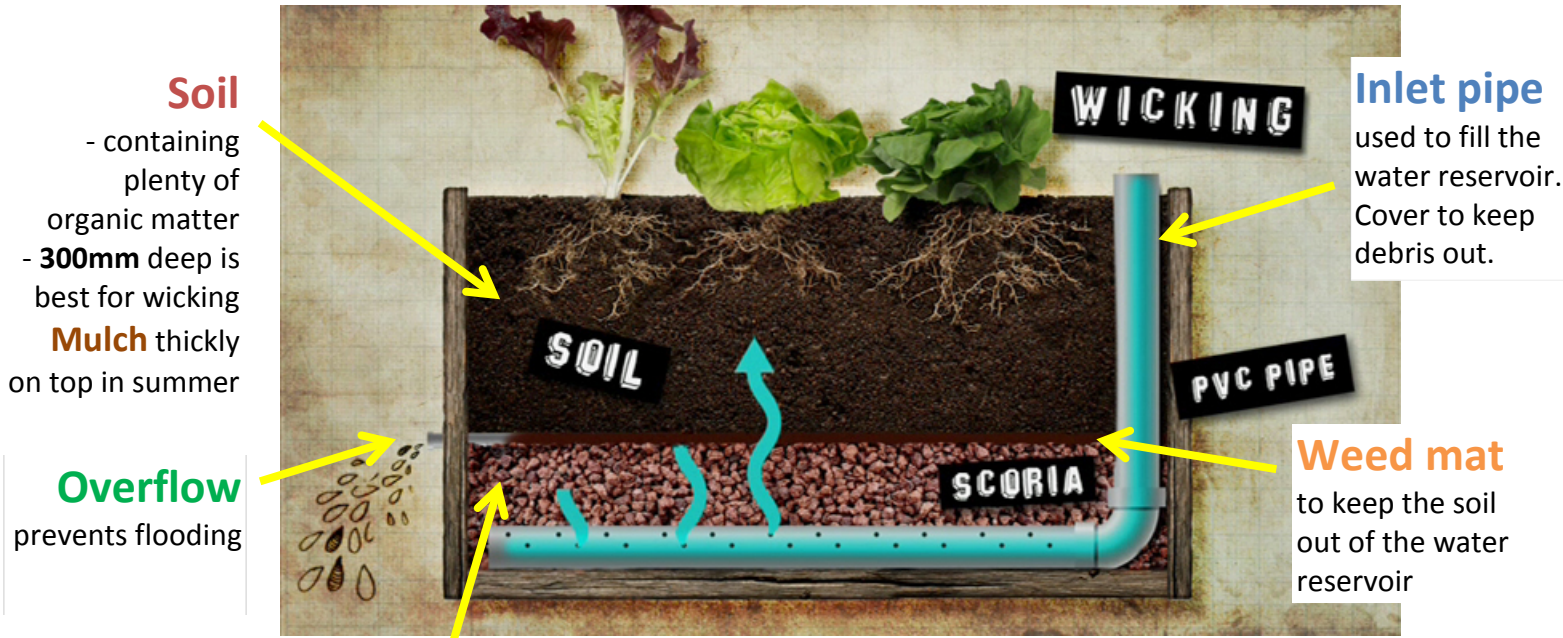


Wicking beds

Similar concept to a self-watering pot.
Can be scaled; from small pots to large beds.

The basic features:



Water reservoir Create with pond liner or use a vessel that's watertight!
Fill with scoria, sand or other inorganic media to support the soil and store the water.
Depth can vary. More water held means less frequent watering. Water 'wicks' into soil.

Positives of wicking beds	Negatives of wicking beds
<ul style="list-style-type: none"> - Plants happy & productive in summer - Flexibility: water just weekly or fortnightly in summer! - Water efficiency, less evaporation - Consistent water access for plants - Avoid site roots or contaminated soil; can even be located on concrete 	<ul style="list-style-type: none"> - More expensive & time consuming to build (if large – small ones less so) - Some skills required to build - If it leaks, it's pointless! Plus, it's more hard work and time consuming to fix, so worth getting it right.

Potential wicking beds: raised beds, crates, tubs, pots, wine barrels, baths, ... you name it.

For lots more information (and photos!) please visit the
Seed Savers Albury-Wodonga website: ssaw.org.au

Tips for constructing wicking beds

The water reservoir is crucial

Go for good quality if using plastic or liner. Most of the online instructions fail to note this and suggest builders' plastic and similar materials will do ... our group's collective experience says this is risky, and likely to result in holes and leaks. We suggest you get it right first time and don't skimp here – you'll save time, energy and tears!

If using a liner, protect it from any rough edges and stones in the ground (eg with sand underneath, silicon dabbed on rough edges or geofabric around the sides and/or bottom).

Or avoid the need for a liner and **use an already waterproof container** eg bath, plastic food drum or container, and be aware of materials that will breakdown with UV exposure.

Ideal soil depth for wicking is 300mm. You can make your soil layer deeper, for deep rooted plants, but be aware the top layers of soil may dry out in summer. Build your beds to be level to ensure even wicking and distribution of water throughout the bed.

The material or media in the reservoir needs to be able to hold the weight of your soil and plants, otherwise the bed will sag when the water level drops. Sand, scoria, purpose-made cells, or similar, can be used.

Any organic matter in the water reservoir will become anaerobic; it will rot and smell (= undesirable!). Use a fine fabric to keep your soil from passing into the water and keep the filling pipe covered.

Check the overflow point by filling with water *before* you lay the weed mat and add soil – ensures your soil won't be sitting in water when it's full. If you leave it overnight you can also reassure yourself there are no leaks!

Many instructions suggest using **slotted ag pipe** to deliver the water from the inlet pipe around the reservoir, but we have found the water will spread even without this. Using an **elbow at the bottom of the filling pipe** can help ensure good access for the water, as would cutting a hole in the pipe - just ensure you don't have any sharp edges on the end of your filling pipe putting pressure on your liner (if using one).

Prevent mozzies or frogs getting into the water reservoir by covering the filling and overflow pipes. Old socks will last a year or two; mozzie screen or shade cloth will also do the trick.



Tips for growing in wicking beds

Ensure the bed is thoroughly wet before planting. Fill the reservoir and also water the soil from the top initially – you may need to leave it a couple of days for the wicking action to take effect.

If growing from seed, particularly in hot weather, remove some mulch and **water shallow-sown seeds from above initially** to ensure good germination. Seedlings too may benefit from a few ‘top waterings’ to get them away in a wicking bed.

Mulch established plants thoroughly in summer – the mulch and top layer of soil will be very dry, but you’re reducing evaporation and the plant is accessing water from below. Pests also seem to dislike these conditions, compared to damp mulch.

Don’t install structures into the bed that pierce the weed mat (letting soil into the water reservoir) or worse, the reservoir itself. Instead, use self supporting structures, or put the support into the ground outside the wicking bed.

Use your wicking bed space effectively by letting plants that need space to ramble beyond the bed - either down the sides or up onto a support. As long as the roots have access to water and nutrients, they can thrive with the rest of the plant spreading. Examples include luffa, pumpkins, cucumber, tomatoes (will grow ‘down’ as well as up) and more.

Be mindful that any **excess nutrients or fertiliser** (for example, from applying seaweed or fish emulsion or compost teas) may accumulate in the water reservoir, so err on the side of less rather than more with these. The usual advice of ‘little bits, frequently’ for fertilisers or tonics seems even more pertinent in wicking beds. And keep an eye on the color of the water coming from the overflow - it should be clear.

As with any bed, the **organic matter and mulch will break down** with time. You may like to replenish the organic matter between crops; follow a crop rotation system that helps to build the soil; and/or add compost at the time of new plantings, to help keep your soil in tip top condition.

