Composts
“Composts”

Current Status

- Much interest/potential
- Renewable resource
- Disease suppression
- Different nutrient forms
- Locally produced
- Highly variable
CAUTION

All composts are NOT the same!
Compost:

Verb...

NOT a noun
“Composts”

Possible Uses

- Soil amendment
- Mulches
- Boiler fuel
- Consumer products
- Component for nursery mixes
- Component for greenhouse mixes
“Composts”
Source Materials

- Yard waste
- Ag. by-products
- Ag. manures
- Fish waste
- Municipal sludge
- Municipal solid waste
Successful Composting

3 P’s

Procurement
Processing
Product
Successful Composting

Obstacles

- Focus on procurement & processing
- Product in hands of waste management personnel - NOT end users
Composting

Obstacles

“If it’s dark and smells earthy, it must be good”

- Municipalities not market sensitive
- Private contractors make money on tipping fees NOT composting
Using “Composts”

Obstacles

- Inconsistent supply
- Very little QC
- Poor final product specs.
- Weight
- Cost
Yardwaste: $20 - $50 per ton
• $0.75 - $1.85 per cubic foot
• Peat: $0.70 cu ft
• Bark: $0.35 cu ft
Higher transportation costs
Compost Processing
Composting

Screened/milled
65-70% moisture
nitrogen?  pH?

Piled to “cure”
2 - 6 months

Process for Pine Bark

Windrowed 8-11 wks
Turned several times
35 - 50% air space
Daily temps
Weekly pH, EC, moist.

Piled to “cure”
Organic Matter Aging

Different from Composting

- **Aging**
  - Screen, windrow, turn infrequently
  - Monitor temp, pH EC??

- **Composting**
  - Adjust C/N & moisture
  - Turn frequently
  - Monitor
Compost
Opening an Inventory Pile

- Check for moisture content, pH, EC
- Check for heat, spores, & fungal growth
- If results are questionable
  - Irrigate
  - Turn
  - Check again in 2 weeks
Compost
Pile Height

- Up to 8 feet with front-end loader
- Up to 15 feet with stacking conveyor

NO DRIVING
ON PILES!!!

REDUCES
AERATION!!!
Organic Matter
Low aeration in piles

- Reduces air exchange
- Temps can reach > 180°F
- Can lead to fires within piles
- Can cause “flash” fires
  - Fresh air infusion when pile is disturbed
Pine Bark
Low Moisture Content

- Steam rising from piles indicates moisture loss
- Look for dry bands in the piles
- < 34% moisture, bark is very difficult to rewet
- Plants in dry bark may die from inadequate moisture retention
- Areas below dry bands may become “anaerobic”
Composts

Anaerobic conditions create...

- Low pH (< 3.5)
- High EC (2.5 mmhos/cm)
- Cure
  - Turn pile
  - Irrigate
  - Check again in 2 weeks
Organic Matter

Unturned Piles

- May develop high fungal populations
  - Clouds of spores
  - Mycelial bands
- May develop more fungal growth in pots
  - Difficult to rewet!!
Organic Matter

When new inventory is delivered:

- Check loads as they arrive
- If hot, steamy, or has spores
  - Moisten new inventory
  - Check pH, EC
  - Observe for a few days for suitability
“Composts” in containers

Be very careful!
Make small trial first
Know your costs before
Know specific benefits