



Back Yard Food Digesters

Digesters are the easiest way to compost any type of kitchen scraps, including hard to manage kitchen waste like meat, breads, dairy, and processed foods. Since these food scraps often attract rodents, the enclosed, half-buried digester acts as a deterrent, keeping rodents out of your compost and away from your home. Digesters can also be used to compost pet waste. Digesters work very well in small backyards when the goal of composting is waste diversion as opposed to soil building.

Effort Scale:

Easy	1	2	3	4	5	Hard	Put your food scraps in the bin and walk away!

Digesters are an easy and effective way to compost in your backyard, and can be purchased ready-made or easily improvised with a metal garbage can. While other methods of composting rely on aeration or ‘turning’ to keep air in the pile, this method does not, thus limiting the amount of air that reaches the compost and facilitating the growth of both aerobic (with air) and anaerobic (without air) bacteria.



Green Cone Digester

An important distinction between digesters and other forms of composters is that digesters don’t need to be harvested. They can be, but they don’t need to be. If you harvest it or not, however, leachate from your digester will provide a valuable source of nutrients to all the plants surrounding it.

How Do I Use a Digester?

1. Install one or two digesters in a well-drained, sunny location in your yard. If possible, locate them away from out-buildings, shrubs, wood piles, or other rodent-friendly areas. They need not be located right beside each other. If you choose, you can encircle your digester with ornamental plantings to take advantage of the nutrient-rich leachate they generate. If you are composting pet waste, be sure to locate the digester far from your veggie garden and fruit bearing trees or plants so the leachate doesn’t reach your food crops.
2. Add all of your kitchen waste to your digester(s). While your digester *can* compost meats, they should not make up any more than 50% of the total volume of materials in your bin. If odours are a



problem, scatter a small amount of leaf mold, sawdust, or dolomite lime over each addition. Your kitchen waste should provide more than enough moisture for the bin, but if the material does seem to get dry, give it some water.

3. If you already have some other kind of compost bin and are only using your digester for your “no-no’s”, one digester should be sufficient. But if you are using digesters as your only composter and you produce a fair amount of kitchen waste, we recommend having 2 digesters since they can fill up in 6-12 months. Once you have filled up the first, let it sit while you fill up the 2nd, and by the time the 2nd is full the first will have decomposed and will be ready to use again, no harvesting necessary.
4. If you choose to harvest the finished compost it is important that you let it sit long enough before applying to your garden, to eliminate any potential pathogens. The decomposition process should be complete after one year. At this point, the material will not have a strong odour and will not be recognizable as foodstuff. If the material has a strong odour, dig it into your garden and wait 2-4 weeks for it to finish decomposing aerobically, before planting into it.

We recommend that you use two digesters if you want to harvest the finished compost, so that one can be left to decompose while you add food scraps to the other. If you are using only one digester, when it is full you can simply remove the upper layers and harvest the decomposed materials from the bottom of the bin; then put the fresh materials back in. If you are composting pet waste in your digester, do not use the finished compost anywhere you are growing edible food, due to concern with the spread of pathogens. Remember, you don't *have* to harvest your digester.

Digester Tips:

- ◆ The same digester can be used for both kitchen scraps and pet waste.
- ◆ Biobags used to collect pet waste can be added to the digester.
- ◆ Wait at least 2 years before harvesting a digester used for pet waste, and never put this finished compost near edible crops.

Anaerobic and Aerobic Processes

When material is added to the digester, it will first decompose aerobically. As more material is added, the materials on the bottom get buried, run out of air, and begin to decompose anaerobically. Aerobic composting helps materials break down quickly while anaerobic composting helps materials retain more of their nutrients, especially nitrogen, because the process is occurring slower and at lower temperatures. However, anaerobic composting (a fermentation process) also produces a number of byproducts that can be detrimental to plant growth: methane, alcohol, and hydrogen sulphide (this is what smells). Active anaerobic compost can be very detrimental to plants so it is important that anaerobic compost is well-decomposed before you use it.

Unlike hot composting, which utilizes high temperatures to destroy pathogens, anaerobic composting has to rely on time and environmental conditions to eliminate potential pathogens. It is recommended that anaerobic compost sit for at least six months to eliminate *Ascaris* eggs, a parasitic nematode that can infect humans. *Ascaris* are the most resilient of the fecal-borne disease parasites in waste.¹

¹ Washington State University document on aerobic and anaerobic composting: Compost Fundamentals (whatcom.wsu.edu/ag/compost/Fundamentals/biology_anaerobic.htm)

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We sell composting equipment, gardening guides and more. Call, e-mail, drop by or visit our web site.

**Call the Compost Hotline:
386-WORM**

Alternative Digester Methods

Garbage bag digesters are a simple, low-cost digestion method that can be used to compost kitchen waste, make leaf mold, or destroy pernicious weeds. This technique might prove useful for an apartment dweller in the absence of a worm bin, or as a way of dealing with overflow from one.



Garbage bag digesters can be used to kill persistent weeds.

Kitchen waste should be combined with some sort of brown material (leaves, sawdust) and a handful of healthy garden soil or compost in a heavy duty black garbage bag (you may want to double them up). If the brown material is very dry, add some water. Add materials to the bag until it is $\frac{3}{4}$ full and then tie it up and stick it in a hot, sunny spot to compost. This combination of materials should take about two to three months to break down in a sunny location. Rolling the bag weekly can accelerate the process.

Dampened leaves can be composted by themselves using this method (providing they are damp enough), to create an excellent, inexpensive soil conditioner.

The garbage bag method can also be used to kill pernicious weeds such as morning glory and couch grass, and some pest organisms, such as codling moth larvae in infected apples.

Digesters are a great tool for both avid gardeners and those looking to divert waste. For gardeners, they are a source of nutrient-rich leachate and compost. For those looking to simply divert their household kitchen waste, this method is one of the easiest ways to do so. The no-maintenance system makes compost management easy. And, because the unit is buried in the ground, it is well protected from rodents, which are a concern for many families and homeowners.

