

# Lesson 9: Compost Quality & Testing

## Learning Objectives:

- Be familiar with compost quality parameters needed for regulatory compliance
- Understand compost quality parameters needed for marketing
- Be aware of United States Composting Council (USCC) programs



# DEP Regulatory Standards

- Types Y, YM and A Compost for unrestricted distribution & use:

Compost Type	Maturity	Foreign Matter	Particle Size
Type Y & YM	Mature or Semi-mature	≤2% (assumed)	Fine, medium or coarse
Type A	Mature	≤2%	Fine

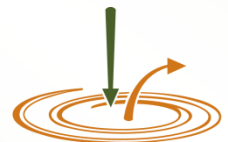
Heavy Metal Concentrations (mg/kg dry weight) (assumed for Type Y & YM)				
Cadmium (Cd)	Copper (Cu)	Lead (Pb)	Nickel (Ni)	Zinc (Zn)
<15	<450	<500	<50	<900

[www.dep.state.fl.us/waste/quick\\_topics/rules/documents/62-709.pdf](http://www.dep.state.fl.us/waste/quick_topics/rules/documents/62-709.pdf)



# Market-Based Parameters

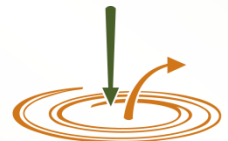
- pH
- Soluble Salts Content
- Macro-nutrient Content (N-P-K)
- Micro-nutrients
- Water Holding Capacity
- Bulk Density
- Moisture Content
- Organic Matter
- Particle Size
- Metals
- Stability and Maturity
- Inerts
- Weed Seeds
- Pathogens



# USCC Testing Program

## Test Methods for Examination of Composting and Compost (TMECC)

- A laboratory manual for evaluating compost:
  - Sampling and sample preparation procedures
  - Testing methods to analyze compost's physical, chemical and biological properties
- Ensures proper procedures and methods are used for analyzing feedstocks and compost
- [www.compostingcouncil.org/programs/tmecc/](http://www.compostingcouncil.org/programs/tmecc/)



# USCC Certification Program

## Seal of Testing Assurance (STA):

- Testing, labeling and information disclosure program providing consistent and reliable information regarding compost
- Compost producers participate in the program
- [www.compostingcouncil.org/programs/sta/](http://www.compostingcouncil.org/programs/sta/)



# Which Laboratories to Use?

- DEP requires analysis by labs certified under NELAP (National Environmental Laboratory Accreditation Programs) by the Florida Department of Health
- However, some NELAP labs may not be familiar with compost
- Compost should be analyzed by STA labs using TMECC procedures
- Therefore, use NELAP labs that are STA certified



# Testing Frequency

- DEP Standards:
  - Composite sample tested every 20,000 tons of compost produced or quarterly, whichever is more frequent
- STA Standards:

Compost Quantity (tons/year)	Testing Frequency
≤ 2,500	1 per quarter (or less)
2,501 – 6,250	1 per quarter
6,251 – 17,500	1 per two months
> 17,500	1 per month

