

0.50 kg \$2.99 \$5.98/kg

California 5920 km



0.10 ¢/kg/km

0.65 kg \$6.49 \$9.98/kg

Annapolis Valley, NS 100 km



9.98 ¢/kg/km

Is it Time to Modify the Compost Maturity Threshold?

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Content

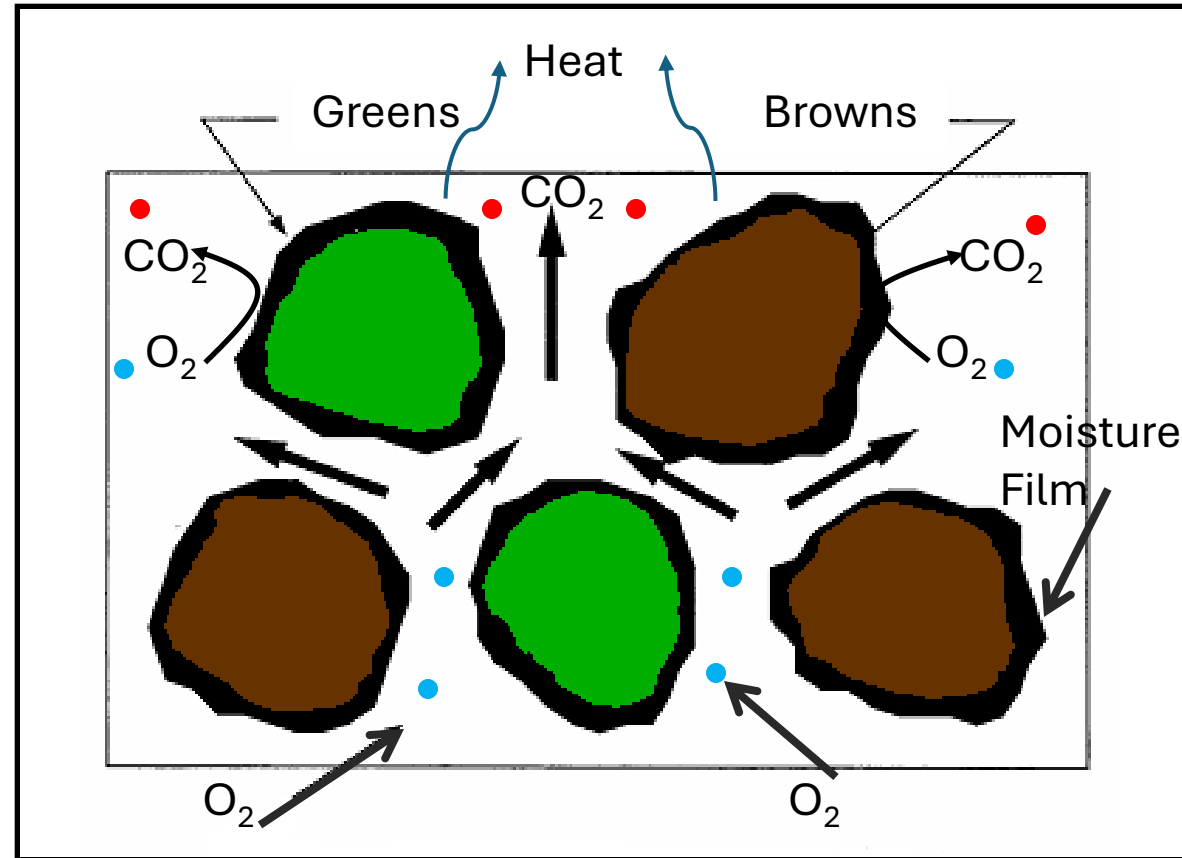
- Compost Maturity
- Compost Process
- Compost Maturity Tests
- A Wrinkle to Complicate Things
- Proposed Study
- A Request
- Coordinates

Compost Maturity

- When it's "done", safe to apply without negative impact
- Doesn't "smell"
- Mature compost ≠ stable compost
- No direct means to tell, only many indirect tests

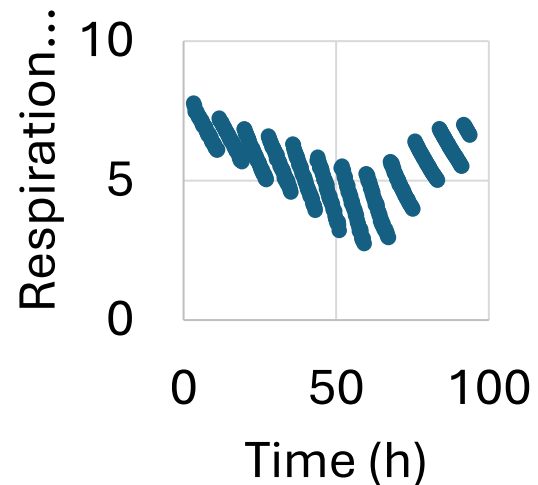
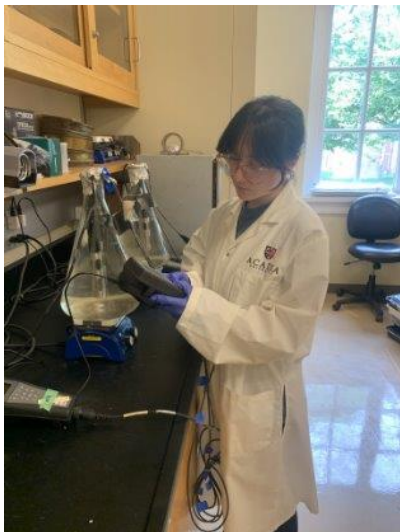
Compost Process

- 3 essential elements of composting:
 - Feedstock mix
 - Air
 - Water



Current CCME Compost Maturity Test Thresholds

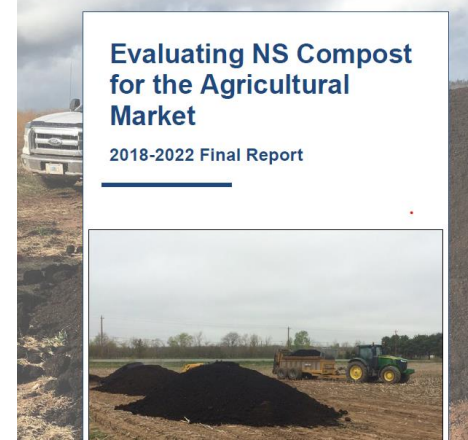
- Dewar re-heat $< 8\text{ }^{\circ}\text{C}$
- Respiration rate
 - Oxygen consumption $< 400\text{ mg O}_2/\text{kg OM}/\text{h}$
 - Carbon dioxide production $< 4\text{ mg CO}_2\text{-C}/\text{g OM}/\text{day}$
 - Method not identified



A Wrinkle to Complicate Things

- Many compost maturity tests over-state maturity (BDL)
- “Unhealthy” test samples (ON 40% curing rule)
- Need a maturity test that supports microbial health:
 - CAN/BNQ 0413-220 Organic Soil Conditioners - Composts - Determination of Respiration Rate - Part I: Respirometric Method - Part II: Modified Biochemical Oxygen Demand (BOD) Respiration Method

Proposed Study



- A sequel to LP Consulting (three field crop (corn, soybeans, barley, and wheat) sites & blueberries)
 - 10 tonnes/acre immature for five years
 - 10 tonnes/acre mature for five years
 - 30 tonnes/acre mature once
 - control
- Using **an accurate** measure of compost maturity, pair compost producers with compost users to run field tests to compare plant performance based on compost with differing maturity levels
- Multi-year
- Soil analysis (organic matter, nutrients, pH, CEC), soil condition (moisture, soil compaction, bulk density, water holding capacity and soil biology), tissue analysis, microbial analysis and crop yield and quality.
- Inter-provincial?

A Request for Participants

- Compost manufacturers
- Compost users
- Past researchers' results
- Policy makers (Quebec leading)

Coordinates

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(“business cards” available)