

In-Vessel Composting At Johnson County Community College



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A Little About Us:

- Suburban Location
- Commuter Campus
- 234 Acres
- 22,000 Students
- Multiple Sustainability



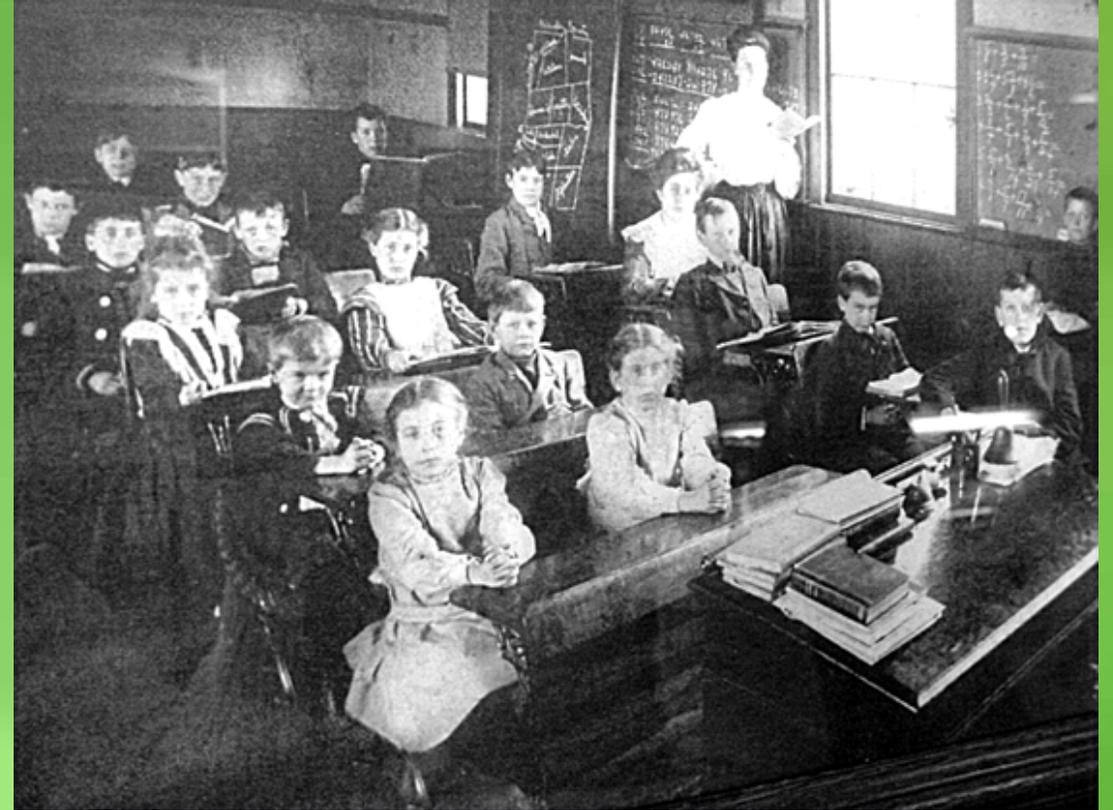
But What about the Compost?

- Started in June 2011
 - Grant from DOE
- 6 Yd. in-vessel, BW Organics
- 50 tons
- Average 1-1.5 tons/week
- Pre-consumer residuals



A Compost Primer

- Aerobic process
- Requires:
 - Oxygen
 - Moisture
 - Proper C/N Ratio
 - Porosity



Overview of Composting at JCCC

- 5 sites daily
- Site specific challenges
- Process
- 10 -14 days in- vessel
- 2-3 weeks of secondary composting
- 2-3 months curing



Collection

- John Deere electric “Gator”
- Site specific containers
 - 28 gallon
 - Bag/ “slim jims”
- Daily or 3/week



BW Organics 512 In-Vessel

- 2 yard/day capacity
- Flow through process
- 7-14 day retention
- 110°
- Initial stage of composting



Processing

- Current: Sheer shredder auger
- Upgrade: Horizontal Mixer
- Recipe Mixing/Particle reduction
- APX- ½ ton/Hour



Second-Stage Composting



- Passively aerated static piles (ASP)
- 141^{0+}
- Completes PFRP
- 2/3 Week retention time

Curing and Utilization

- Sustainable Agriculture Program
- 2-3 month curing
- Solvita / Ph testing



Challenges

- Odor
 - Proper Mix,
 - Added Bio-filter.
- Moisture in building
- Pest Control
 - Flies
 - Mice
- Carbon Sourcing



Opportunities

- Education
 - Integration in curriculum
 - Community Outreach
- Experimentation
 - Aerated in-vessel
 - Bio-filter



Contact...

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