

Garden Barrel Build



It took me a few hours to make the plinth and I completed the barrel over two days. It took a few hours to fill with compost.

Outline of materials

The barrel is a 55 gallon blue HDPE poly-drum that was used for food transport. They can be obtained from farmers or food importers usually quite cheaply and are also for sale on many websites. The dimensions of the barrel is 60cm diameter by 88cm height approximately. The barrel garden is made up of the following components:

- The barrel itself
- A stand or plinth on wheels, two braked and two ordinary.
- A bucket to catch any liquid that drains through the barrel garden. This is later poured back into the garden.
- A central pipe that acts as a wormery and can be fed with garden waste.
- Filled with a variety of compost
- Some composting worm, red wigglers or others.

I didn't do a video or anything while I was making it but did research a few YouTube videos and picked the best bits from them. The other tools and things that are required for the build are:

- A heat gun.
- An electric drill.
- An electric jig saw.
- A permanent black marker.
- Gutter corner bracket to mark upward arc for cutting pockets.
- A post stake cut in half at a 45 degree angle (see picture later).
- Screws for making the plinth, I think I used 8 or 10cm long ones.
- 4 heavy duty castor wheels, two of them locking. The ones I used have the brand name Guitel on them and are around 10cm (4 inches) in diameter.
- Sand paper or electric sander and acrylic paint to decorate if you want to.
- A set of steps to load the barrel with compost is useful.
- A wheel barrow for mixing the compost.

I suggest that you read all the instructions first before commencing with the build.

Building the plinth



This is very simple to build. Just two rectangles 45x49cm made using 6x4cm timber anything close to this will be fine. The lengths of wood are all 45cm, the extra 4cm comes from the width of one length of timber. I screwed the timber together using 8 or 10mm screws having pre-drilled and counter sunk holes for the screws. The two rectangles are then screwed together using 4x35cm lengths of the same timber, one piece at each corner.

I painted three coats of preservative on the timber before assembly to make it last.

After assembly I screwed on the castors, one to each corner the two with brakes on one side to make steering easier when everything is assembled.

Adapting the barrel

The barrel has 5 rows of planting pockets. The pockets of each row are offset by half the width of a pocket. This has two purposes, it allows the lower plants more vertical room to grow and it saves water as when watering the overflow from the top rows flows into the pockets underneath.

It also has a central pipe that works as a wormery.

A couple of drainage holes in the bottom of the barrel prevent it from becoming waterlogged.



The first picture on the right is the type of gutter corner bracket that I used to mark the upward arc for the pockets. You can use anything with a similar arc.

The second picture on the right shows the bottom of the barrel and the receiver for the central wormery pipe. It has rings that lock it in place inside and outside the barrel. It has a cap that can be screwed off to allow the worm compost to be removed every year or two. Sorry I can't remember what it is called but I got it in B&Q and seemed to be quite common item for drainage applications. I will call it the "keep" in the instructions below. The wormery also has a cap on the top to keep rain, birds etc. out.



These are the three posts that I used for creating the pocket shape and holding it until it cools. They are 7.5cm diameter, I cut 1.6m posts in half at a roughly 45degree angle. This allows for easy insert to shape the pockets. Using three posts allows enough for the shaped pockets to have cooled and move the first used on to shape the next pocket.



Steps for marking the barrel and cutting the pockets.

1. Remove the barrel lid. Some barrels have a removable lid. Mine did not and I had to cut it out. This is not easy as the plastic is quite thick. Be careful. I used a jigsaw to do it after drilling a number of holes around the edge. A good reciprocal saw might work better.
2. Knot a thick white cord tightly around the outside of the barrel and make sure it is level horizontally.
3. Mark the knot with a permanent black marker which gives you the circumference of the barrel.
4. Untie the knot and place it on a level surface. Measure the width and gaps of each pocket on the string with a measuring tape and mark these positions on the knot.
5. Retie the knot around the barrel ensuring that the knot is in the position on the cord marked in step 3 above. Position the cord at 16cm from the top of the barrel. Use blue tac to hold it in position
6. Use blue tac or similar to hold the cord in position and ensure that it is 16cm from the top all the way around.
7. Mark the drill positions for each pocket from the cord onto the barrel using a permanent marker.
8. Move the cord down 12cm and horizontally across half a pocket width. Ensure the cord is level and hold it in place with blue tac.
9. Repeat steps 7 and 8 until all drill holes are marked.
10. Each pocket is cut in an upward arc. Mark the upward arcs for cutting on each pocket on all five rows using the suggested gutter bracket or anything similar.
11. Drill all the holes for cutting the pockets using a bit wide enough to fit your jigsaw blade.
12. Put the barrel on its side, and brace it with a couple of concrete blocks to keep it steady so that you can make the cuts for the pockets.
13. Take a break and have a cup of coffee or tea.

Steps for creating the pockets.

1. Cut the marked arcs from drill hole to drill hole for all the pockets.
2. Heat above and below an arc using a heat gun until the plastic above and below the arc is hot enough to shape but not melting. Better to stop too early in the heating process than too late.
3. Insert the angled cut end of the post into the heated arc cut to shape the pocket. Try to keep the angle for each pocket around the same for all rows by bracing posts either against the side or bottom of the barrel depending on which row you are on.
4. Repeat steps 2 and three for the second and third post.
5. The first pocket should be cool enough to hold its shape after the third post has been inserted so remove the first post.
6. Repeat these steps until all the pockets are created.

Steps for making the central wormery pipe.

1. Cut the central pipe to a length about 8 cm longer than the barrel's height. The pipe I used was 11cm in diameter. It fitted into the locked keep at the bottom of the barrel.
2. Drill and cut a hole in the bottom of the barrel in the centre big enough to take the keep.
3. Fix the keep into the barrel if it doesn't have locking rings then use some silicone.
4. Drill holes at 12cm intervals along the pipe to allow the worms access to the compost in the barrel.
5. Drill a ring of holes at the top of the pipe to allow for aeration.
6. Fix the pipe in the keep using silicone. You may also want to brace the pipe until it is held in place with the compost.
7. Have another break.

Painting

I think that the barrel looks much better if you paint it. You don't have to if you don't want to. It will look fine when planted up but in the winter and early spring it will look fairly bare if you don't. You should paint the top of the central pipe white in any case.

I suggest that if you are going to paint the barrel then you should do it before filling it with compost as it is easier to do it this way. If the central pipe is white then it will not need to be painted. The reason that the top part of the pipe is painted is to reduce the amount of heat that it absorbs from sunlight.

1. Sand the outside of the barrel so that it will take paint.
2. Sand the central part of the pipe that will be above the compost level in the barrel.
3. Paint the sanded pipe white. I used acrylic paints for safety and they have lasted almost four years now.
4. Paint the barrel. I used different colours in a spiral to allow for planting similar vegetables and herbs in each spiral. Try to be original, I'm sure the more artistic among you will be able to create very interesting designs.

When the paint is dry you can undertake filling it with compost.

Filling barrel with compost

Put the barrel on the plinth either at the start of this process or after the first lot of compost is added. It will be too heavy to lift otherwise. The compost should be added when the barrel is in situ as it will be difficult to transport otherwise.

Since it is a 55gallon barrel you will need at least 140 litres of compost and 70 litres of topsoil. Get a variety of compost from different sources for better results. If you are buying in bulk then get a mix that is 1 part topsoil to three parts compost. Otherwise you will have to mix the compost and topsoil as you go. Add about 5kg of organic seaweed granules to the entire compost mix. Some people advise adding rock dust to the mix, I don't personally think it will add any benefit for your plants. Depending on the density of your compost you may need more than the above amounts.

1. Mix your compost, top soil in a wheelbarrow in the proportions above. Add about a fifth of the seaweed granules per wheel barrow load.
2. Empty the compost from the wheel barrow into the barrel up to the bottom of the first row of pockets.
3. Fill the pockets themselves with compost and compact it slightly to prevent spillage
4. Put the bucket in place to catch to water that will soak through.
5. Water the compost with a full 5 litre watering can.
6. At regular intervals throughout this process, empty the bucket before it overflows back into the compost in the barrel.
7. If water is not seeping into the bucket then use more water as your compost may be drier than mine was.
8. Repeat steps 1 to 6 for the next row. Do this until you have reached the top. Do not fill all the way to the top. You should leave a couple of centimetres unfilled to allow for watering.

Filling the wormery

1. Add compost or coconut coir to the pipe.
2. Put one third of the worms.
3. Add a little kitchen waste. Since the wormery is rat proof and does not exude odours which attract vermin waste meat is ok.

4. Repeat until the pipe is at a level with the top of the compost. You may need a stick to check this out.
5. Put the cap on top of the wormery.
6. You can now plant up and/or seed the barrel garden. Enjoy.

Ongoing maintenance

1. Depending on rainfall you will need to water the top and the pockets regularly but don't over water. The bucket will give you an indication of whether the barrel is getting enough water.
2. Empty the bucket into the barrel before it overflows.
3. Turn the Barrel every week to ensure the plants on the shady side get some full sun.
4. You can often grow plants more than once in a season. Whenever you are planting up a pocket you should add more compost mix to the pocket.
5. At the start of the season check the level of compost in the barrel. You may need to add a couple of centimetres of compost each year.
6. Add some kitchen scraps to the wormery every couple of weeks at the start and if it is being used up you can add more but do not over fill. Keep the top level of the pipe at the same level as the top of the compost in the barrel.
7. Every couple of years you should clear out the wormery by emptying the bucket, put it back under the barrel.
 - a. Take off the bottom cap.
 - b. Take off the top cap.
 - c. Gently push the compost through pipe and into the bucket.
 - d. As the bucket fills spread the contents onto a canvas or similar.
 - e. Remove the worms into a container for re-adding back to the pipe later.
 - f. Put the compost into a bag for general garden use. It will be more fertile than the compost that you buy.
 - g. When you bucket contains un-composted food waste you should put this aside for putting back into the top of the pipe.
 - h. Replace the bottom cap.
 - i. Refill the pipe as described above in filling the wormery.
8. Your barrel forms a closed ecosystem so it should never have to be emptied out.
9. The construction of the barrel is proof against slugs and other similar pests so you should never have to use even organic slug bait or copper barriers.

Deterring winged pests.

1. Make up the following mixture to deter pests and act as a foliage feed into a saucepan:
 - a. Two garlic bulbs.
 - b. One lemon chopped up.
 - c. One litre of water.
 - d. Bring to the boil and simmer for about 20 to 30 min until you can crush the garlic easily into the liquid.
 - e. Strain and press the liquid with a fine sieve into another container.
 - f. Store in bottle or spray container
 - g. Add half a teaspoon of washing up liquid.
 - h. Label the container as "Organic garlic pest deterrent and feed"
 - i. Spray your plants once they have grown large enough and before they are attacked by any aphids or other pest.
 - j. Repeat spraying every month.

Enjoy your barrel gardening.