

COMPOSTING AT GLOUCESTER COMMUNITY GARDEN

Composting is the breaking down of 'waste' organic matter to its basic components (humus, nutrients, water etc) which new plants can use for nourishment. This breaking down happens gradually through the action of one or more of the following:- aerobic and anaerobic microorganisms, fungi, and worms.

At our Community Garden we are using two different methods.

1) **HEAP COMPOST** The compost bays we have built are a copy of bays seen at Warners Bay Community Garden.

The slidable lid and open front make both moving the pile for aeration and adding new material easy. The open front however has the disadvantage of drying out the compost at the front and also allows some escape of the valuable heat which assists in breaking down hard unwanted materials such as weed seeds.

Our compost gets up to about 55° C which is high enough to break down weed seeds. We try to turn the heap weekly and this brings up the temperature again. If the heap is too compacted it can become sodden and anaerobic bacteria cause a smelly compost that emits methane. When the heap is maturing the temperature drops and worms can build up. It took six months to get to usable compost with the unshaded position and open front leading to a tendency to become too dry.



Compost material is traditionally described as 'green' or 'brown' with advice to have one third green and two thirds brown. Typical green material provides more nitrogen and is soft such as fruit and vegetable scraps, grass clippings, plant cuttings and just to confuse us coffee grounds and tea leaves which are of course brown in colour but classified green in this composting system. Brown material provides carbon and its fibrous tough nature resists compaction and lets air into the compost. Typical brown material is shredded paper and cardboard, straw, woody prunings, dry leaves (shredded with the lawnmower if very big leaves) and sawdust.

Build the heap in layers starting with twigs at the bottom to assist aeration and drainage. A little poultry manure can be included but not pet droppings or diseased plants. Add enough water to make the material moist but not enough to produce drops of water when you squeeze a handful of compost. Air is essential for aerobic bacteria which create the heat. Also essential is moisture.

2) **WORM COMPOSTING** Some of our wicking beds have PVC pipe 'towers' that have holes in the buried section. The towers are loaded with food scraps (except citrus and onion) and worms can move in and out of these towers to aerate and feed the soil in the wicking beds.

We also have a typical worm farm that is fed with food processed scraps and produces worm castings which are a bit lower in nitrogen than compost and worm tea which is made by soaking castings in water.

You can make your own worm farm from a bathtub or a foam box with instructions online or there are many ready-made worm farms available from councils and garden centres. Just set the boxes up, provide a layer of bedding material (a mixture of wet coir and straw laced with horse manure is ideal) – then add your worms. You can leave the tap open to drain excess moisture. Keep feeding your worms at one end of the box till the castings begin to build up, then feed at the other end and harvest the first castings.

Both methods provide valuable nutrients and promote growth.

We are kindly provided with coffee grounds and shredded paper by local businesses, leaves from the swimming pool surrounds and grass cuttings from the croquet lawn.