

# THE EASY-GROW BOX

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[www.easygrowvegetables.com](http://www.easygrowvegetables.com)



Photo 1. An 'Easy-grow' box

An 'Easy-grow Box' (photo 1) is the simplest way of using the wicking principle<sup>1</sup>. Any box that is 30 - 45cm high and holds water will do. We prefer Styrofoam boxes. They keep the soil cool in summer when plastic containers can get too hot. They must be food-grade standard as industrial boxes may contain chemicals to stop moulds. Painting them looks better and protects them against the sun. A painted box has lasted four years without signs of decay.



Photo 2. Materials used

## **MATERIALS** (all recycled)

- a water-holding box (e.g. a broccoli, salmon or other food box); we bought ours for \$1;
- a 'leaky' water-store or pipe made from either
  - 3 identical 1.25 soft-drink bottles with their tops and bottoms cut-off and pushed together (photo 2) and reinforced by placing PVC rings around them (photo 3), or
  - a 45 cm long piece of 90 mm PVC drain pipe with a slot cut into it (photo 4) ;
- one other bottle with only the bottom cut off which is the upright to pour water in (photo 5);
- one yoghurt container with lid (or similar container with lid) with the bottom cut off to be the worm feeding station (optional, photo 2);
- soil; a good potting mix; or a mixture of soil and compost, manure or wormcast;
- organic mineral supplement<sup>2</sup> if available;
- roughage such as hay, straw or bagasse to use as basis and mulch (bagasse in photo 1);
- composting or garden worms (optional).

<sup>1</sup> 'Wicking' refers to the capillary action of soil which moves water upwards. Water can 'wick' up to 35 cm above the free-water level in the soil or a box.

<sup>2</sup> Look for a mineral supplement that contains Phosphorous, Potassium, Calcium, Magnesium, Iron, Sulphur, Silicon, Carbon, Manganese, Copper, Zinc, Molybdenum, Boron and Cobalt.

## Putting it together



Photo 3. Bottles pushed into a pipe (left) and with PVC rings around the pipe (right) to stop it from being flattened.



or

Photo 4. A 45 cm length of PVC pipe with slot, closed at one end to stop soil being washed into it.



and

Photo 5. The fill bottle.

1. Drill two drain-holes 9 - 10 cm from the bottom (blue circles on the box in photo 1).
2. Make a 'leaky pipe' that will hold 3– 5 litres:
  - Cut off the tops and bottoms of three bottles (photo 3), cut four 1- 2cm slits in the bottom end of each bottle and push them together to form a pipe cut four PVC rings and place these around the pipe (photo 3), this may need a bit of perseverance; or
  - Cut a length of PVC drain pipe (450 mm), cut a slot in it and cover one end (photo 4).
3. Cut off the bottom only of the fourth bottle. This will be the upright to fill the pipe through. Cut a triangle at the bottom to connect it with the pipe (the white inverted V on photo 5).
4. Cut off the bottom of the yoghurt container; this will be the worm feeding station.



Photo 6. Upright (left) and 'Pipe' placed in box.



Photo 7 .Nearly finished.

5. Place the upright in the box on the side opposite the drain holes (on the right in photo 6).
6. Place the 'pipe' (holes down) between the upright and the drain holes (photo 6).
7. Place the roughage around the pipe and upright. This lets the water spread sideways when the box is filled and it is food for worms (photo 6).
8. Spread two handfuls of the organic mineral supplement over the roughage.
9. Fill the box with two to three buckets of good soil, a good potting mix, or mixture of soil and compost, wormcast, or manure; make sure any manure is well rotted.
10. Mix two handfuls of the organic mineral supplement into the top soil as well.
11. Put the yoghurt container next to the 'upright' (photo 7). Put the worms into the container, add some worm food, and put the lid on. Keep feeding the worms on a regular basis.
12. Plant the seedlings and water them in from the surface as usual (photo 7).
13. Spread more grass clippings, hay or bagasse over the top as mulch (photos 7 and 1). The worms will eat it, so it needs to be replaced occasionally.
14. Fill the box through the upright until the water comes out of the drain holes. Once the seedlings are established, water through the upright but only when you don't see free water at the bottom. The water can last for several weeks in winter and/or while plants are small.

## SETS OF BOXES

One box is useful for herbs. A set of six boxes allows you to grow several vegetables at a time. Or it will keep a family in lettuce when you plant one box every week or ten days.



Photo 8. A set of six salmon boxes on a table.



Photo 9. The same boxes four or five weeks later.

The six boxes in photo 8 are salmon boxes on a table of 185x75cm, under shade. The table stands in buckets and away from the wall to stop snails getting into the plants. The owner used cut-offs from PVC pipes as water fill-pipes. She extended the wicking principle by drilling a hole in an old clay pot, 10 cm from the bottom, and putting in a water-store. She grew tomatoes in that one. She lives South of Perth and has not yet had insect problems.

## INSECT PROTECTION

Insects can be a challenge, depending on where you live, the season and the vegetables. We made covers, using 30% shade-cloth. Heavier shade-cloth stretches the plants and causes weak stems, even near Bundaberg in the dry sub-tropics. We tried mosquito netting but it did not last.



Photo 10. Boxes covered by shade cloth.

The covers in photo 10 are made from 100x100mm wire mesh and shade cloth. For the larger ones, we cut a length of 2m (20 squares) from a 900 mm wide roll and bent it into shape. Two lengths of wood hold the ends together at the bottom, using bits of wire. We cut the shade cloth to size and attached it to the mesh with wire clips. The covers are remarkably sturdy and easy to lift on and off. The covers in photo 10 protect respectively one, two (at the back) or three boxes. The tables in photo 10 stand in a large open area. Strong winds have not been a problem. The covers have worked well for over a year. The growth rate of the plants has been outstanding. This set-up would have cost us about \$60 and a few afternoons' relaxed work.