

## COMPOSTING RESOURCES | RECURSOS PARA COMPOSTAJE

*Many GreenThumb gardens with compost bins are experiencing increased participation and more incoming food scraps. Some gardens might be interested in composting for the first time now that the curbside collection of organics is suspended. The following videos and reading materials were selected by our staff to answer some questions you might have about composting at your garden. This material ranges in skill-level from beginner to more experienced. If you have any questions, don't hesitate to reach out to your [Outreach Coordinator](#).*

*Muchos jardines de GreenThumb con contenedores de compost están experimentando una mayor participación y más desechos de comida. Algunos jardines podrían estar interesados en compostaje por primera vez ahora que la colección de productos orgánicos está suspendida. Los siguientes videos y materiales de lectura fueron seleccionados por nuestro personal para responder algunas preguntas que pueda tener sobre el compostaje en su jardín. Si tiene alguna pregunta, no dude en comunicarse con su [Coordinador\(a\) Comunitaria\(o\)](#).*

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### **Resources for Novice Composters**

#### **Composting At Home: An Introduction to the Basics:**

<https://ilsr.org/webinar-home-composting-may-2020/>

[90 minutes, ILSR] Discusses what compost is and why it is useful for your garden. Describes how to make a basic type of compost pile, what you will need, and what kind of maintenance is necessary. A great all-in-one overview to get familiar with composting.

#### **Choose Your Compost Bin:**

<https://www.youtube.com/watch?v=EMjgXTtUVFw>

[video, 9 minutes, Cornell Cooperative Extension] Short video with a summary of the types of compost bins that are available. Highlight the features of different compost bins and provide information to help viewers select the system that is best for them.

#### **Getting Started with Backyard Composting:**

<https://homegrown.extension.ncsu.edu/2019/01/getting-started-with-backyard-composting/>

[video, 4 minutes, Homegrown NC State University Extension] Short video with a summary of the types of compost bins that are available. Highlight the features of different compost bins and provide information to help viewers select the system that is best for them.

#### **Successful Rat Prevention for Community Composting:**

<https://ilsr.org/successful-rat-prevention-for-community-composting-webinar/>

[video, 60 minutes, ILSR] Panel discussion about rat prevention in community gardens that addressed rat biology and behavior and compost best management practices to avoid and

prevent rats. Panelists are from the NYC Department of Health and Mental Hygiene, Red Hook Farm, the Institute for Local Self-Reliance, and the NYC Compost Project.

### **Lasagna Layering:**

<https://www.youtube.com/watch?v=2nqJ5e6F-vQ>

[video, 8 minutes, Cornell Cooperative Extension] Detailed demonstration video of the lasagna layering method for adding compost to your bin.

### **How to Compost:**

<http://www.stopwaste.org/at-home/home-gardening/all-about-compost/backyard-composting>

[video, 4 minutes, Stop Waste] Short video on how to add compost to a bin with tips on how to maintain the system.

### **Composting on a Large Property:**

<https://www.youtube.com/watch?v=5dFaguYZVG8&feature=youtu.be>

[video, 12 minutes, Cornell Cooperative Extension] This video goes over setting up and maintaining a 3-bin composting system. It includes compost management tips, as well as how to harvest and use compost.

### **Vermicomposting at Home:**

<https://nycparks.webex.com/recording/service/sites/nycparks/recording/playback/11e19832c4554baa99fd49815e6ba1bf>

[video, 45 minutes, begins at 16:50, GreenThumb, password: Worms!2020] A how-to video about starting your first worm bin for composting!

## **Recursos para Compostadores Novatos**

### **Compostaje y Reutilización de Desechos Orgánicos**

[https://www.seattle.gov/Documents/Departments/SPU/EnvironmentConservation/CompostReus\\_english.pdf](https://www.seattle.gov/Documents/Departments/SPU/EnvironmentConservation/CompostReus_english.pdf)

[pdf, 4 paginas, Seattle Tilth] Una corta guía sobre el compostaje para jardineros particulares en casa.

### **Guía de Compostaje Doméstico**

<http://movil.asturias.es/medioambiente/articulos/ficheros/Guia%20de%20compostaje%20domestico.pdf>

[pdf, 24 páginas, COGERSA] Este guía explica el compostaje paso a paso.

### **Compostaje**

<https://agriflifeextension.tamu.edu/browse/featured-solutions/gardening-landscaping/compostaje/>

[pagina web, Texas, A&M AgriLife Extension] Este guía explica sobre distintos métodos de compostaje.

### **Manual de Compostaje**

[http://www.resol.com.br/cartilhas/manual\\_de\\_compostaje.pdf](http://www.resol.com.br/cartilhas/manual_de_compostaje.pdf)

[pdf, 21 páginas, Gobierno de España y Amigos de la Tierra] Este guía sencillo para todos los compostadores enseña cómo se fabrica esta materia orgánica y mejores prácticas.

### **Cómo Hacer Compost (Lima Compost)**

<https://www.youtube.com/watch?v=Z3sMeXXQzLc>

[vídeo, 7 minutos, Lima Compost] Cómo compostar restos de cocina.

### **Compostaje Doméstico**

<https://www.youtube.com/watch?v=TOZLmEvXfi4>

[vídeo, 8 minutos, odeunmedia para la Mancomunidad de Txingudi] Este video analiza el compostaje a nivel doméstico.

## **Resources for Experienced Composters**

### **ASP Composting Webinar Part 1:**

<https://www.o2compost.com/asp-composting-webinar-pt1.aspx>

[video, 24 minutes, O2 Compost] Overview of aerated static pile technology and its pros and cons. It compares ASP technology to turned windrow methods.

### **Mid-Atlantic Composting & Compost Use Webinar Series:**

<https://ext.vt.edu/natural-resources/composting/mid-atlantic-better-composting-school-webinar.html>

[video, 75 minutes each, VA Extension] This comprehensive composting webinar series covers the following subjects: Science of Composting; Feedstocks & Recipe Development; Compost Systems & Methods; Site Selection & Design; Equipment; Management & Troubleshooting; Management & Odors; Health & Safety; Compost Use; and others.

### **Cornell's Waste Management Institute Website**

<http://cwmi.css.cornell.edu/composting.htm>

[series of web links, Cornell CWMI] Cornell's extensive composting site includes fact sheets on diverse subjects such as in-vessel composting, monitoring compost moisture and temperature, and windrow management. Specific research interests related to compost are also available.

### **Using Bokashi in Community Composting Webinar**

<https://ilsr.org/webinar-bokashi-april-2018/>

[video, 95 minutes, ILSR] This webinar features bokashi experts from NYC and focuses on using bokashi fermentation as a technique for managing food waste in community gardens.

## **Recursos para Compostadores Experimentados**

### **Manual de Compostaje del Agricultor**

<http://www.fao.org/3/a-i3388s.pdf>

[sitio web, FAO.org] Un guia completo para mantener compostaje a través de pilas y otros sistemas.

**Guia Tecnica para el Aprovechamiento de Residuos Orgánicos a A Través de Metodologías de Compostaje y Lombricultura**

[http://www.uaesp.gov.co/images/Guia-UAESP\\_SR.pdf](http://www.uaesp.gov.co/images/Guia-UAESP_SR.pdf)

[pdf, 85 páginas, UAESP de Bogotá] Este guia extensivo describe sobre la importancia de cuidar los suelos y cómo desarrollar abono orgánico con un enfoque en compostaje y lombricultura.

## Materials from the NYC Compost Project (suitable for all levels)

All materials referenced below are available from: <https://www.makecompost.nyc/makecompost>.

### **NYC Master Composter Guide:**

<https://materials.bwpronline.org/system/tdf/MCM-Nov2018-0219-FINAL.pdf>

[pdf, 242 pages] The NYC Master Composter Guide covers soil science basics, composting science, tools and methods for making compost, using finished compost, compost-related group activities, and much more. Everything you need to know to compost in NYC.

### **Outdoor Composting Guide:**

[pdf, ~16 pages] Available in multiple languages (see below), this guide covers the basics of starting a backyard or small garden scale compost pile.

Outdoor Composting Guide (English):

<https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-0218.pdf>

Guía de Compostaje en Espacios Exteriores (Spanish):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_ES.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_ES.pdf)

戶外堆肥指南 (Chinese):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_TC\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_TC_4.pdf)

Руководство по компостированию на улица (Russian):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_RU\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_RU_4.pdf)

بالخارج دليل التسميد (Arabic) :

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_AR\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_AR_4.pdf)

বাড়ার বাইরে সার তৈরি নির্দেশিকা (Bangla):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_BN\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_BN_4.pdf)

Guide De Compostage Extérieur (French):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_FR\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_FR_4.pdf)

Gid Pou Fé Konpostaj Deyo (Haitian Creole):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_HC\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_HC_4.pdf)

실외 퇴비화 가이드 (Korean):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_KO\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_KO_4.pdf)

Kompostowanie na zewnątrz - przewodnik (Polish):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_PL\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_PL_4.pdf)

اوث ڈور كهاد سازى سے متعلق رہنما (Urdu):

[https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL\\_UR\\_4.pdf](https://materials.bwpronline.org/system/tdf/06339-OutdoorCompostGuide-1118-FINAL_UR_4.pdf)

### **Decomposers in a Compost Pile Tip Sheet:**

<https://materials.bwpronline.org/system/tdf/tip-sheet-decomposer-id-cpts-id-f.pdf>

[pdf, 2 pages] Provides a description of the many decomposing organisms that live in outdoor compost piles.

### **What to Compost Tip Sheet:**

<https://materials.bwpronline.org/system/tdf/tip-sheet-what-to-composttroubleshoot-cptscompstf.pdf>

[pdf, 2 pages] Covers what can and cannot be composted along with some general troubleshooting tips for outdoor compost bins.

### **How to Use Compost Tip Sheet:**

<https://materials.bwpronline.org/system/tdf/tip-sheet-how-to-use-compost-%20cpts-htuc-f.pdf>

[pdf, 2 pages] Discusses using compost in houseplants, gardens, vegetable beds, and more.

### **Compost Made Easy Tip Sheet:**

<https://materials.bwpronline.org/system/tdf/tip-sheet-compost-made-easy-cpts-spez-f.pdf>

[pdf, 2 pages] Provides a brief overview of composting in English and Spanish.

### **Indoor Composting Guide**

[pdf, ~7 pages] Available in multiple languages (see below), this guide covers the basics of composting indoors using a worm bin.

Indoor Composting Guide (English):

<https://materials.bwpronline.org/system/tdf/indoor-worm-bin-composting-brochure-06340-f.pdf>

Compostaje En Espacios Interiores (Spanish):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_ES.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_ES.pdf)

室內堆肥 使用蠕蟲箱 (Chinese):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_TC.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_TC.pdf)

داخل المنزل إعداد السماد (Arabic):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_AR\\_4.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_AR_4.pdf)

Composter À L'Intérieur (French):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_FR\\_4.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_FR_4.pdf)

Компостирование Дома (Russian):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_RU\\_4.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_RU_4.pdf)

Konpostaj Anndan Kay (Haitian Creole):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_HC\\_4.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_HC_4.pdf)

실내 퇴비화 지렁이 통 이용 (Korean):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_KO\\_5.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_KO_5.pdf)

Kompostowanie W Pomieszczeniach (Polish):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_PL\\_4.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_PL_4.pdf)

کیڑے والے کوڑے دان سے ان ڈور کھاد بنانا (Urdu):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_UR\\_5.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_UR_5.pdf)

বাড়ির ভিতরে সার তৈরি কর (Bangla):

[https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL\\_BN\\_10.pdf](https://materials.bwpronline.org/system/tdf/06340-IndoorWormComposting-1118-FINAL_BN_10.pdf)

### **Worm Bin Troubleshooting Tip Sheet:**

<https://materials.bwpronline.org/system/tdf/tip-sheet-worm-bin-troubleshooting-cpts-worm-f.pdf>

[pdf, 2 pages] This tipsheet discusses tips for a successful worm bin including a quick list of necessary supplies for your bin.

### **Worm Facts Tip Sheet:**

<https://materials.bwpronline.org/system/tdf/CPTS-WF-TipSheetWormFacts-0120-FINAL.pdf>

[pdf, 2 pages] This tipsheet includes fun worm facts and a detailed picture of worm anatomy for the curious learner, or avid crayon colorer!

## Compost Bins & Tools: Overview

*GreenThumb is grateful to our greening partners, Earth Matter NY, for their contributions to this section's content. As one of the leading composting organizations in NYC, Earth Matter is a nonprofit organization dedicated to advancing the art, science, and application of composting in and around New York City. Located at Governor's Island, Earth Matter has trained hundreds of participants about composting best practices, particularly around urban soils. Additionally, their hands on programming has allowed countless visitors to the island to learn about the magic of compost and how to reduce waste.*

<p>Three Bin System</p> 	<p>This device is made up of three 1-yard bins, each 3' on a side with a system of wooden slats in the front. New material is added to the leftmost open bin. When this bin fills up, it is turned into the bin to its right, and new material is added to the first bin again. Repeat, rolling the material to the next bin as each one fills. You can use all three bins in alternate ways, for example 2 bins can be used for fresh materials, or the middle bin may be the "fresh" material. The key is to label which bin accepts materials and which bin(s) are "closed" to adding fresh scraps.</p> <p>Notes: There are many blueprints to build three bin systems. Building a new system is labor intensive. It requires basic tool/carpentry skills, the help of a few people, and typically two days of work. Designs that use more wood and less wire can cost \$500-\$1000 in new materials. Using more wire for panels reduces costs but is less sturdy.</p> <p>Blueprints from <a href="#">StopWaste</a>, <a href="#">University of Arkansas</a>, <a href="#">University of Wisconsin</a>.</p>
<p>Compost Tumbler</p> 	<p>Holds materials in a large plastic or metal drum(s). The drum sits off of the ground on a frame. You rotate the tumbler to mix the contents. This is an invessel system which is a rodent deterrent for fresh materials. It generally holds less material because it has to be light enough to rotate this bin. It can be used as a "bin 1" when rodents are most interested in digging in and once it reaches a bin #2 stage, it can be turned out into another closed bin.</p> <p>Notes: If you are interested in using a compost tumbler, speak with your Outreach Coordinator to discuss possible free or low cost options.</p>
<p>Metal Can Compost Bin</p>	<p>A small metal trash can with 1/2" holes in the side and lid for aeration. It can hold about 3 cubic feet of material. This can</p>

	<p>be a DIY or you can purchase with holes already drilled in. The size of holes is in theory too small for a mouse or rat to crawl into. This is an in-vessel system that is neat and fits in a courtyard next to the other source separation stations and is a rodent deterrent. You will need to either turn it out to mix and then shovel it back in the can, or you can invest in a compost hand auger (crank) that allows you to turn the compost in the can providing air by augering down and pulling up the materials a little at a time to introduce air. We recommend using a series of 3 cans so that you can more easily distinguish the levels of decomposition and label the “open” can for accepting new scraps. This system lasts for up to 3 years. Then the bottom will rot out.</p>
<p>Earth Machine</p> 	<p>A cylindrical black plastic structure that holds 10½ cubic feet of material. The Earth Machine is like a rounded version of the Garden Gourmet, with a door on the top for adding material and a sliding door on the front for removing finished (bin #3) compost. This system is a “3 in 1” system that requires skill in making sure that the materials that are the oldest are not augered into the middle, material that is not fresh but not mature material (bin #2) and the top 1/3rd of the bin which is where new, fresh, (bin #1) type of material is added. Using a compost “auger” is the best way to keep this bin aerated. The auger travels to the bottom of the bin and does not “bring up” the material that is on the bottom into the middle or top 2/3rds of the bin so that there is material on the bottom to harvest.</p> <p>Notes: Similar systems consisting of a plastic structure that opens at the top and has a door at the bottom are marketed under a number of brand names. The Earth Machine is well-liked for its longevity, but you can also inquire about other models at your local garden or home improvement store.</p>
<p>Bokashi Composting</p> 	<p>The bokashi method of recycling food waste, or bokashi composting, is a two-step process.</p> <p>Step 1. Pre-treat the food waste so that it can more safely and quickly break down in step 2. Pre-treatment is done by putting food waste, including meats, bones, dairy, oils, etc., in an airtight container layered with bokashi, a fermentation starter that includes the same microbes which ferment foods and beverages. This takes at least 2 weeks to ferment at room temperature.</p> <p>Step 2. Add the fermented food waste to soil or compost. After step 1, it still looks like food waste, but it’s now ready</p>

	<p>for burying or sandwiching between soil in planters or feeding to earthworms or adding to compost as greens, or bring it to a drop-off site or use a pickup service that takes fermented food waste. Overall, 2 weeks to ferment, 2 weeks in soil, then plant.</p> <p>Notes: For more information on the bokashi method visit <a href="http://recyclefoodwaste.org">recyclefoodwaste.org</a>.</p>
<p>Snow Fence Bin</p> 	<p>Snow fence is a lightweight fence made of thin wooden slats wired together. A length of snow fence shaped into a cylinder can serve as a Passive Leaf Bin or a holding bin for leaves and other brown or carbon materials used to make compost.</p> <p>Notes: Snow fence bins are typically not appropriate for highly active composting. They are primarily for storage or passive processes.</p>
<p>Worm Bin</p>	<p>This composting method can be used in an apartment. This plastic bin can be the size of an under the bed storage tupperware or a square / rectangular plastic tote optimally at least 12' x 12" x 12" in order to keep your worms happy for a long time. This bin requires 1 lb of red wiggler worms, a plastic bin with aeration vents (like a window screen sized mesh) with a lid. It is for indoor composting. You can use very small chopped up food scraps and "brown" ingredients that are "indoor" browns such as used paper coffee filters, newspaper that is shredded up. The key to success is regularly harvesting your worm castings from one side of the bin, in order to continue to make space for new food scraps to be introduced into the bin.</p>

Supplies Needed for Outdoor Composting

- Compost bin for processing that has a rodent deterrent design, or alternate composting system that is effective and equally rodent deterrent
- A steady source of browns, and appropriate storage containers or pens
- Containers for collecting food scraps that are scale appropriate (ex. 5 gallon buckets, 32 gallon wheeled trash cans)
- Ice chopper/scrapper for chopping food scraps
- Hose with nozzle for washing containers and tools
- Manure fork with 4-5 tines

- Flat shovel
- Spade shovel
- Spade fork
- Hand pruning shear for cutting large weeds or woody debris
- Clear and instructive signage that is water resistant and prominently displayed that outlines the system, and how people can participate

#### Optional, Helpful Tools

- Scoop shovel and outdoor broom for easy clean up of materials that are fine
- Compost auger as a quick but less thorough tool for turning compost bins
- Clipboard with paper or notebook to track your compost's progress and notes
- Scale, if interested in weighing the collected food scraps for record-keeping
- Compost thermometer 12" or 18"long