HOW TO TELL WHEN YOUR COMPOST IS READY

You will know your compost is ready for use when:

- It has a pleasant, earthy aroma. None of the materials put in your compost should be recognizable. There should be no large clumps of brown, woody material that is uncomposted. If you can pull out a clump of material without breaking it apart, it is not ready to use.
- It is dark brown and crumbly. The materials that were originally placed in the bin should be recognizable. There should be no large, undecomposed food scraps or yard waste materials before placing it in your garden is a good idea. The compost can be spread as a mulch over plants and on bare soil. Take care to keep the mulch from touching the base of plant stems or trunks.
- In San Diego, where the soil is either sandy or clay, mixing compost in with the soil helps to improve its texture and structure, improve its water retention capacity, and reduce the need for frequent watering. Manor and other composted materials can be added to potting mixes or seed starter mix. A good mix would include two parts finely screened compost, one part perlite, and one part vermiculite. Give them a good start and keep them healthy.
- Use your compost to top dress containerized plants, seedlings, or transplants. A good mix would be two parts finely screened compost, one part coarse sand, one part vermiculite, and one part peat moss.

Pile troubleshooting

In the meantime, the following troubleshooting techniques may help you get started.

- Turn the pile two to three times a week. Add more moisture if it is too dry, or add more material if it is too wet.
- The pile is not warm enough. Turn the pile. It may be a few weeks of cool weather or a winter;
- The pile is too hot and smells like rotten eggs, or dairy products. Put any meat, fish, eggs, or dairy products that might cause the smell in a sealed container and return it to the store.
- The pile is not large enough. Build a larger compost pile. The pile size is important for the composting process to work effectively.
- The pile is not warm enough. Turn the pile. It may be too cool for the composting process to work effectively.
- The pile is not small enough. Build a larger compost pile. The pile size is important for the composting process to work effectively.
- The pile is not wet enough. Add more moisture.
- The pile is not dry enough. Add more material.

OTHER COMPOSTING RESOURCES


Rodale Book of Composting

Food scraps

There are three Composting Demonstration Gardens located in the San Diego area. These gardens are open to the public, and homemade composting systems. Examples of Vermicomposting systems are also demonstrated.

<Insert image of composting systems>


Composting is a quick and easy way to recycle your grass clippings.剪草时会生成氨气，且会迅速溶入土壤，不会导致草皮变黄。剪下的草往往会做成 mostly water and leave the grass clippings on the lawn. The nitrogen rich clippings decompose quickly, adding nutrients to the soil and leave the grass clippings on the lawn. The nitrogen rich clippings decompose quickly, adding nutrients to the soil.
What is composting and why do it?

Composting is nature’s way to recycle organic materials produced by humans and plants into rich soil that can be used for gardening and landscaping. It is the controlled natural decomposition of organic material, such as leaves, grass clippings, vegetable scraps, coffee grounds & filters, eggshells, and soil amendments.

The process begins with the addition of green and brown materials to a compost bin. These materials provide the necessary nutrients and moisture for the microbes to break down the organic matter into compost. Composting is a great way to reduce the amount of organic waste sent to landfills and create a valuable soil amendment.

Benefits your yard and garden

- Improves soil texture and structure
- Increases water retention
- Adds organic matter to the soil
- Enhances soil fertility
- Helps control soil pH

Composting has many environmental benefits as well:

- Reduces greenhouse gas emissions
- Preserves natural resources
- Reduces the amount of organic waste sent to landfills

How to get started

1. Choose a compost bin: There are several different styles of composting. Some require less labor than others. Choose the type that best fits your needs and schedule.

2. Choose a location: Make sure your compost bin is located in a sunny area where it will get plenty of air and water, and be away from trees that might cast shade.

3. Prepare your compost: Mix your compost ingredients together in a bin or composting box. You can also add water to the pile to help with the composting process.

4. Turn your compost: Turn your compost once or twice a week to help aerate the pile and facilitate the decomposition process.

5. Harvest your compost: Once your compost is ready, you can use it to enrich your garden soil or to create a new garden bed.

Vermicomposting, or composting with earthworms, is a fun and easy way to recycle your food scraps. It takes up less space than traditional composting and uses less energy. Set up an apartment setting. Red wigglers earthworms convert your food scraps into rich, nutrient-dense compost in just weeks. Vermicomposting is a great way to reduce your carbon footprint and add essential nutrients to your garden soil.

Next, make a ‘food’ for your worms. Worms love to live under bits of paper or leaves. You can create a moist, aerated environment for them by tucking them into a small box or container of soil and leaving them to feed on their food scraps. When they’re feeding, you can add more food to the box and repeat the process until your worms have eaten all of the scraps.

Finally, collect your compost. You can use your compost to enrich your garden soil, create new garden beds, or add it to existing soil to improve its texture and structure.

Getting Started

Composting can be practiced almost anywhere. You can compost at home, in your backyard, or on your balcony. Start with a small bin or composting box and add more as you need it. The important thing is to get started and see how composting works for you.

More on back.

What Are the Benefits of Composting?

- Reduces the amount of organic waste sent to landfills
- Preserves natural resources
- Adds nutrients to your soil
- Improves soil structure

How to Get Started

1. Choose a Location: Choose a sunny spot in your yard or garden. Make sure it has good air circulation and is away from trees that might cast shade.

2. Choose a Bin: Choose a compost bin that is appropriate for your space and needs. Some bins are designed for vermicomposting, while others are designed for traditional composting.

3. Start Composting: Start with a small amount of organic material, such as food scraps, yard waste, and soil amendments. Add water to the pile to help with the composting process.

4. Turn Your Compost: Turn your compost once or twice a week to help aerate the pile and facilitate the decomposition process.

5. Harvest Your Compost: Once your compost is ready, you can use it to enrich your garden soil or to create a new garden bed.

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Finally, collect your compost. You can use your compost to enrich your garden soil, create new garden beds, or add it to existing soil to improve its texture and structure.

More on back.
WHAT IS COMPOSTING AND WHY DO IT?

Composting is the natural way to recycle yard trimmings, food scraps, leaves, grass clippings, sawdust, shredded paper, and other garden waste into a rich, crumbly soil amendment. Composting is one of the most effective ways of recycling organic materials into compost, or humus, the nutrient rich soil that results from proper composting.

Getting Started

Composting can be practiced almost anywhere. All you need is a little bit of space, a bin, and a basic understanding of the composting process.

WHAT GOES IN THE COMPOST PILE?

Four basic ingredients are required for composting: GREENS, BROWNS, WATER, & AIR. Mixing the proper amounts of these ingredients together will provide the composting requirements for decomposition.

1. GREENS

Macroorganisms (insects, worms, fungi, bacteria) are the main workers (decomposers) that help break down the materials in the compost pile. A handful of compost contains more decomposer organisms than there are people on planet earth. These microorganisms, called mesophiles, require a certain amount of water (50-70%) and moisture (30-40%) to work effectively. Water and moisture are important in our composting process. Water is the fuel that drives the natural liquid fertilizer "power之所以

Microorganisms

are the main workers of the compost pile. Although they are small in number, they are powerful in their work as they consume the organic materials at the rate of their body weight in organic material every five days.

Browns

Browns include leaves, shredded paper, bark, straw, hay, sawdust, shredded paper, cardboard, wood ashes, and other inert material. Carbon-rich materials are not as effective at decomposing as nitrogen-rich materials; however, they help maintain the proper balance of the ingredients needed for composting. Browns help to maintain the structure and texture of the compost pile, and prevent it from becoming too warm or too wet. Browns promote the activity of the composting organisms and also provide the carbon needed by the mesophiles to break down the organic materials.

Greens

Greens include grass clippings, green leaves, fruits and vegetable scraps, beer and wine yeast, and other organic materials rich in nitrogen. Greens require enough nitrogen, carbon, moisture and oxygen. To have the mesophiles work effectively, there must be enough nitrogen, carbon, moisture and oxygen and proper aeration. Greens promote the activity of the composting organisms and also provide the nitrogen needed by the mesophiles to break down the organic materials.

Water

Water is important in our climate. Your compost pile should be kept as moist as a wrung out sponge. Too little moisture will hinder the composting process, and too much water can cause your pile to smell.

Air

Air is essential for a healthy compost pile. Your composting organisms require oxygen to work effectively. Oxygen is provided by turning the compost regularly and maintaining proper air circulation. Oxygen is also provided by composting browns and greens in a 3:1 ratio.

WHAT GOES IN THE COMPOST PILE

Garden waste is the main ingredient added to compost piles. Garden waste consists of plant materials such as leaves, grass clippings, weeds, fruits, vegetables, and flowers. These materials are broken down by the composting organisms into a rich soil amendment called compost. Compost can be used as a soil conditioner, a soil amendment, or a soil improver. Compost is a natural way to recycle yard trimmings, food scraps, leaves, grass clippings, and other garden waste into a rich, crumbly soil amendment. Composting is one of the most effective ways of recycling organic materials into compost, or humus, the nutrient rich soil that results from proper composting.

1. TWO METHODS OF COMPOSTING

Two methods are used to compost yard waste: active and passive. Active composting involves turning the compost pile regularly or at least every other week to maintain proper aeration and moisture. Passive composting is a slower, less labor-intensive method that relies on natural decay and temperature control to break down the organic materials.

ACTIVE COMPOSTING

Active composting involves turning the pile on a regular basis to maintain proper aeration and moisture. This method is faster and results in finished compost quicker than passive composting. Active composting involves turning the compost pile regularly or at least every other week to maintain proper aeration and moisture. Active composting is a faster method than passive composting, but it requires more labor and time.

PASSIVE COMPOSTING

Passive composting is a slower, less labor-intensive method that relies on natural decay and temperature control to break down the organic materials. Passive composting is a slower method than active composting, but it requires less labor and time.

Vermicomposting

Vermicomposting is a method of composting with earthworms, which is a by-product of the vermicomposting process. Vermicomposting involves adding fresh bedding to the side of the bin that was just harvested. The composting organisms will migrate toward the food, leaving the other half of the bin full of worm-free castings. Start the process over by adding fresh bedding to the side of the bin that was just harvested.

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WHAT HAPPENS IN THE COMPOST PILE?

Green material is decomposed by mesophiles to short-chain molecules (CH4, CO2, H2O), and it may dry out at times, so it won't

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Making compost is like cooking a meal. You take your ingredients, add water, mix it together, and let it "cook" over a given period of time. In as little as 12 weeks, you can have finished compost ready to use in your garden.

**SOURCES**

Four basic ingredients are required for composting:

- **Greens** (leafy materials such as grass clippings, grasses, fresh fruits and vegetables, and matter that is high in nitrogen such as fresh manure), and kitchen scraps. Most composts are 60% to 80% greens. **Browns** (wood mulch, shredded branches, leaves, straw and yard trimmings). The proportion of browns to greens can vary widely. A general range of 30% to 50% browns is recommended by some."'

**WHAT GOES IN THE COMPOST PILE?**

- FRESH Weeds with mature seeds.
- Garden debris, raked leaves, spent compost, prunings, and fruit and vegetable scraps.
- Natural manure, fresh grass clippings, lawn clippings, and plant trimmings.
- Crushed egg shells and bones and shellfish scraps.
- Brown material like ground-up twigs, bark, straw, and wood ash.
- 50% Greens (fresh grass clippings, yard trimmings and kitchen scraps) and 50% Browns (leaves, yard debris, dried grass clippings and trash, bark, hardwood, and paper). Add a handful of compost to start the process.

**WHAT STAYS OUT OF THE COMPOST PILE?**

- Meat, fish, poultry, dairy products, oil, grease, and fat. Add these in a household grease trap.
- Dog and cat manure.
- Chitrus or other citrus-based products. Treated wood products.

**IF YOU DOUBT, LEAVE IT OUT!**

- Charcoal or Duraflame ashes.
- Treated wood products.
- Sulfur-rich compost soil can burn seedlings. It is best to flush out the sulfur by mixing it in your garden or in the compost pile.
- Toxins and pesticides on dead leaves.
- This category is different from the "what's in" list. It is designed to help you decide what to compost at your home.

**WATER**

Water is important in our climate. Your compost pile should be kept as moist as a wrung out sponge. Too little moisture will hinder the composting process, and too much water can cause your pile to smell.

**COMPOST CRITTERS**

A handful of compost contains more decomposer organisms (insects, worms, bacteria) than there are on the planet. These amazing little critters speed up the composting process.

**MICROORGANISMS**

Chlorophyll, the green pigment in plants, is the main workhorse of the compost pile. Although too small to see, these microscopic organisms are the engines of the compost pile.

**MACROORGANISMS**

Insects, worms, and other animals are also active in compost piles and the more they're generated, the faster the composting process.

**VERMICOMPOSTING**

A composting process that involves vermicomposting is composting with earthworms, is a fun and easy way to recycle your food scraps. It takes up less space than other composting methods, and is done in an apartment setting. Red wigglers (Eisenia fetida), 1-2 inches long, prefer a moist fertilizer that has lost its body weight in organic material every year. They do not like rocks or other debris to be left in the compost pile. Vermicomposting is easy to do - the space required is smaller than for more traditional composting methods.
Harvesting & Using Your Compost

Mulch is different from compost in the way that the material is produced and the resulting material is composed of screened material that can be used as a soil amendment, mulch in unamended compost that is spread over the surface of the soil as a ground cover.

Mulching:

You can use a simple screen for your compost by nailing a 3-foot square piece of 1/2” wire mesh to a 3-foot piece of wood. This will not be a screen, but will catch the screened compost as it falls through the mesh.

Troubleshooting:

Mowing once a week during the summer gives your lawn the nutrients it needs. Ready-to-use mulch is also available at the City’s Miramar Landfill. Call (858) 492-6100 for more information.

用工和_wind/using_your_compost.jpg

Mulch is different from compost in the way that the material is processed and the resulting material is composed of screened material that can be used as a soil amendment, mulch in unamended compost that is spread over the surface of the soil as a ground cover.

Mulching:

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Troubleshooting:

Mowing once a week during the summer gives your lawn the nutrients it needs. Ready-to-use mulch is also available at the City’s Miramar Landfill. Call (858) 492-6100 for more information.
Grassclippings is a quick and easy way to recycle your grass clippings and fertilize your lawn at the same time! It saves time and money, reduces the need for frequent watering and chemical fertilizers, and helps to keep weeds from becoming a problem. Grassclippings also decompose quickly, adding nutrients to the soil and helping your lawn retain water.

Mulching

Using mulch has many benefits. Ready-to-use mulch is also available at the City’s Miramar Landfill. Call (858) 492-6100 for more information.

Mulching is different from composting in the way that the materials are processed and used. Mulch is composted material that can be used as a soil amendment, mulch or placed in the next batch of compost. While compost is fully decomposed material that can be used as a soil amendment, mulch or as a potting mix or seed starter.

How to tell when your compost is ready

Your compost is finished when the original materials have been transformed into a dark brown, crumbly soil product with a pleasant, earthy aroma. None of the materials used for composting will remain recognizable. It may be a few chunks of woody material left, as these are generally chosen to break down first. There can be screened out or used as mulch or placed in the next batch of compost to continue decomposing.

Mulching tips

Mulch is uncomposted material that is spread over the surface of the soil as a ground cover. Mulching reduces the evaporation of water from the soil, and limits weed growth. It keeps the soil warmer in the spring and cooler in the fall of certain plant diseases. The host way to apply mulch is to spread a large approximately 3-inch thick around the base of plants and on bare soil. Take care to keep the mulch from smothering the base of plants and on bare soil.

Mulch can be made at home with the use of a power chipper. If you have a large yard, you may want to consider purchasing one. Otherwise, clippings are typically available at your local nursery or garden center. Cut the grass into 3-foot lengths and add them to the chipper. Overseeding can be done after the mulch is applied to the soil. This helps to keep the weeds from becoming a problem.

FREE WORKSHOPS

City of San Diego Environmental Services Dept. 11011 Bigler Ct., San Diego 92113 sandiego.gov/environmental-services

Water Conservation Demonstration Gardens

Ridgehaven Composting Garden

San Diego Children’s Zoo 2302 Zoo Dr. San Diego 92101 sandiegozoo.org

Water Conversation Garden 1217 Justine Dr., Vista 92083 elcapio2010@msn.com

Call the Rotline (760) 436-7986 to register.

Organic Liquid Fertilizer

An organic liquid fertilizer can also be made for your plants with compost. Place one or two heaping tablespoons of finished compost or vermicompost into an 8-ounce glass or plastic bottle, add 1 cup of water, cover, and let sit overnight in a five-gallon bucket of water. The liquid will have been converted to the active form of the liquid fertilizer. Place one or two shovels full of watered-down grassclippings and vermicompost with the liquid to give plants a good start and keep them healthy.

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Backyard Composting Demonstration Gardens  
There are three composting demonstration gardens located in the San Diego area. These gardens showcase designated compost sites and homemade composting systems. Examples of vermicomposting systems are also demonstrated.

Ridgehaven Composting Garden  
City of San Diego Environmental Services Dept.  
901 Old Bridge Rd.  
San Diego 92114  
sandiego.gov/environmental-services

Water conservation Garden  
San Diego Children’s Zoo  
2500 Zoo Drive  
San Diego 92101  
sandiegozoo.org

The Master Composter Program is a 5 week training course (12 hours classroom and hands-on instruction) in backyard composting, led by certified volunteers. Participants agree to give back to the community by composting on a regular basis through community gardens, schools, or other outreach activities. Call SOLARCENTER (760-655-7906) or visit sanlandia.org for more information.

Barnes Book:  
Composting, Martin & Gordon

Rodale Book:  
The Worm Book: The Complete Guide to Worms Eat My Garbage

Resources for Red Wards  
Contact Compost Information Team  
(760-436-7986) or compost.css.cornell.edu"

Your Local Nursery is always a great source of information and gardening equipment.