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Weekly Newsletter
from Agresource Inc.
for turning waste into
opportunity

Whole Cycle Tuesday

"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

Key Takeaway

Water shedding isn't an accident, it's the result of thoughtful windrow design, proper feedstock selection, and consistent management. A well-shaped, well-maintained compost windrow acts as its own stormwater control system, keeping excess moisture on the outside where it belongs and protecting the biological engine at its core.

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Why Compost Windrows Shed Water

One of the most overlooked design features of a compost windrow is its ability to shed water. While compost needs moisture to support microbial activity, too much water can quickly turn a productive windrow into an anaerobic, odor-producing problem. Well-built windrows naturally manage rainfall by shedding excess water from their outer surface, protecting the biology working inside.

Windrow Shape Matters

The arched or peaked shape of a properly formed windrow acts much like a roof. Rainfall striking the surface runs off the sides instead of infiltrating straight down. A rounded top with no flat areas is critical, flat spots allow water to pond, increasing the risk of saturation and oxygen displacement in the upper layers.

Surface Structure Creates Drainage

The outer layer of a windrow is typically composed of coarser particles: wood chips, bark, or shredded yard debris. These materials create a rough, porous surface that breaks the force of falling rain and promotes lateral flow. Rather than soaking inward, water follows gravity and moves across and down the exterior of the pile.

Biological Heat Drives Moisture Movement

Active composting generates heat in the core of the windrow. This heat creates a temperature gradient that encourages moisture to migrate outward as water vapor. As vapor reaches the cooler outer layers, it can condense and either evaporate or drain away, further limiting excess moisture buildup in the center.

Capillary Action Works in Our Favor

In a well-balanced mix, pore spaces within the windrow are large enough to prevent strong capillary pull from drawing water deep into the pile. This means free water from rainfall is more likely to move around the pile than be wicked into the biologically active core.

Turning Restores Water-Shedding Performance

Over time, windrows can slump or compact, reducing their ability to shed water. Regular turning restores structure, re-establishes porosity, and reforms the peaked shape that encourages runoff. Turning also redistributes moisture, preventing localized wet pockets from forming.