

# Sustainable Landscaping: **Composting**

## **Value**

Compost is a great way to recycle and reduce the amount of personal waste you send off to the landfill each year. Composting is also a simple and effective way of putting organic nutrients back into the earth, which will add needed nutrients to your landscape and is the best possible use of our personal waste. Instead of throwing your kitchen scraps and yard clippings into the garbage why not stick them back where they belong, in the earth!

## **How Composting Improves Your Soil**

- Increases the organic matter of soil
- Aerates clayey soil which helps it to drain
- Gives sandy soil body to hold moisture
- Helps to balance to the pH levels (acidity/alkalinity) of soil
- Helps to control soil erosion
- Improves vitamin and mineral content of soil
- *Adds moisture to soil which reduces the demands for supplemental water*
- Creates healthy plants and soil which can minimize the need to use fertilizers

## **Placement**

To make composting easy, we recommend you place your compost in an area that has easy access to your kitchen, because much of the “green” or nitrogen rich ingredients will come from kitchen scraps. Do not place your compost too close to a building or wood fence; over time wood will rot due to the moisture level of your compost. It is best not to place compost on an impervious material such as concrete or asphalt as this will prevent the microorganisms from breaking down the organic materials.

In a dry climate such as Tucson try and place your pile under a tree or other shaded area. This will prevent the pile from drying out too quickly.

## **Compost Structures**

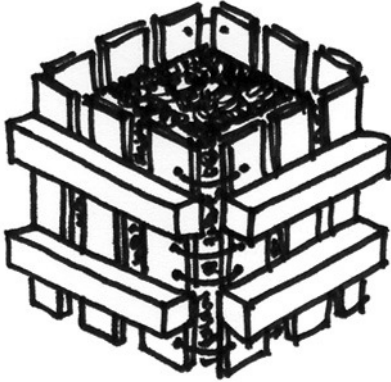
### **Heap Composting**

Heap composting is as easy as it sounds. Simply pile your materials on top of each other directly on to the ground. Larger piles will generate more heat than smaller piles and therefore will decompose faster. These piles tend to spread as they decompose so consider an uncomplicated enclosure, like chicken wire.



### **Pallet Composting Bin**

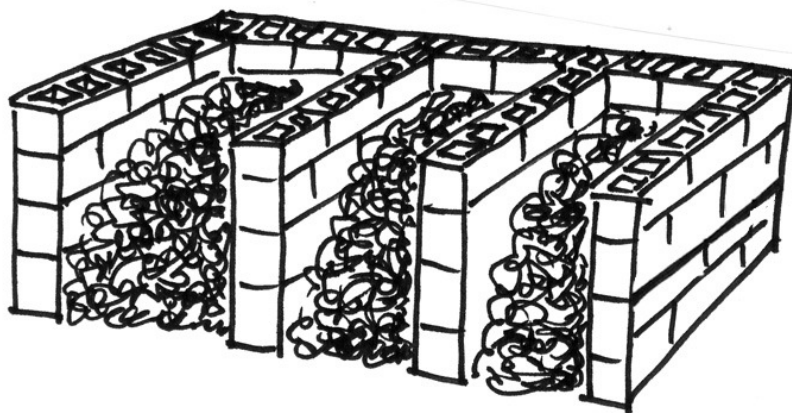
An easy and inexpensive way to build a compost bin would be to collect four shipping pallets from a local store in town. Places like Home Depot and Safeway often have pallets which they are more than happy to give out. This is also a great way to reuse and recycle materials which may otherwise head straight to the landfill.



Stand all four pallets upright to form a square. Tie the bins together with rope or wire, or nail the pallets together. If you have a fifth pallet, use it as the floor of the bin which will increase air flow. A tarp, large scrap of wood, or piece of used carpet can be used for the bin lid to help retain the moisture level.

### **Cement Block Bin System**

Another composting system you can easily build yourself is a block bin system. The only material needed is cement blocks. Stack the cement blocks three feet tall by three feet wide, leaving the front side open to allow for easy access to turn and aerate your compost materials. You can place one, two, or three bins side by side. Having multiple bins allows you to have compost piles at various stages of decomposition. Cover the materials with a plastic cover or piece of plywood to retain moisture.



### **Pre-made Composting Bins**

There are MANY types of composting bins in the market place today. We do not recommend any particular brand, if you are interested in purchasing a pre-made compost bin; go to [www.compsters.com](http://www.compsters.com) where you will find many styles and brands to choose from.

### **Compost Ingredients**

- 1. Brown = Carbon**
- 2. Green = Nitrogen**

Composting ingredients generally fall under two categories “browns” and “greens”. Brown materials contain carbon; examples would be wood chips, dried leaves and grasses, straw, and shredded newspaper. Green materials contain nitrogen and are fresh, moist materials such as

kitchen scraps (fruit and vegetable waste, tea and coffee grinds, egg shells) and fresh yard clippings. Brown materials (carbon) and green materials (nitrogen) are the two components needed to create a successful compost pile.

### **Composting is like making a pot of soup, there are MANY different recipes!**

There are many variations and opinions on compost recipes. A pile made up of 25% to 50% green, nitrogen rich ingredients watered regularly will heat up quickly and decompose faster. Below is a basic compost recipe; for additional recipes and additives check out the books listed in the resources.

1 part brown, carbon rich materials (dried leaves, straw, or wood chips)  
1 part green, nitrogen rich material (food scraps or fresh garden clippings)

Just remember that No Nitrogen = No Heat. So a mixture of at least ¼ to ½ of green (nitrogen) materials to ½ to ¾ brown (carbon) materials will heat up and rapidly decompose.

### **Oxygen**

Oxygen flow speeds up the decomposition. After your pile is built, the easiest way to oxygenate the pile is to use a pitch fork or stick and poke several deep holes into the pile. Turning the pile over is another useful technique to increase oxygen flow. If you don't think you will remember this step, then you can build your compost pile on branches or a shipping pallet, this too will increase the air flow.

### **Moisture**

The last step is to maintain moisture in the pile. It is important to keep the pile about as wet as a rung-out sponge. This level of moisture will create a good environment for earthworms, insects, and microorganisms. In a warm, desert climate, covering your pile with a lid or tarp will trap moisture. If your pile does dry out, just give it a good soak and composting will resume!

### **The following is a list of materials which should be used minimally or not at all.**

- Plants infected with disease
- Poisonous or acidic plants such as Oleander, Eucalyptus, Juniper, Acacia
- Plants which can tolerate high levels of heat such as succulents
- Pernicious weeds such as Bermuda Grass
- Cat and dog manures

For more ideas on composting and more designs for compost structures, check out these resources:

### **Resources**

1. Campbell, Stu. *Let It Rot!* (North Adams, MA: Story Publishing, 1998)
2. Jeavons, John. *How to Grow More Vegetables*, (Berkeley, California: Ten Speed Press).
3. Jenkins, Joseph. *The Humanure Handbook: a guide to composting human manure*. (Grove City, PA: Joseph Jenkins, Inc., 2005).
4. Martin L. Deboray, and Gershuny, Grace, Editor *The Rodale Book of Composting*, (Emmaus, Pennsylvania: Rodale Press, 1992).
5. Roulac W. John, *Backyard Composting*, (Sebastopol, California: Harmonious Press, 1997).

Produced by Watershed Management Group, 2008

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