Oklahoma Winter Composting

Another year has clicked over, and January is here again! With average monthly air temperatures running in the mid-to-upper 30's, well-intentioned gardeners regard the internal temperature of their compost pile a bit more seriously. After all, creating a nice batch of finished compost should be on everyone's list of goals this year - and in Oklahoma, keeping your compost pile active during the winter is definitely achievable.

To quickly review, composting is a backyard accelerated version of the normally slow, natural process of vegetation decomposition. Fungi, bacteria, insects and worms join forces with air and water to use these materials, and produce a rich, organic matter as a result of their efforts. And the benefits of this organic concoction? Many, including moisture and nutrient retention, drainage and soil texture improvement, erosion control...not to mention the greater community and environmental impact to excessive chemical use and overflowing landfills.

So if you're curious about composting, the Oklahoma Cooperative Extension Service provides sound information on getting started; follow the *links at the end of this article* to learn more.

But if you already compost and need help for a cold compost heap, you know that winter weather can slow the process. But there's no reason for decomposition to stop entirely in January. Read on for troubleshooting tips to put the heat back into the heap.

Factors for Composting Success

Fundamentally, compost cannot occur without the activity of microorganisms. Considering their well-being is a must for successful composting. Therefore, compost structures require all of the following for decomposition to occur:

- **Water:** The busy microorganisms require moisture to stay active.
    - **TIPS:** In winter, watch to ensure the pile doesn't dry out due to long stretches of low or no precipitation. Keep it damp like a sponge, but not soggy. More dry material can be added if it is too wet, and adding a tarp can protect the pile from excessive precipitation.
- **Oxygen:** Along with water, oxygen is required for these aerobic microorganisms to live and do their work.
    - **TIPS:** Continue turning the pile to aerate and redistribute the material. Add coarse material, like straw, to improve airflow.
- **Materials:** Carbon and nitrogen waste at a 3 parts brown (carbon) to 1 part green (nitrogen) is a good balance. Smaller particles decompose faster.
    - **TIPS:** Nitrogen-rich green waste isn't as readily available in winter. Adding nitrogen fertilizer or kitchen green waste helps. Chop or mulch existing and added waste into smaller pieces to aid decomposition.

- **Temperature:** The optimal internal temperature to keep the microbes alive and kill pathogens, weed seeds and insects is between 140°F and 160°F. Any less, and the process has slowed or stopped.
    - **TIPS:** Optimal size for a pile to maintain proper temperature is 3’ x 3’. Divide larger piles for ease of aeration, or install aeration tubes. Nitrogen may also need to be added.

Jumpstart For Spring!

It can take months for composting to complete and deliver the rich goodness craved by our garden plants. Fortunately, we live in Oklahoma, where outdoor work on milder winter days can still prove productive. Don’t let the January calendar blues slow or stop your composting process; a little troubleshooting and effort can get it back on track and ready for spring.

Composting Resources

HLA-6448: Backyard Composting in Oklahoma
HLA-6436: Healthy Garden Soils
Recycling Yard Waste: “Don’t Bag It” Leaf Composting
PSS-2911: Compost Turning: The Key to Quick Composting
BAE-1742: Vermicomposting - Composting With Worms