

Whole Cycle Tuesday

Key Takeaway

Compost made from leaves and grass and compost made from food waste each have distinct strengths. Yard waste compost excels in stability and soil structure, while food waste compost delivers higher nutrient value. Understanding these differences helps composters tailor feedstock mixes, optimize operational controls, and supply customers with products matched to their soil improvement or agricultural performance needs.

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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

Comparing Leaf–Grass Compost and Food Waste Compost

Feedstock Composition: The Starting Point

Leaf & Grass Compost

Primarily derived from deciduous leaves, grass clippings, and other landscape trimmings, this stream is typically:

- High in carbon (leaves)
- Moderate in nitrogen (grass)
- Structurally bulky, improving airflow
- Lower in moisture compared to food waste
- Free of fats, oils, and proteins

Food Waste Compost

Food residuals include fruit and vegetable scraps, bakery waste, coffee grounds, meat, dairy, and plate waste. These materials are typically:

- Very high in nitrogen
- High in moisture (70–90%)
- Rich in sugars, proteins, and fats
- Rapidly degradable, leading to faster microbial activity
- Potentially odorous if not managed properly

Finished Compost Characteristics

Leaf & Grass Compost

- High in stable organic matter, particularly humic substances from leaf degradation.
- Typically lower in total nitrogen than food waste compost.
- Provides excellent soil structure improvements, aggregation, and water-holding capacity.

Food Waste Compost

- Higher nutrient content, especially nitrogen, potassium, and micronutrients.
- Faster to mineralize once in soil, providing more plant-available nutrients.
- Slightly lower in long-term humus, as food material degrades more completely.

Which Is “Better”? It Depends on the End Use

Whether using materials for soil structure or high nutrient value, each type of compost has its’ value. Many facilities intentionally blend both streams to balance nutrient density with structural stability.

