



Duke Farms

An Experiment in At-Home Composting

PART IV

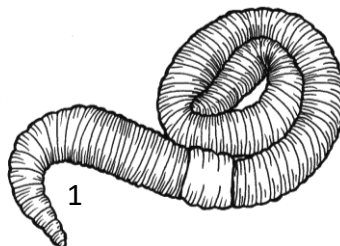
The concept of at-home composting may seem overwhelming, even intimidating, at first glance. The wealth of information available on the subject can be both helpful and harmful, steering you in the right direction while, at the same time, making you feel as though you are missing something important or doing something wrong. Fortunately, there is surprisingly little that can go seriously amiss when it comes to composting in your own backyard!



Check out the Duke Farms' educational resource ***The Black Gold Standard: A Beginner's Guide to Composting*** on the Distance Learning Portal for a thorough explanation of the composting process; the many benefits of both composting as a waste disposal method as well as compost as a soil amendment; and a helpful breakdown of different composting systems.

This resource will focus on the composting process as it plays out in real time, in an open bin system, utilizing the hot/active method – which involves weekly turning of the compost pile, vigilant monitoring of its temperature, and the regular addition of both “greens” (nitrogen-rich organic matter like fruit and vegetable scraps) and “browns” (carbon-rich organic matter like newspaper and straw). It will also explore the answers to interesting questions such as what organic matter looks like after one, two, three weeks of exposure to the elements and decomposer activity, and what some of those decomposers are.

In short, this experiment will illustrate just one of the many ways to compost at home easily and effectively.



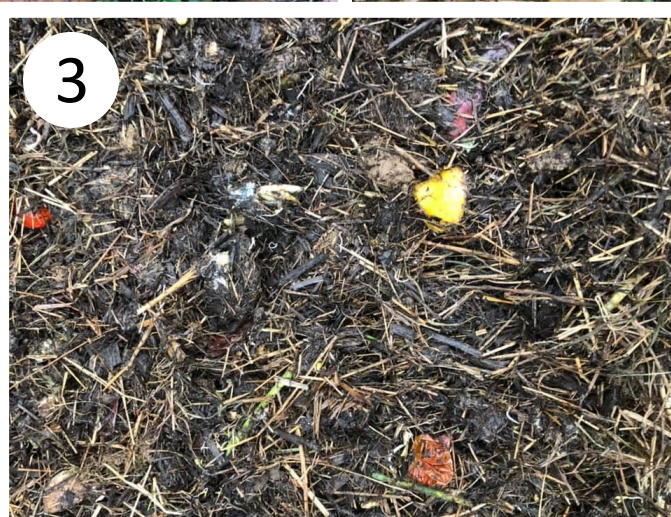
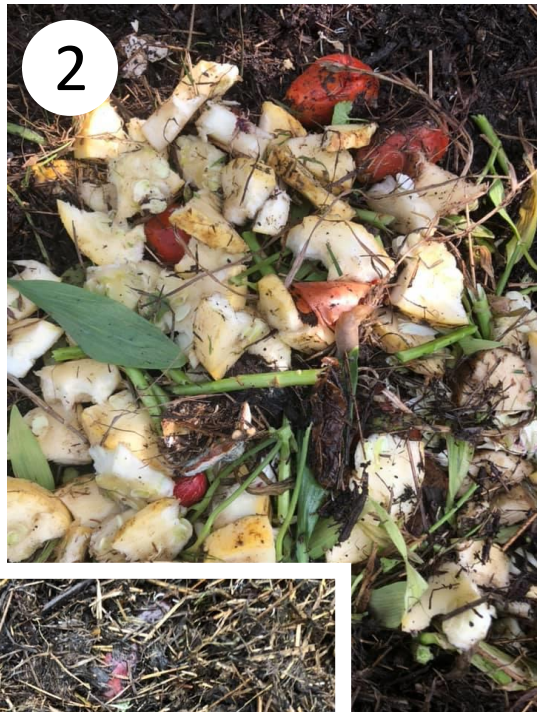


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Day 15

In Part III of this series, the theory that organic matter is quicker to decompose if it is cut or torn into smaller (i.e. easier-to-digest) pieces was put to the test. Several large fruits and vegetables that had previously been buried in the compost pile for two weeks and remained almost entirely untouched were split open and broken into chunks with the soft interior flesh exposed.

Seven days later, as can be seen in the photograph below, very few of those previously-untouched fruits and vegetables remain distinguishable! With the exception of some particularly fibrous skins and rinds, the eggplant, gourd, and sweet potatoes that were re-added to the pile have since entered late-stage decomposition.



Another decomposer – arguably the most well-known decomposer of them all – was found wriggling amongst the remains of these “greens”: the *Lumbricus terrestris*, also known as the common earthworm or nightcrawler due to its nocturnal feeding habits.



Like its fellow decomposers the common pill bug and the dusky arion (discussed in Part II), the common earthworm is not native to North America. In fact, many North American earthworm species were largely decimated or went extinct thousands of years ago, when a Pleistocene era ice age covered the northern half of the United States in glaciers. This tiny creature so often hailed as the gardener’s best friend and arbitrary indicator of healthy, productive soil is, in fact, a relatively recent arrival to this continent, most likely having first hitched a ride across the ocean with European colonists sometime during the 1600s.

Although they are welcome additions to not only the garden but the compost pile as well, it is specifically because of the common earthworm’s voracious appetite that it has been labeled invasive (and worse) in the forest setting, where it disturbs the soil and makes nutrients *too* available for uptake, leading to the introduction and quick establishment of inherently opportunistic invasive plant species. Additionally, the common earthworm can destroy, in record time, an incredibly important component of the forest ecosystem, its leaf litter: the thick, fertile layer of leaves in various states of decomposition that typically blankets the forest floor, providing nutrients and protection to plants, and food and shelter to insects and animals.

Fortunately, when confined to the compost pile or garden bed, the common earthworm’s prodigious hunger is far more helpful than it is harmful.



This week, more fruits, vegetables, stale bread, and used tea bags have been added to the compost bin, but have been confined to the rear to allow the current compost pile time to more thoroughly decompose. A thin layer of compost was spread atop the newly added organic matter to promote microbial activity before being covered by a much thicker layer of straw.

With the compost nearly “cooked”, Part V will be the conclusion to this series.





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Each week for the month of September into October, you can check in to see what the compost pile looks like, watching the decomposition process in real time and uncovering the variety of incredible organisms that make compost happen!



Let's get cookin'!

