

## HOW TO MAKE A SUB-IRRIGATION PLANTER WITH TWO FOOD GRADE BUCKETS

You'll need a pair of 4 or 5 gallon buckets and a smaller plastic container to act as a "wicking cup" (something like a yogurt container or a Solo cup), a plastic or bamboo tube 1" or greater, at least as long as the stacked buckets are tall, and some cable ties.

When you put one bucket inside the other, the inner bucket should sit above the outer bucket creating a space between the bottoms of the two buckets. This is where water will be stored. We'll call the outer bucket that holds the water the reservoir bucket and the inner bucket that holds the soil the planter bucket.



The wicking cup, which will be filled with potting soil, hangs below the planter bucket so the soil in it is in contact with water in the reservoir bucket.



It is important to drill lots of holes in the bottom of the planter bucket, for drainage and aeration.

1. On the bottom of the planter bucket trace a circle big enough for the wicking cup to pass through the bottom of the bucket. The wicking cup may, but does not need to rest on the bottom of the reservoir bucket.
2. Use a hole saw to cut the hole. Alternatively, use a drill and utility knife. Just drill lots of holes along the circle you traced and use the knife to cut away the circle.
3. Punch holes in the sides of the wicking cup so when it's filled with soil, water will flow in and soak the soil inside it.
4. Drill a bunch of small holes in the bottom of the planter bucket, such as with a 3/16 inch drill bit. Don't make them too big or all the soil will fall through the holes but make sure there are lots so you can get a decent supply of oxygen to the roots at the bottom of the container.
5. Drop the planter bucket into the reservoir bucket and insert the wicking cup.
6. If you want an easy way to fill the reservoir bucket, add a fill tube (recommended). Cut one end of the tube at a 45 degree angle and cut a hole in the bottom of the planter bucket near the side of the bucket for the fill tube to go through.
7. Insert the fill tube into the hole and let it sit on the bottom of the reservoir bucket. Because it is cut at 45 degrees, there will always be an opening for water to flow into the reservoir bucket.
8. You can attach the tube at the top lip of the planter bucket with a cable tie. Just drill a pair of holes through the planter bucket on either side of the fill tube, pass the cable tie through and fasten it.
9. Put an overflow hole in the reservoir bucket. Drill this hole in the reservoir bucket just below the bottom of the planter bucket. The drain hole will keep the reservoir from overflowing and flooding the soil chamber and you can also use it to let you know when the reservoir is full.

The fill tube, poking up over the soil surface.



Adapted from [http://www.mybalconyjungle.com/self\\_watering.html](http://www.mybalconyjungle.com/self_watering.html)

Also see <http://greenroofgrowers.blogspot.com/2008/07/how-make-two-bucket-sub-irrigated.html>