

Water

Municipal Yard Waste Composting Operator's Fact Sheet #3 of 10

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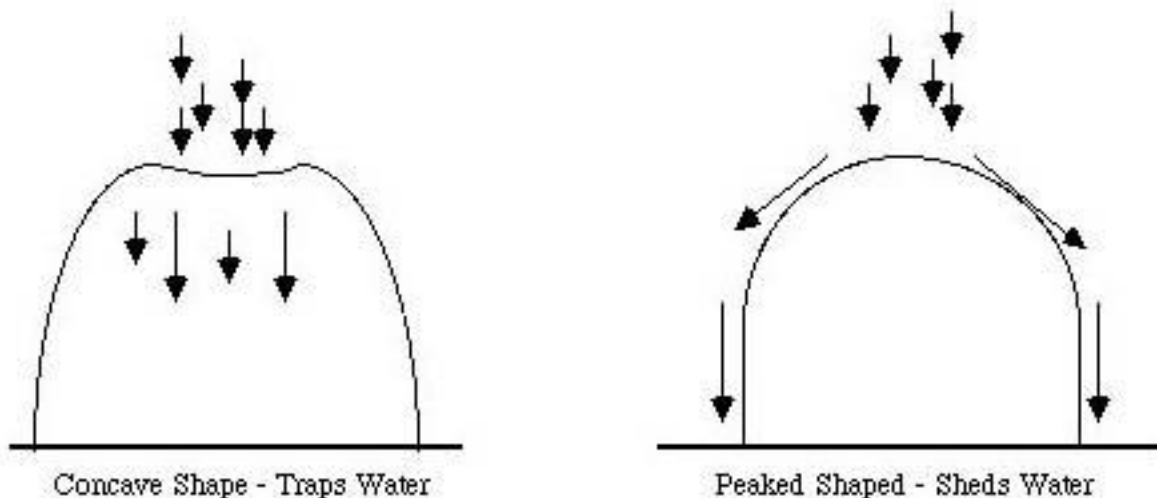


Active microorganisms need a moist environment. Ideally, composting materials should be between 40 and 60 percent water. When conditions are too wet, water will fill the pore space needed for air movement, and anaerobic conditions can result. If conditions are too dry, the decomposition rate will slow down.

For leaves, the "squeeze" test is an easy way to gauge moisture content. The leaves should feel damp to the touch, with only a drop or two of water expelled when tightly squeezed in the hand. Leaves are often quite dry when collected in the fall, and water may need to be added by one of the methods discussed below.

Some materials, like grass clippings, may seem dry to the touch but contain a great deal of water in their cell structure. As that structure breaks down, the water is released, turning the grass into a slimy mess. If compost becomes too wet, it may be necessary to add some drier material, such as partially decomposed leaves or wood chips. Coarse material is especially helpful in this situation, as it increases the porosity allowing water to drain out and air to flow in.

The shape of a compost pile has an important effect on moisture content. Scooping out the top of the pile to create a concave shape will maximize water absorption, so that rainfall can help replenish the moisture that is lost from the piles as steam. However, if the pile is overly saturated, anaerobic odors and leachate will be produced. Therefore, in prolonged wet conditions, the pile should be shaped to form a peak that will minimize absorption by shedding water. Both of these shapes are illustrated.



Water can be added to the compost pile in various ways. Hosing yard waste as the windrow is turned or turning it on a rainy day can help get water into the pile. Overhead sprinklers on a concave shaped pile also work well. By applying water slowly, it is more likely to infiltrate the pile, rather than running off the surface. Another method uses a drilled pipe as an injection probe, delivering pressurized water from a water truck to the center of the pile where it can be readily absorbed. As a rule of thumb, dry leaves initially need about 20 gallons of water for every cubic yard of leaves.

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