# Proceedings of the U.S. Composting Council's 18<sup>th</sup> Annual Conference & Tradeshow

January 24-27, 2010 Wyndham Resort Orlando, Florida



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Monday | Jan 25, 2010

#### **Plenary Session:**

### CRITICAL ISSUES IN COMPOSTING & ORGANICS RECYCLING

8:00 am – 9:45 am Plenary Session: The Future of Composting and Organics Waste Management in the U.S.		Floral Ballroom
A Vision for Organic Waste Management.	Paul Sellew, Harvest Power, Inc., MA	Sellew
The Critical Role That Composting and Compost Utilization Play in a Sustainable Community's Infrastructure.	Nora Goldstein, Biocycle Magazine, Emmaus, PA	Goldstein
SunChips and the World's First Compostable Chip Bag	Carrie Walsh and Ashley Leidolf, Frito- Lay, Inc., Plano, TX	Walsh
Fact versus Fiction: Yard Waste and Landfills	Sally Brown, Washington State University	Brown_S_1

#### Monday Jan 25 2010

Track 1 | Increasing Food Residuals Composting, Building Infrastructure, Increasing Organics Diversion, Developing Regulations, Protecting Yard Debris Disposal Bans

10:45 am – 12:30 pm Increasing Food Res in the U.S.	iduals Composting and Infrastructure	Jasmine
Source Separated Organics Programs Recycling's Next Frontier	Peter Anderson, Center for A Competitive Waste Industry, Madison,	1
	WI	Anderson
Zero Waste Zones: Mobilizing an Industry to Make a Difference	Holly Elmore, Green Foodservice Alliance, GA	<b>&gt;</b>
	,	<u>Elmore</u>
The Merits of Decentralized Treatment of Food Waste: Experiences from the U.K.	John Cockram, Green Cone Limited, UK	<b>&gt;</b>
		Cockram
Building Infrastructure by Integrating Food Residuals into Existing Yard Waste Composting	Sharon Barnes, Barnes Nursery, OH	<b>~</b>
Programs		Barnes
1:45 pm – 3:30 pm Efficient and Cost Effective Food Waste Collection, Developing Better Regulations Jasm		
The Dollars and Sense of Pricing Food Scrap Collection in Central Vermont	Donna Casey, Central Vermont Solid Waste Management District, Montpelier, VT	Casey

Residential Food Waste Collections, Quality and Efficiency: the North Italian Experience	Christian Garaffa, Novamont, SpA, Italy	Garaffa
Effects of EOW (Every Other Week) Collection of Food Waste on Collection and Capture Rates	Rod Muir, Sierra Club of Canada	 Muir
Designing Compost Regulations that Protect the Environment and Promote an Operator/Regulator Partnership	Greg Pirie, Napa County Executive Office/Department of Environmental Management, Napa, CA	Pirie
4:15 pm – 6:00 pm Keep Composting Yard Waste – USCC's National Strategy to Protect Yard Waste Landfill Bans		
Making the Case for Maintaining Yard Waste Landfill Bans	Sally Brown, Washington State University, WA	Brown_S_2
		Brown_S_2 Lindeberg
Landfill Bans	University, WA  JD Lindeberg, Michigan; Chris Snow, Florida; Wayne King, Sr., Georgia;	1

## Monday | Jan 25

# Track 2 | ODOR CONTROL, PROCESS & FACILITY MANAGEMENT, FACILITY DESIGN, EMISSIONS MONITORING

10:45 am – 12:30 pm Odor Control, Process Management & Emissions Monitoring Ma			
Site Operations Planning for Odor Prevention and Treatment	Jeff Gage, Compost Design Services, Olympia, WA	Gage_1	
Management of Odors through Design and Operations	Eliot Epstein. Epstein Environmental Consultants, FL.	Epstein	
The Importance of Public Outreach in an Effective Odor Control Strategy	Marc Levin, NCM Odor Control, NJ		
Use of Thermography in Emission Sampling.	Fatih Büyüksönmez, Z Gu, S. Riseh, and L. Yang, Civil and Environmental Engineering, San Diego State University, San Diego, CA	Buyuksonmez_1	
1:45 pm – 3:30 Workplace Safety, Compost Facility Best Management			
pm Practices, Equipment and System Selection Magnolia			
Conducting Job Hazard Analysis for Composting Facilities, Including Some Considerations for Diversity and for Persons with Disabilities	Nellie Brown, Cornell University, Ithaca, NY	Brown_N	
The Evolution of Composting at Ohio State University: The Practical Aspects of Compost Management	Gerald Reid, Ohio State University, Wooster, OH	Reid	

Evaluation of Slow Speed Shredders for Bulking Agent	Craig Coker, Coker Composting and Consulting, Vinton, VA and Ken Newman, Royal Oak Farm, LLC, Evington, VA	Coker
How to Select a Composting System When There are So Many Options from Which to Choose	Steve Diddy, Engineered Compost Systems, Seattle, WA	<b>Diddy</b>
4:15 pm – 6:00 Compost Facility Design and	d Retrofit for Operational Efficiency	Magnolia
Upgrading Food & Yard Waste Composting Technology, Permitting and Facility Upgrades Required for 110,000 Ton/Year Facility Located in Central California	Tim O'Neil, Engineered Compost Systems, and WA Chris Choate, Recology, CA	ONeil
Wilmington Organics Recycling Center (WORC): Development of a Large-Scale Composting Facility	Nelson Widell, The Peninsula Compost Group, Wilmington, DE	Widell
Microbial Monitoring, Measurement and Process Maximization	Edwin Blosser, Midwest Bio-Systems, Tampica, IL	Blosser
Spotsylvania County's New Improved Composting Facility	Todd O. Williams, CH2M Hill, Richmond,	Williams

## Monday | Jan 25

# Track 3 | MARKETING, SUCCESSFUL BUSINESS PRACTICES, EQUIPMENT SELECTION, & VERMICOMPOSTING

10:45 am – 12:30 pm Marketing and Regula	atory Requirements	Oleander A & B
Innovative Marketing Tools, Programs and Strategies.	David Hill, Cyclelogic, Bethesda, MD	Hill
Regulatory Requirements for Compost Products Under the Fertilizers Act.	Haley McKinnon, Canadian Food Inspection Agency, Ontario, Canada	McKinnon
Fertilizer and Soil Amendment Regulation Can Impact Compost Sales.	Ron Alexander, R. Alexander Associates, Apex, NC	Alexander
1:45 pm – 3:30 pm The Business of Composting and Organics Recycling		Oleander A & B
Getting to ROI. Assessing which Activities and Markets are Profitable and Sustainable	Kathy Kellogg Johnson, Kellogg's Garden Products, Carson, CA	Kellogg
Growing a Company in a Recession, Tough Decision Making, Difficult Financial Atmosphere, Favorable Business Model, Spells Success	Chuck Wilson, A-1 Organics, CO	Wilson

Patrick Geraty and Rebecca Geraty, St. Louis Composting, MO



4:15 pm – 6:00 pm Compost Equipment Selection, Vermicomposting, & Perspectives on Managing Food Waste		Oleander A & B	
Vermicomposting at Bus	sinesses and Institutions	Rhonda Sherman, North Carolina State University	
Using Innovative Equipr from Yard Waste.	nent to Separate Plastic	Jim Reece, CHMM, Fort Walton Beach, FL.	Reece
Large-Scale Vermicomp	osting.	Mike Nicholson, WeCare Organics, LLC, Jordan, NY.	Nicholson
Animal, Vegetable, or M Gas? New Perspectives Scraps from Municipaliti	on Managing Food	Kendall Christiansen, Gaia Strategies, Brooklyn, NY	Christansen

## Monday | Jan 25

## Track 4 | Building Bridges Between the Investment Community and the Composting and Organics Recycling Industry

10:45 am – 12:30 pm Accessing Bank Financing and the Debt Capital Markets in Today's Economic Environment Palms B			
Roundtable Discussion with senior bankers and lending professionals presenting a variety of perspectives on accessing bank and bond financing in today's economic environment.  Partho Sanyal, Bank of America Merrill Lynch,; Tina Neal, Piper Jaffray & Co., Andrew S. Rose, Wastefinance.com and Tony C Westhoff, Cone & Holmstedt,			
1:45 pm – 3:30 pm		rate Equity and Their Impact on ganics Recycling Funding	Palms B
A Roundtable Discussion w sponsor executives	vith leading financial	Bryan Lin, The Carlyle Group, Andrew Trigg, HSBC Capital (USA) Inc., Amol Deshpande, Kleiner Perkins Caufield & Byers, and Phil Arra, Terra Verde Partners	
4:15 pm – 6:00 pm	Alternatives to Tradi	tional Private Equity and Bank Financi	ng Palms B
Professionals from three alternative sources of capital will each present an overview of their market and what factors are necessary to attract investors. Opportunities for Q&A will be available for each speaker.			
The Mezzanine Market  Andrew Trigg, HSBC Capital (USA) Inc., New York, NY  Trigg		Trigg	
The Public Finance Marke	et	Tina Neal, Piper Jaffray & Co., Richmond, VA	
The Ag Bank Market		Nathan Rudgers, Farm Credit East, ACA, Batavia, NY	

## Tuesday | Jan 26

Track 1 | CLIMATE CHANGE LEGISLATION, CARBON CREDITS, REDUCING GREENHOUSE GAS EMISSIONS (GHG'S), ZERO WASTE PLANNING, MAXIMIZING ORGANICS DIVERSION, & ENERGY PRODUCTION

8:30 am – 10:00 am Effects of Climate Ch Organics Recycling I	ange Legislation on the Composting andustry	nd Jasmine
Status of Energy and Climate Legislation Impacts on Composting, Anaerobic Digestion and The Food Recovery Hierarchy	Scott Subler, Environmental Credit Corp., Ithaca, NY	Subler
USCC Efforts to Influence Climate Legislation to Benefit the Composting and Organics Recycling Industry	RJ Bee, Hattaway Communications	Bee
New Revenue Opportunities from Carbon Credits with the Climate Action Reserve	Joel Levin, Climate Action Reserve , CA	Levin
10:45 am – 12:15 pm Climate Change, Org	anics & Composting	Jasmine
A Carbon and Renewable World: Composting's Role	Gauri Patanaker, Element Markets, Houston, TX	Patanaker
Compost: The Connection to GHG and Global Warming	Monica Ozores-Hampton, University of Florida/IFAS/SWFREC, Immokalee, Fl	Ozores-Hampton
Mitigating Greenhouse Gases through Composting	Ray Kapahi, John McCabe, C. Hul. GHG Climate Team, LLC. Wilton, CA	Kapahi
12:15 pm – 2:00 pm Annual Awards Luncheon Palms Ba		
Annual Award Ceremonies	Frank Francioisi, Awards Committee Chair	Awards
Soil Saving Lives: Composting and International Agricultural Development	Douglas Satre, Kellogg Garden Products, Carson, CA	Satre
2:00 pm – 3:45 pm Organics Program De Part I	evelopment and Maximizing Diversion:	Jasmine
Composting – A Beginning to End of Life Situation In Seattle	Doug Kunnemann. NatureWorks LLC, Minnetonka, MN	Kunnemann
Go Green, Save Green in the Corporate Environment	Mike Manna, Organic Recycling Solutions, Manchester, NJ	Manna
US EPA Region IV/USCC Compost Infrastructure Meeting Recap and Future Plans.	Frank Franciosi, Novozymes, NC	Franciosi
Green-Ness Is Next to Godliness: Composting at a Religious Facility	Michelle G. Minstrell, Gershman, Brickner & Bratton, Inc, Fairfax, VA	Minstrell

4:30 pm – 6:00 pm Organics Program D	evelopment and Maximizing Diversion:	Jasmine
Roadmap for Maximizing Organics Recycling	Mitch Kessler, Kessler Consulting, Inc., Tampa, FL	Kessler
Closing the Loop: Composting Opportunities within the Healthcare Segment.	Nicole Chardoul, Resource Recycling Systems, Ann Arbor, MI	Chardoul
The Greening of America: Organics Diversion	Peter Klaich, Klaich Consulting, Roswell, GA	Klaich
Florida Organic Recycling Center for Excellence (FORCE)	Miriam Zimms, Kessler Consulting, Inc., Tampa, FL	Zimms

## Tuesday | Jan 26

## Track 2 | COMPOST SYSTEMS & TECHNOLOGIES, ANAEROBIC DIGESTION AND ENERGY RECOVERY FROM ORGANICS

ENERGY RECOVERY FRO	OM ORGANICS	
8:30 am – 10:00 am In-Vessel and other	Composting Technologies	Magnolia
In-Vessel Composting of Source Separated Food Waste in Hong Kong	J. W. C. Wong, E. Epstein and Y. Wu, Hong Kong Baptist University, Hong Kong, China	Wong
In-Vessel Composting, Barcelona, Spain: Proven and Cost-Effective Solutions	Michael Herken, Taim Weser Gmbh, Bad Oeynhausen Germany	Herken
Get "SMART" with Food Waste. Modular Aerobic Digestion	Jack Walsdorf, Converted Organics Inc, Boston, MA	Walsdorf
10:45 am – 12:15 pm Anaerobic Digestion	n and Energy Recovery Part I	Magnolia
Anaerobic Digestion: State of the Art	Luc De Baere, OWS NV, Ghent, Belgium	De Baere
Integration of Composting and Anaerobic Digestion Systems	George Savage, CalRecovery, Inc, Concord, CA	Savage
Partnership to Implement Conversion Technology	Michele Young, City of San Jose, CA	Young
Comparative Suitability of Anaerobic Digestion Methods for Treating Solid Waste	Melvin S. Finstein, American Anaerobic Digestion, Rutgers, NJ	Finstein
2:00 pm – 3:45 pm Anaerobic Digestion	n and Energy Recovery Part II	Magnolia
Energy Recovery from Organics and the Composting of Dry Fermentation Residuals	Nadeem Afghan, Bioferm Energy Systems, Madison, WI	Afghan
Synergies of Composting and Anaerobic Digestion: Odor Control, Marketable Product, and System Selection	Jerry Bartlett. Cedar Grove Composting, Seattle, WA	Bartlett
Dry Fermentation for Multifamily and Commercial Organics Diversion.	Watson, Harvest Power, Inc. Seattle, WA	Watson

4:30 pm – 6:00 pm	Renewable Energy Integration	from Organics, Composting and Digest	ion Magnolia
Anaerobic Composting of Co	offee Pulp Feedstock	Jose Dumas, Joaquin Chong and Nilsa Acin, University of Puerto Rico Agricultural Experiment Station	Dumas
Development of Vermont's C Data Viewer and Information		David Healy & Barbara Patterson, Stone Environmental, Inc. Montpelier, VT	Healy

4:30 pm – 6:00 pm	Renewable Energy Integration	from Organics, Composting and Digestion	n Magnolia
Development of a Mobile Grass Fuel Pellets	Pelletizing System for	Robert Rynk, SUNY Cobleskill, NY	Rynk
Biogas in Society "Succe	ss Stories"	Johannes Pohl, Komptech USA Inc., Lafayette, CO	Pohl
Liquids Extraction/Digestic	ion for More Efficient	Bruce Coxhead, Zero Waste Energy Systems, Ontario, Canada	
Compatibility of Compost	ing and Digestion	Will Brinton, Woods End Research Lab, ME	Brinton

## Tuesday | Jan 26

# Track 3 | Environmental Applications, Erosion Control, & New Benefits of Compost Use

	Frosion Control, Stormwater Products of Anaerobic Digestion	Oleander A
Use of Compost in Manufactured Soil for Wetland Restoration and Storm Water Management.	Goeff Kuter, Agresource, Inc, Amesbury, MA	Kuter
Are Compost Blankets the Best Performing (and Greenest) Erosion Control Technology?	Britt Faucette, Filtrexx International, Grafton, OH	Faucette
Hydraulic Properties of Compost when used as a Berm for Stormwater Treatment/Sediment Control	Fatih Buyuksonmez, San Diego State University	Buyuksonmez_2
Composting Digestates of AD Plants in Europe	Björn de Haan, BACKHUS North America, New York, NY	DeHaan
10:45 am – 12:15 pm Environmental Applications and Improvements Using Compost Oleander A		
Compost Application Strategies Affect Turfgrass Grown in Disturbed Soils	Gregory K. Evanylo, Department of Crop and Soil Environmental Sciences, Virginia Tech, Blacksburg, VA	Evanylo
A New Modular Cropping System Utilizes Blended Yard Waste Compost Growing Media, Increasing Compost Value And Sales Volume, While Achieving Superior Crop Performance	Rod Tyler and Kip Gardner, Filtrexx International LLC, Grafton, OH	Tyler
Compost Influence on Dendroremediation of Pulpmill Effluent by Fast Growing Eucalyptus, Populus, and Corymbia Species	D. L. Rockwood, University of Florida, Gainesville, FL	Rockwood

Compostino	at the US	House of	Representatives

Perry Plumart. Office of Speaker Pelosi, US House of Representatives. Washington, DC



2:00 pm – 3:45 pm Environmental and and Compost Use	Economic Benefits of Composting	Oleander A
Quantifying Benefits of Compost Use	Sally Brown. Washington State University, WA	Brown_S_3
A Life Cycle Approach for Measuring the Environmental and Economic Benefits of Composting	Keith A. Edwards, BASF Biodegradable Plastics, Ypsilanti, MI	<u>                                     </u>
Long-Term Benefits of Compost and Biosolids Use Include Carbon Sequestration and Improved Soil Quality	Katherine Kurtz, University of Washington, Seattle, WA	Kurtz_K
4:30 pm – 6:00 pm	nds in Soil Blending Applications	Oleander A
National Overview of Efforts to Promote the Beneficial Use of Spent Foundry Sands	Richard Benware, US EPA	Benware
Foundry Sand Environmental Profile	Dr. Robert Dungan, USDA	Dungan
Soil Attributes and Performance in Manufactured Soils	Dr. Elizabeth Dayton, Ohio State University, OH	Dayton
Using Foundry Sands in Soil Blending Applications: Case Study	John Kurtz, Kurtz Bros., OH	Kurtz_J

## Tuesday | Jan 26

# Track 4 | Compostable Plastics, Managing Disaster Debris, Mortality Composting, Tools Of The Trade

8:30 am – 10:00 am Mortality Compos	sting	Oleander B
Carcass Composting in Montana, an Update	F. Patrick Crowley, Crowley Consultants, LLC, Helena, MT	Crowley
On-Farm Mortality Composting of Large Animal Carcasses	Josh B. Payne , Oklahoma State University, Stillwater, OK	Payne
The Role of Composting in Natural Disasters	Jean Bonhotal. Cornell University, Ithaca, NY	Bonhotal
Carcass Composting at Kansas Feedlots	Ken Powell. Kansas Department of Health & Environment, Topeka, KS	Powell
10:45 am – 12:15 pm Compostable Plas	stics: Standards and Industry Status	Oleander B
The BPI/USCC Compostable Logo: 10 Years and Growing	Steve Mojo, Biodegradable Products Institute, NY	Mojo
Marketing Bioplastics and the Composting Infrastructure	Debra Darby, Mirel Bioplastics By Telles, Lowell, MA	Darby

Expanding the Use of Compostable Plastics: A Novel Approach to Corrosion Inhibiting Films	Michael J. Morin and Kristy A. Gillette, Cortec Corporation, St. Paul, MN	Morin MORIN.doc
New Products and Expanding Uses Compostable Plastic Mesh Lawn and Leaf Bags	Paul Kolada and Frederick Feeney, Priority Designs, Columbus, OH	Kolada
2:00 pm – 3:45 pm "Tools of the Trac	de" Workshop	Oleander B
Compost Maturity Tests-The Good, The Bad and The Confusing	Paul Arnold, Acadia University, Wolfville Nova Scotia, Canada	Arnold
New Developments in Oxygen and Temperature Monitoring	Nathan O'Connor. Reotemp Instruments, San Diego, CA	O'Connor
Field Tests for Compost Maturity and Stability	Will Brinton, Woods End Research Lab,	, ME
Tools of the Trade	Jeff Gage, Compost Design Services	Gage_2
4:30 pm – 6:00 pm Managing Disaster Feedstocks	er Debris and Composting Other	Oleander B
Managing Vegetative Disaster Debris Reductions: A Noble Purpose to Practical Implementation	John C. Rogers, Louisiana Department of Environmental Quality, Baton Rouge, LA	Rogers
Static Composting of Dairy Manure in a Desert Environment	David Johnson, NMSU/Institute of Energy and Environment, Las Cruces, NM	Johnson
Mineral Analysis of Compost Subjected to Different Microbial Inoculation	Onawumi Adeyinka, Federal College of Forestry, Ibadan, Nigeria; O. Fagadee, University of Ibadan, Nigeria.	Adeyinka