

# Wicking Barrels

By Samantha Manderson of Urban Farm Living ©2017



## HOW TO INSTRUCTIONS – WICKING BARRELS

*Allow approximately an hour per pot when making them as there is lots of parts and processes to each pot. If you're making several than I recommend that you do it like a production line, instead of finishing off 1 at time.*

### What you need:

- 1 x olive barrel
- 160cm x 100mm diameter slotted agriculture pipe socked or not
- Old pantyhose if agriculture pipe isn't socked
- 1m x 8mm of rope
- 60cm x 50% Shade Cloth
- 50cm x 25mm PVC Pipe
- 25mm PVC Pipe cap end
- 22cm X 13mm Flexible poly pipe
- 13mm barbed irrigation joiner
- Scrap of 50% Shade Cloth 6cm x 7cm
- Cable ties 150mm x 3.6mm
- Cable ties 200mm x 4.8mm
- Coir Peat
- Aquaponics Clay Beads
- Assorted filler (cocopeat, composts, soil, worm castings, essential minerals, vermiculite, pelletized chicken manure, blood and bone)

### Tools

- Flexible tape measure
- Jigsaw or Tenor Hand Saw
- Power Drill
- Drill 6mm bit
- Drill 15/64 inch bit
- Drill Spade Speedbor 14mm Wood Bit
- Mitre Box

## Instructions

Take the time to watch the below "How to" on YouTube. Yes, I have made some changes but these will give you a visual reference when it comes to following the below instructions.

[https://www.youtube.com/watch?v=sJmkxA\\_c52s](https://www.youtube.com/watch?v=sJmkxA_c52s)

<https://www.youtube.com/watch?v=wGF72sOwgJI>

- Cut olive barrel in half, with a jigsaw or tenor saw. If it is a terracotta olive barrel just follow the seam line around the middle. If Grey or Black you will need to measure your centre and mark it out before cutting.
- Scrub the barrels clean, as there will be left over brine etc in them.
- I use the bottom of the barrels for wicking pots, and the tops for general garden pots. If you are going to use the tops for wicking pots, make sure that the lid seals well.
  
- Cut 1 end of the PVC 25mm Pipe at a 45 degree angle using a mitre box if you have one.
- On the other end of the PVC Pipe that hasn't been cut make a mark with a texta 15cm the end.
- From the mark, measure 2cm on either side around the pipe and place another mark. Drill the holes with a 6mm bit. These will be the drill holes to attach the pipe to the wicking pot.
  
- Cut the slotted Agriculture pipe and its sock into the following lengths, 120cm, 21cm and 19cm.
- Note if your Agri pipe didn't come with a sock cover, then here is where you will need the old stockings/pantihose.
- For the smaller pieces, cover with stocking and tie off both ends. With the larger piece cover with stocking, but leave both ends open.
- With the 120cm pipe bend it to create a complete circle. Use 3 cable ties thread through the slots in the agri pipe to get it to keep its shape and
- Cut a hole in the top of the Circle of Agri pipe so that it's just big enough to be able to slide in the 45 degree end of the PVC Pipe into
- Tie off the stocking or sock on the circle of Agri pipe using cable ties.
  
- Cut a circle from the 50% shade Cloth with a diameter of 55cm to fit into base of pot.
- From the scraps of shade cloth cut a 6cm x 7cm rectangle.
- Fold the shade cloth rectangle in half and cover one end of the 13mm barbed irrigation joiner. Use a cable tie to keep the shade cloth in place.
  
- Cut the 1m length of rope in half, and burn the ends to stop from unravelling. You will need to mould the ends so that they will smoothly fit through the holes you drilled previously on your pot
- Cut the 22cm length of flexible poly pipe in half.
- For the handles mark out from the side seam measure 5.5cm to the right and 1.5cm from the opening of the barrel and mark with a texta.
- Repeat measuring to the left this line.

- Find the other side seam and repeat the above steps. You should now have 4 markings for the handles to be drilled
- Drill these holes using the 15/64 inch bit.
- Thread the rope through 1 of the handle holes and tie off on the inside of the pot.
- Add the flexible poly tube, then insert the other end of rope through the other handle hole and tie off.
- Repeat for other side.
  
- Next we want to mark out the drainage hole, which will be situated in between the handles. From the side seam line and along the first ridge from the bottom of the barrel, measure 44.5cm, this will be your centre point between your handles. Mark with a texta.
- Drill this hole using a spade wood bit.
  
- Place your circle of agriculture pipe into the base of the olive barrel.
- Insert the 2 other pieces of pipe in the middle of the circle of agri pipe.
- Insert the 45 degree cut end of the PVC pipe into the circle of Agri Pipe
- Spin your circle around until the PVC pipe directly opposite the overflow hole.
- Drill 2 holes in the olive barrel to align with the holes on the top of the PVC pipe using the 6mm bit. Use a cable tie to tie the PVC Pipe to the barrel.
- Add the cap to the PVC Pipe – this is to stop mosquitoes etc making their home in the water reservoir.
- Insert the 13mm irrigation joiner into the overflow hole, from the inside of the barrel with the uncovered end coming out of the hole. The covered end, staying inside the pot.

**NOTE:** If you want to join your wicking pot to retic, drill a hole in the top of the PVC Pipe Cap, thread through the 6mm flexi polypipe, then add a veriflow dripper to the poly pipe. You will need to trim either side of the veriflow dripper with secateurs so that it can fit snugly into the cap.

- **IMPORTANT: Place your pot where it is going to stay, and ensure it is level**
- Cover the irrigation pipe with Fine Coir until completely covered and level with the irrigation joiner.
- Next lay the circle of shade cloth over everything, and lift the irrigation joiner so you can see it. You will need to cut the circle where it meets the PVC pipe so that it can lay flat.
- Gently lay the Aquaponics clay beads on top of the shade cloth to a depth of 1 to 2 beads.
- Now add your soil mix (my mix is on the next page) gently so as to not to disturb the Clay beads. Fill the pot until the soil is 5cm from the top as it will settle once you water.
- Plant out your plants.
- Top mulch the last 5cm of the pot.
- Now fill the reservoir by watering from the top until water comes flowing through the over flow hole.
- I keep top watering for the first 1 to 2 weeks until my seedlings are settled, then you water by filling up the reservoir through the PVC pipe or via irrigation if you have added that step instead of top watering.

## My Soil Ratio

I work in 10 litre buckets.

- 2 buckets of Coco Peat
- 1 bucket of Mushroom Compost
- 1 bucket of Landscapers Soil
- ½ bucket of Vermiculite
- ½ of a 400ml container of Essential Minerals
- ½ of a 400ml container of Blood and Bone
- Full 400ml container of pelletized chicken manure
- 5 handfuls of worm castings

Mix very well together in wheel barrow, and then pour into wicking pots. My wicking pots tend to require about 1 ½ to 1 ¾ of the above mix.

## My Choices

- I choose to put a pipe from the reservoir so that you can;
  - Easily fill the reservoir as it will fit a household hose down it, so you can be doing something else whilst it is filling up.
  - You can check the water level in your reservoir my using a stick to put down the pipe and check where the water wets the end.
  - You can add it to retic later if you want to auto fill your reservoir
- I use slotted agriculture pipe because;
  - It's sturdy enough to support the weight of the soil above it so it won't slump
  - It's flexible so can be curved to fit the area you want.
  - It already has the holes in it, so that water can disperse throughout the reservoir instead of having pockets of water.
  - I don't fill with gravel or weighty material because they will be too heavy if you want to move them to another position. With the Ag pipe you just tilt the pot forward to empty out the water through the drainage hole and that lightens the load by at least 20kg.
- I use 30 to 50% shade cloth because;
  - It doesn't deteriorate quickly even though it's moist
  - I have tried dense shade cloth and it's too wet and doesn't allow for a good flow through of water.
  - I have tried mulch matt too, and it doesn't work well as the water takes a long time to disperse through to the reservoir.
  - I haven't tried weed mat personally but the YouTube video uses it.
- I use hydroponic clay because;
  - It traps nutrients that would otherwise be washed into the reservoir and then lost if the water reservoir overflows. For the cost, and being that we are planting into pots, I think capturing as much nutrients as possible is of benefit to the plants.
- I use vermiculite in my soil mix because;

- It holds water.
- Is lighter than soil so doesn't add to the weight of the pot.
- It stops soil mixes becoming extremely dense and hard, especially if you have accidentally let your pot dry out completely.
- I have experimented with several soil mixes and not using vermiculite and my pots whether wicking or non wicking ultimately do better with it.

## Suppliers

### Olive Barrels

- WA Barrels <https://www.facebook.com/wabarrels?fref=ts> or call 0425 003 335

### Slotted Agriculture Pipe

- This comes brand new in 20 metre lengths, however most people don't need 20 metres when fixing water problems so check on Gumtree, or your Local Tip Shop. If you don't mind Verge Crawling you can also find it out on verges too.

### 13mm Poly Pipe

- Since this is only used for handles it doesn't matter if it has holes in it from previous retic. You can pick up lengths of it normally from the Tip Shop or via Verge Crawling.

### Coir Block

- Bunnings, NOTE: If you look at the different brands you will notice that the texture is different. You want the fine texture, not the one with the big chunks in it.

### Expanded Clay

- From your local Hydroponics store as cheaper than Bunnings. A 50 Litre Bag will generally do 10 wicking pots.

### Coco Peat

- Available in 30 Litre Bags or by the trailer load, from Swan Valley Flower Farm, 143B Wilson Road, Middle Swan, Phone 9250 4839. The bags can be home delivered, but buying by ½ trailer load is much cheaper. <http://bioactivepeat.com.au/>

### Mushroom Compost

- Available from a variety of supplies, but I get mine from Keiths Gardening, Phone 0422 641 318 which are 60 Litre bags, and its home delivered. <http://keithsgardening.com>

### Landscapers Soil

- I get mine from Soils Aint Soils, but that's because it's close and they give you free trailer hire for 2 hours, and because you can get ¼ of a trailer load.

### Vermiculite

- Cheaper to buy in 100L bags from The Perlite & Vermiculite Factory than from Bunnings or Aquaponics shops. The Perlite & Vermiculite Factory, 85 McCoy St, Myaree WA 6154, (08) 9330 2928
- A bag will do approximately 15 wicking pots

## Essential Minerals

- Available from Earthkeepers, Shop 7, 1 North Beach Road, North Beach, Phone 0411 772 249, They actually share a shop front inside the North Beach Shopping Centre. Always ring before visiting to see if they have stock available. **NOTE:** 1 Bag goes a very long way, so might want to go halves with a friend.

## Worm Castings

- Hopefully from your own worm farm, however you can purchase from Greenlife Soils, The Worm Farm etc, if you don't have any. **NOTE:** If you add worm castings into these pots you will need to change the soil every 2 years down to the hydroponics clay as it will get heavy as worms will generally hatch out from the worm castings and eat your manure and compost.

## Blood and Bone

- Available from your local Bunnings or other gardening stores etc

## Pellitized Chicken Manure

- Rooster Booster available from your local Bunnings or other gardening stores etc