

Whole Cycle Tuesday

Key Takeaway

Communities and businesses today face a choice with organic waste: bury it in a landfill or recycle it back into the soil through composting. That choice impacts not only our environment but also long-term costs, soil health, and climate goals.

Compost offers a cycle of renewal that landfills cannot. Tackling PFAS at the source ensures that compost remains a safe, sustainable solution for our soils and our climate.

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"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share." — Lady Bird Johnson

Building Healthier Soils, Cutting Emissions, and Facing New Challenges

The Benefits of Land Application

Applying compost to land is more than waste management, it's resource recovery. By turning food scraps, yard trimmings, and biosolids into a soil amendment, compost delivers:

- **Improved Soil Health:** Restores organic matter, builds structure, and increases water retention for resilient landscapes.
- **Nutrient Value:** Provides a slow-release source of nitrogen, phosphorus, and potassium, reducing the need for synthetic fertilizers.
- **Climate Benefits:** Diverts organics from landfills, avoiding methane emissions while sequestering carbon in soils.

The Downside of Landfilling

Sending organics to landfills locks away valuable nutrients and creates additional challenges:

- **Methane Production:** Anaerobic breakdown in landfills releases a potent greenhouse gas.
- **Lost Soil Resources:** Nutrients that could enrich soils are buried instead.

- **Rising Costs & Limited Space:** Landfills face higher tipping fees and shrinking capacity.

PFAS: An Emerging Concern

One challenge with land application is the presence of PFAS (per- and polyfluoroalkyl substances)—synthetic “forever chemicals” found in grease-resistant packaging, textiles, and consumer goods. PFAS can survive the composting process and studies are taking place to investigate the potential for accumulation in the environment.

- **The Risk:** Potential for PFAS to enter soil, water, or even food systems.
- **The Reality:** Landfilling PFAS containing materials does not solve the problem, they can leach into groundwater through landfill leachate.
- **The Response:** Composters, regulators, and manufacturers are working to reduce PFAS at the source by phasing out contaminated packaging and increasing testing standards. In our world today, expecting zero PFAS compounds in all types of compost is unreasonable and unattainable until the source has been stopped. Limits to these compounds like others (metals, pathogens, etc.) is one way to continue to gain the benefits to our depleted soils while more work is done to stop the manufacture of PFAS substances at the source.

