

Garden Bed Soil for Perth

Before we start talking about the most important part of the garden, the soil, we must realise that in Perth we have very little water, be it from rain or other sources. It is critically important that you build up your sandy soil and catch all run off, even from driveways, and channel it into the soil.

In Perth precipitation (rain) only exceeds evaporation for 3 months of the year and thus, without heavy soil improvement or continual and unsustainable watering, we can only grow conventional food crops 3 months of the year. However, given we have limited space and don't practice food forestry and want to have a yield all year we need to get soil smart.

Key concepts:

- **WATER** – Plant the water and the plants plant themselves.
- **SOIL** – Feed the soil not the plants.

Building Soil

Sandy soil must be built up in the following order for high yield systems (veggie beds). If in clay soils omit step 1.

1. **CLAY** – Water and nutrient holding, the GLUE of the soil. Bentonite, Sand Remedy, Soil Solver, pure kitty litter are some sources. Swap soil with friends in clay areas like the hills.
2. **ROCK MINERALS** – Our sand is nutrient deficient, granite quarry and mining 'waste' minerals are a natural slow-release source of minerals.
3. **SEA MINERALS** – The ocean was different minerals. Seaweed solutions and powdered kelp make our soils better and allow strong disease resistant plants.
4. **COMPOST** – Any organic matter (composted manure, leaf litter, grass clippings) feeds the fungi and bacteria in the soil which, in turn, feeds our plants as required (the Soil Food Web).
5. **MULCH** – Lucerne or lupin feeding mulch, put it underneath, and street tree pruning's for water saving go on top in summer. You should use both or at least street tree mulch.

No Dig and Lasagna Beds

Commonly called the no dig method, or the Lasagna Bed, the method of layering lots of good organic stuff in a pile is a great way to create healthy sponge-like soil.

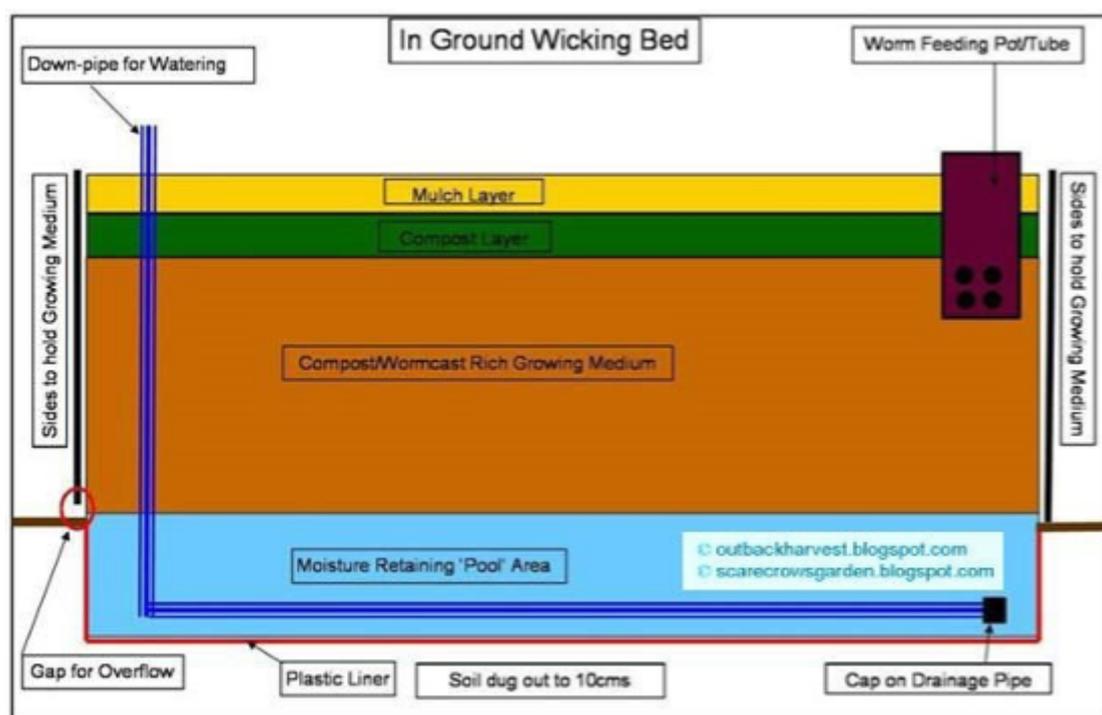
Get a bale of lucerne, some clay (Bentonite or other), compost or leaf litter, and a bag of rock dust. Sprinkle bentonite into slashed weeds/organic stuff (not too thick as it clumps), sprinkle on rock dust, cover in 10 cm lucerne, cover with compost, sprinkle bentonite, cover with 10 cm lucerne. Wet well and leave to rot down. You can plant in small piles of soil pushed into lucerne or cover with cardboard/hessian/etc and let it rot down first. Sea minerals from ground seaweed (kelp),

seaweed emulsions or even fish hydrolysates is also great for increasing plant, and in turn your, health.

We recommend lucerne hay, although its more expensive, because it is mineral rich and has a natural growth promoter. Another good option is lupin mulch (available from DSATCO in a 1000l bulk bag for \$235). Don't use pea straw if you want to plant peas there in the future, pea straw is full of pea viruses. Also, don't use hay/straw as it will fill the bed with grass seeds. If you are concerned about the number of weeds and weed seeds in that top layer of soil, or in the 'mulch' you have already put down, it is suggested you sheet mulch with paper, cardboard, etc before building a new lasagna bed on top.

Wicking Beds

The biggest controlling factor for sustainable food production in Western Australia is the climate, specifically the diminishing rainfall. The second general issues is the poor sandy leaching soils. The combination of these two mean the efficiency and design of your watering and nutrient holding systems is critically important.



Picture from Scarecrows Garden Blog – Thanks, Scarecrow and Doc !!

Wicking beds involve using a plastic liner (or alternative waterproof barrier) but creating a bed where a water reservoir is formed under the soil with the moisture coming up via capillary action as required. These methods have the two-fold advantage of controlling water and nutrients in our freely leaching sandy soils.