A Quick Look Inside The Organics Recycling & Compost Manufacturing Industry



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Presentation Highlights

- Introduction
 - ERTH Products, LLC
 - US Composting Council
- The Soil and Water Connection
- Engineered Soils & Soil Organic Matter
- Emerging Markets
- Strategic Alliances

ERTH PRODUCTS, LLC Changing the Way the World Grows







Composting

and the second

Manufacturing & Shipping



US COMPOSTING COUNCIL

- Advances Composting and Promotes Compost use to Enhance Soils and Provide Economic, Environmental and Lifestyle benefits to our members and society.
- We Believe that the Recycling of Organic Materials is Central to Achieving Healthy Soils, Clean Water and a Sustainable Society

US Composting Council

- Challenging and Exciting times for the Council
 - Economic , Regulatory , Transportation
 - Green as it Gets! –Environment is our business...Land Protection, Air, Water
- Paradigm Shift from Conventional uses in Landscapes and agriculture practices
- Strong Growth in Membership & Programs

US Composting Council Programs & Initiatives

- Test Methods for Examination of Composting and Compost (TMECC)
- Compost Analysis Proficiency Program (CAP)
- Seal of Testing Assurance Program (STA)
- Compostable Logo Program
- Training and Certification Programs
- Compost Use Program (CUP)

Science-based programs that increase the credibility and reliability of compost producers, compost products & "raise the bar" for the industry



Waste Management to Sustainable Materials Management

Organic Resource Management Not a waste but a wasted resource No place (in the hole) at landfills EPA Hierarchy for Highest & Best Use EPA GreenScapes Program Environmental Friendly Solution to Landscapes

Sustainable Materials Management

Programs designed to make holistic decisions regarding waste generation and disposal and the associated impact on..... LandSoils! Air and Water



The Soil Water Connection

Connecting the dots.....

Photo courtesy of Environmental Science & Technology

Why ??

- Why... has the USCC chosen the Soil Water Connection as this years theme?
- Why.... is all of this important?
- What... does it mean to Food Waste (Resource) recovery & compost manufacturing

The Answer

- The USCC has over the course of 20 years developed initiatives that promote recycling of organic materials through Composting
- Working harder today to get our message across – Strategic Alliances
- Leaders in Organic Recovery, composting
 & Sustainable Green Building Practices

Back to the Questions ?

- Is the USCC "Soils" message being drowned out by the waste to energy message and movement????
- We have a Clean Air Act, a Clean Water Act Where is the Clean Soils Act?
- Are we really protecting our Land, Air and Water Resources when we don't protect our soils?

The Soil and Water Connection

- Too often the decline in soil quality has been viewed in isolation from the decline in water quality.
- For progress to be made in improving water quality and quantity it must first be recognized that nearly every drop of water in our rivers, lakes, and aquifers has either traveled through the soil or flowed over its surface.
- The decline and degradation of soil starts a chain reaction with profound consequences for water quality and quantity

A Watershed Manager's Guide to Organics....

...... The Soil and Water Connection

Prepared by the Council's Research & Education Foundation

Water Loss, Contamination, and purification are all directly affected by the soil

From Droughts to Floods

Today when we have a rain event all to often it can be better characterized as a Flood Event

From Drought to Floods



Compost !

It's all about Soil Organic Matter!

Managing Soil Organic Matter The Key to Air and Water Quality

NRCS Soil Quality Technical Note No.5

- Many soil properties impact soil quality, but organic matter deserves special attention
- Because organic matter enhances water and nutrient holding capacity and improves soil structure, managing for soil carbon can <u>enhance productivity</u> and <u>environmental quality</u>, and can <u>reduce the severity and</u> <u>costs of natural phenomena, such as **drought**, **flood** <u>and **disease**.</u></u>
- In addition, increasing soil organic matter levels can reduce atmospheric CO2 levels that contribute to climate change

Waste Recovery and Conversion Through Composting

- The Economic & Environmental impact of Diverting Waste Destined for landfills speak for itself.....Wasted Resource!
- Far more important are the Economic, Environmental & Life Style benefits that can be derived from recycling of organic waste into compost for use in sustainable landscapes and other environmental applications

Engineered Soils Not "Dirt" or "Topsoil" !!

Soils designed with compost and mineral aggregates in a measurable way so as to meet specific soil quality and depth requirements and to perform to a standard of permeability, stability and fertility

Emerging Markets

USGBC LID

- Rooftop Gardens or Green Roofs
- Rain Gardens or Bio-retention Cells
- Vegetated Swales and Filter Strips
- Compost amended landscapes
- Pervious Parking
- Structural Soils "Street Scapes"

Tools For Making The "Soil Water Connection"



Cornell Structural Soil MixTM



Extensive Greenroofs



Intensive Greenroofs



Bio-Retention/Rain Gardens



Compost Amended Soils

Spire

Atlanta, GA Architect: Preston Partners Landscape Contractor: Prolandscapes Installation Date: May 2005 Lightweight Soil: Rooftop Gardens/Planting



Realm

Atlanta, GA Architect: Preston Partners Landscape Contractor: Prolandscapes Installation Date: March 2006 Lightweight Soil: Rooftop Gardens/Planting









Forum Phase #2

West Paces Ferry Atlanta, GA Architect: HighGrove Partners Landscape Contractor: HighGrove Partners Installation Date: July 2004 Intensive Lightweight Soil





World Congress Center Viaduct

Atlanta, GA Landscape Contractor: Ray Landers Company Installation Date: June 2004 Intensive Lightweight Soil



Manhattan Condos

Atlanta, GA Landscape Contractor: Pro-Care Environenmental Installation Date: July 2006 Intensive Lightweight Soil











Bio-Retention / Rain Gardens







Milton High School – Bio-Retention Ponds





September 14, 2006

Alpharetta High School

Completed Cell after 2 Years





Georgia Department of Natural Resources Wildlife Resources Headquarters Social Circle, GA LEED Certified Gold Project



PERVIOUS PARKING







Georgia Department of Natural Resources Wildlife Resources Headquarters

BIO-RETENTION







Georgia Department of Natural Resources Wildlife Resources Headquarters

Compost Amended Soils Landscape System Federal Reserve Bank- Atlanta, GA









Compost Amended Soils Landscape System Federal Reserve Bank- Atlanta, GA



Compost Amended Soils Landscape System Alys Beach, FL







Sports Field Construction Alpharetta High School











Other Emerging Markets

- Alternative Landfill Caps and Covers (Eco Systems)
- Biomass to Energy
 - Electricity (Anaerobic Digestion)
 - Bio Fuels & Bio Gas

Waste to Energy

EPA's Hierarchy for Highest and Best Use 3'R's Reduce Reuse Recycle!! Source Reduction Feed the Hungry Feed Animals Industrial Uses ? * Composting Landfill/Incineration

Anaerobic Digestion (AD)

- EPA ---- "Since food is such an incredibly valuable resource that can be used to protect our soil and water or grow our next generation of crops, there are so many better uses for it to consider before putting in a landfill or incinerator
- AD residuals (digestate) can and should, be put to beneficial use to—feed the soil!

Conclusion

- There are only between six and eight inches of topsoil left on the planet----
- We have a loss of 10 million tons per day from U.S. Farms alone
- It takes a minimum geologic evolution of 150 years to create a single inch of topsoil

SOS ! Save our Soil

The End! Or should it be the beginning?

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