				Meghana Rao, Jesuit High School, Oregon	<i>Carbon Sequestration and Particle Size</i>
Monday	2:40 PM	Cooperage	Monday Mid-afternoon Break		
Monday	3:00 PM - 5:00 PM	Biochar Village	Farm-Out Session II: Tara Firma Farm	<p>Visit to a nearby farm to meet the farmer and discuss possible implications and impacts of biochar use.</p> <p>Tara Firma Farm is a CSA (vegetables, pastured chicken, beef, pork, poultry, and eggs) and Institute.</p>	<p><i>Methods of Biochar Application: Best Practices for Applying Biochar on Small and Large Farms</i></p> <p>NOTE: Space limited, prior registration mandatory. Bus transportation will be provided.</p>
Monday	3:00 PM	Cooperage	Biochar Use and Temperate Agriculture	David Laird, PhD, Iowa State University	<i>Biochar Mitigation of Allelopathy Induced Yield Loss in Continuous Maize</i>
				Stefanie Kloss, University of Natural Resources and Life Sciences (Austria)	<i>Soil and Plant Yield Responses in Temperate Soils</i>
				Natalia Rogovska, Iowa State University	<i>Effect of Biochar Use on Soybean Root Disease Potential</i>
Monday	3:00 PM	Salazar 2021	Improving Soil Systems	<p>Mike Flynn, BioSpecific LLC</p> <p>Robin Cook, Sunmark Environmental</p> <p>Sunny Castillo, University of Alaska, Fairbanks</p>	<p><i>Making Soils Smarter and Happier with VermiChar</i></p> <p><i>Using Permamatrix to Reduce Costs</i></p> <p><i>Application of Biochar to Subarctic Soils</i></p>
Monday	3:00 PM	Salazar 2016	Reclamation Using Biochar: Mines and Industrial Sites	Charlene Kelly, PhD, USGS	<i>Biochar Use in Mine Reclamation</i>
				K.Thomas Klasson, Ph.D., USDA	<i>Mercury Removal Using Biochar</i>
				Chun-Ha Gao, Shanxi Academy of Agricultural Sciences (China)	<i>Effects of Different Organic Materials on Soil Carbon Accumulation in Reclaimed Coal Mine Area</i>



MONDAY, July 30, 5:30 – 7:00 pm

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Monday	5:30 PM	Zinfandel Hall	Monday Night Dinner		
Monday	7:00 PM	Person Theater	Movie: Symphony of the Soil	The film examines our relationship with soil, the use and misuse of soil in agriculture, deforestation and development, and the latest scientific research on soil's key role in ameliorating the most challenging environmental issues of our time.	

Musings. Sketches. Inspirations.

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Tuesday	7:00 AM	Zinfandel Hall	Tuesday Breakfast		
Tuesday	8:00 AM	Person Theater	Tuesday Welcome	Acknowledging Sponsors and Special Guests	
Tuesday	8:30 AM	Person Theater	Carbon and Energy Policy Issues	Johannes Lehmann, PhD, Cornell University Peter Hirst, New England Biochar Rhys Roth, Climate Solutions Karl Frogner, PhD, UB International	Biochar and Carbon In Perspective Building a Biochar Industry: Roles for Carbon and Energy Biochar and the Second Climate Solution Biochar in the Hansen and Woolf Climate Change Models
Tuesday	9:45 AM	Person Theater Lobby		Tuesday Morning Break	
Tuesday	10:00 AM	Person Theater	Large Production Technology	Tom Miles, T.R. Miles, Technical Consultants, Inc Thomas Del Monte, Interra Energy Bert Bennett, ICM Greg Stangl, Phoenix Energy	Product and Process Options for the Biochar Entrepreneur A Project Developer's Guide to Picking a Biomass Conversion Technology The ICM Gasifier: Industrial Biochar Production Generating Electricity and Making Biochar: Successes and Challenges
Tuesday	10:00 AM	Cooperage	Biochar Production Economics	John Bonitz, Southern Alliance for Clean Energy David Sjoding, Washington State University, Pacific Region Bioenergy Partnership, & USDOE Northwest Clean Energy Application Center	Regional Bioenergy Progress and Industry Assessment Pacific Northwest Perspective on Developing a Biochar Industry
Tuesday	10:00 AM	Salazar 2021	Special Chars and Feedstocks	Michael Urban, Biochar Merchants Dr. Christoph Fuhner, PhD, Ufz (Germany) Brian von Herzen, PhD, The Climate Foundation Kelly Sveinson, Langara College (Canada)	Using Lump Charcoal Byproducts as a Soil Amendment Biochar as a Tool for Sustainable Sanitation Making Biochar from Novel Biosolids Sources Production of "Designer" Biochar

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Tuesday	10:00 AM	Salazar 2016	Non-Agricultural Uses of Biochar	Sophie Minori Uchimiya, Ph.D., USDA	<i>Treating Heavy Metals and Pesticides in Contaminated Soils</i>
				Seok-Young Oh, Ph.D., University of Ulsan (Korea)	<i>Biochar Remediated Reduction of Nitro Herbicides and Explosives</i>
				John Miedema, Thompson Timber and Pacific Northwest Biochar Initiative	<i>Using Designer Biochar for Water Remediation</i>
Tuesday	11:15 AM	Person Theater	Small Biochar Production Technologies	Wayne Teel, PhD, James Madison University	<i>Capturing Heat from a Small Biochar Production System</i>
				Paul “Dr TLUD” Anderson, Chip Energy	<i>TLUD Cookstoves and Barrel-size Production of Biochar</i>
				Dan Mackenzie, retired environmental scientist	<i>Producing Backyard Biochar</i>
				Karl Frogner, UB International	<i>Jolly Rodger TLUD</i>
Tuesday	11:15 AM	Cooperage	National and Regional Perspectives on Biochar Use	Richard Frankel, Ph.D., Mae Fah Luang University (Thailand)	<i>Approaches to Biochar Use in Laos and Thailand</i>
				Anthony Anyia, Ph.D., Futures, Alberta Innovates-Technology AITF	<i>Alberta’s Biochar Experience</i>
				M. Ryan Delaney, Carbon Roots International	<i>Biochar Adoption and Poverty in Haiti</i>
Tuesday	11:15 AM	Salazar 2021	Char Characterization	Hugh McLaughlin, PhD, Alterna Biocharon [paper presented by Greg Thiele, Micromeritic]	<i>Analytical Options for Determining Adsorption and Surface Area</i>
				Kurt Spokas, USDA	<i>Evaluation of Sorbed PAHs</i>
				Bernardo del Campo, Iowa State University	<i>Stability and Safe Application of Fast Pyrolysis Biochar</i>
Tuesday	11:15 AM	Salazar 2016	Special Soil Effects I	Bob Cirino, University of Delaware	<i>Effect on Arabidopsis and Soil Microbial Communities</i>
				Colleen Rostad, USGS	<i>Environmental Implications of Water Soluble Components</i>
				Adam Asquith, University of Hawaii	<i>Biochar Trials with Depleted Hawaiian Soils</i>

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Tuesday	12 noon	Biochar Village	SMV SHUTTLE BUS SERVICE BEGINS		
				This shuttle bus runs from the Biochar Village to Sonoma Mountain Village where several components of the Tuesday afternoon program take place, followed by the Gala Dinner.	
Tuesday	12:15 PM	Zinfandel Hall	Tuesday Lunch		
Tuesday	12:30 PM - 2:30 PM	Biochar Village	Farm-Out Session III: Green String Farm	<p>Visit to a nearby farm to meet the farmer and discuss possible implications and impacts of biochar use</p> <p>Green String is a sustainable farm focused on aiding, rather than fighting, natural processes to grow healthy and happy fruits and vegetables.</p>	<p>Methods of Biochar Application: Best Practices for Applying Biochar on Small and Large Farms</p> <p>NOTE: Space limited, prior registration mandatory. Bus transportation will be provided.</p>
Tuesday	1:15 PM	Cooperage	Biochar Impacts on Nitrogen	<p>Engil Pereira, University of California, Davis</p> <p>Kurt Spokas, USDA</p> <p>Teri Angst, University of Edinburgh (UK)</p>	<p>Effects on Soil Structure and GHG Emissions</p> <p>Interactions with Dissolved Ammonia and Nitrates</p> <p>Nutrient Retention and Nitrous Oxide Emissions</p>
Tuesday	1:15 PM	Salazar 2021	Special Soil Effects II	<p>Caroline Masiello, PhD, Rice University</p> <p>Jesus Diaz, PhD, Colorado State University</p> <p>Jatara Wise, Texas A&M University</p>	<p>Biochar Effects on Microbial Cell-Cell Communication</p> <p>Soil Microbial Community Abundance and Composition</p> <p>Feedstock Nutrient Conservation in Biochar</p>
Tuesday	1:15 PM	Salazar 2016	Biochar and Forestry	<p>Judith Harwood, Mendocino County (CA) Biomass Working Group</p> <p>Mark Coleman, PhD, University of Idaho</p>	<p>Mendocino County Biochar Demonstration Project</p> <p>Impacts of Biochar Use in Western Forests</p>

The Shuttle Bus runs from Sonoma State University (SSU) to Sonoma Mountain Village (SMV) from noon to 10PM

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Tuesday	1:30 PM	SMV	Sustainability Guidelines, Standards and Practices (Review Meeting)	Gloria Flora, USBI John Miedema, Thompson Timber and Pacific Northwest Biochar Initiative Kelpie Wilson, IBI	<i>USBI's Approach: Sustainability and Beyond</i> <i>The Need for Biochar Sustainability Protocols</i> <i>Developing International Sustainability</i>
Tuesday	1:30 PM	SMV - Board Room	Biochar 101 A special information session conference participants (special session passes)	Biochar 101 is a special session for those attendees who cannot attend the full conference, but are seeking an intensive introduction to vital information about biochar: the key characteristics that raise the most serious hopes and policy challenges for its future as a tool for ecological and environmental management. Alex Dolginow, Sonoma County Climate Protection Campaign Peter Hirst, New England Biochar	
Tuesday	2:40 PM	Cooperage/SMV	Tuesday Mid-afternoon Break		
Tuesday	2:40 PM - 5:00 PM	Biochar Village	Farm-Out Session IV: Gap's Crown Vineyard	Visit to a nearby farm to meet the farmer and discuss possible implications and impacts of biochar use. Gap's Crown Vineyard is a wine grape and riparian restoration project along Copeland Creek.	NOTE: Space limited, prior registration mandatory. Bus transportation will be provided.
Tuesday	3:00 PM	SMV	New GHG Offset Quantification Methodology	Peter Weisberg, The Climate Trust Keith Driver, Prasino Group	<i>This special presentation will address important new work being supported by funding from the Blue Moon Foundation. The presenters will introduce conference attendees to this process and provide insight and guidance into how stakeholders can get engaged.</i>

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Tuesday	3:30 PM	SMV - Board Room	Financing Biochar Enterprises		
			As with any new industry, finding startup or growth capital can be daunting and is often as much of an educational campaign as a challenging numbers game. This special session will provide tips and information on financing strategies from some well-known companies in the biochar industry, interacting with a special panel of experts representing both traditional financing sources (such as angel investors and investment banking) and emerging alternatives (such as direct public offerings, crowd funding, and slow money). The session will consist of short presentations followed by what we anticipate to be a very lively, interactive discussion among the experts and participants from the audience.		
				Mike Rocke of Cool Planet Biofuels	
				Jonah Levine of Biochar Solutions	
				Jenny Kassan of Cutting Edge Capital	
				Tony Cone of Westhoff, Cone and Holmstedt	
				Lisa Tamayo-Kennedy of investorMetrix	
				Paul Bozzo, 10X Group	
				Jeff Wallin, The Biochar Company	
				Greg Stangl, Phoenix Energy	
				Jack Lance, Investor/Entrepreneur	
				Ashwin Gulati/ President, Match Point Ventures	
Tuesday	4:00 PM	SMV Foyer	Poster Presentations		
			See the conference website for a separate listing of all poster presenters and their topics.		
Tuesday	6:00 PM	SMV	SBI TASTE OF SONOMA DINNER		
Tuesday	7:00 PM	SMV	Dinner Keynote	Richard Heinberg, Senior Fellow-in-Residence and Board Secretary, Post Carbon Institute	<i>Soil, Carbon, and Survival</i>
Tuesday	8:30 PM	SMV - Board Room	Social Conversation		
Tuesday	10:00 PM	SMV - BIOCHAR VILLAGE	SMV SHUTTLE BUS SERVICE CONCLUDES		

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Wednesday	7:00 AM	Zinfandel Hall	Wednesday Breakfast		
Wednesday	8:00 AM	Person Theater	Wednesday Welcome		
Wednesday	8:15 AM	Person Theater	The Road Ahead	David Laird, Ph.D., Iowa State University	<i>Achieving a Carbon-Negative Economy</i>
				Jeff Schahczenski, National Center for Appropriate Technology	<i>Food or Fuel: Economic and Political Barriers to Biochar Development</i>
				Ronald Larson, Ph.D., USBI and IBI Advisory Board	<i>Biochar SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats)</i>
Wednesday	9:40 AM	Person Theater Lobby	Wednesday Morning Break		
Wednesday	10:00 AM	Person Theater	World Enterprise Perspectives	Morgan Williams, Biochar Solutions	<i>Biochar Solutions and the Virgin Earth Challenge</i>
				Craig Sams, Carbon Gold	<i>Taking Biochar to Market in the UK and Tropical Agriculture</i>
				Mike Rocke, CoolPlanet Biofuels	<i>The Cool Planet Approach to Creating Fuels from Biomass</i>
Wednesday	10:00 AM	Cooperage	Biochar Use in Specialized Agricultural Settings	Elizabeth Verhoeven, University of California, Davis	<i>Biochar Use in Vineyards</i>
				Kurt Spokas, USDA	<i>Biochar and Specialty Crop Production</i>
				Jeff Licht, University of Massachusetts at Boston	<i>Biochar and Sand Plain Species</i>
				Heinz-Joseph Koch, Ph.D., University of Goettingen (Germany)	<i>High Nitrogen Supply Alleviates Reduced Sugarbeet Growth Caused by Hydrochar Application</i>
Wednesday	10:00 AM	Salazar 2016	Special Issues in Biochar Use	John Miedema, Thompson Timber and Pacific Northwest Biochar Initiative	<i>Using Industrial Surplus Materials to Produce Biochar</i>
				Ines Vogel, Ph.D., Free University of Berlin (Germany)	<i>Using Biochar Substrates for Degradation of Organic Pollutants in Soils of Former Military Areas</i>
				Benjamin Wirth, Leibniz Institute for Agricultural Engineering (Potsdam, Germany)	<i>Anaerobic Treatment of HTC Wastewater</i>

DAY	TIME	Location	TITLE	Presenter	Presentation Title
Wednesday	10:00 AM	Salazar 2021	Biochar Specialty Uses	<p>Sherie Edenborn, Ph.D., Chatham University</p> <p>Sholeb Akaram, Shastra University (India)</p> <p>Konstantin Terytze, Ph.D., Free University of Berlin, Germany</p>	<p><i>Using Compost Tea to Enhance Biochar's Beneficial Properties</i></p> <p><i>Reducing Soil and Water Pollution from Pathogens in Poultry Manure</i></p> <p><i>Application in the Berlin Botanical Garden</i></p>
Wednesday	11:30 AM	Person Theater	Conference Final Comments and Next Steps	<p>Raymond Baltar, Sonoma Biochar Initiative</p> <p>Gloria Flora, USBI</p>	<p><i>Farewell and "where do we go from here?"</i></p> <p><i>Next Steps for Biochar in the US</i></p>
Wednesday	12:15 PM	Zinfandel Hall	Wednesday Lunch		
Wednesday	1:00 PM - 3:00 PM	Biochar Village	Sonoma Compost Tour	<p>We will go on a chronological tour following organic matter from receiving all the way through the finished product in retail. The tour will be a short course in composting, highlighting the principles of composting and monitoring as we move through the site.</p> <p>NOTE: Space limited, prior registration mandatory. Bus transportation will be provided</p>	
Wednesday	1:15 PM	Cooperage	Post Conference Meetings and Events		

See the conference website for a separate listing of all post-conference meetings and events, and for information about the 2013 USBI conference.

Final thoughts...