

THE EASY-GROW BOX October 2009

WHAT WE HAVE LEARNED SO FAR

www.easygrowvegetables.com

The boxes have become popular. As more people use them, we learn more. The main things we learned are summarised below.

Soil

- The soil settles after a while and then needs to be topped up. In a half-filled box, all soil is very wet which can cause problems, such as rot in strawberries.
- The initial improvement in the structure of our heavy black clay, due to the organic activity stimulated by the wormcasts, wore off after a while. The soil became lumpy again, especially after a box dried out by mistake. The surviving plant roots were largely on the outside and along the bottom of the box.
- Using different soil mixes for different crops seemed to work well. Our strawberries did much better on lighter mixes with more sand and less clay. Their root balls were very large and evenly spread throughout the box.
- Our standard mix now is roughly 40% clay, 40% sand and 20% wormcasts or compost. Wormcasts are largely organic matter, which is used up by the micro-flora. The casts we use also contain fine sand and loam. These are permanent additions to the soil mix. So far the worms have remained present and active.

Feeding our plants

- The initial fertility from the wormcasts was spectacular, but was used up by the first two crops. After that, feeding our plants became essential. We now use a liquid organic fertiliser on a regular basis. Dilute it as per instructions and pour it through the vertical bottle before or during watering. Our crops have responded well to this.
- It is easy to overfeed and thus damage or kill plants. Remember, all minerals stay in the box unless you flush them. It is best to feed little and often. Go by experience.

Cover

- Mosquito netting worked well in keeping insects out and it lasted well in dry weather. They are a cheap cover in dry climates and where old mosquito nets are cheap.
- One person drapes her old mosquito net from her bed over the boxes from a hook above, the same as over a bed, and anchors it so the wind does not blow it aside. There is nowhere for the birds to sit and cut it with their claws. So far it worked well.
- However ours deteriorated rapidly in warm moist conditions and from birds roosting on the covers. Their claws ripped the mosquito netting apart. We now use 30% shade cloth with good results.

Water

- The key advantage of this system is having a store of water below the plants that keeps the soil moist and allows for once-a-week watering for most of the year. We use the two methods shown in photos 3 and 4 on the page 'The easy-grow box': reinforced bottles and PVC pipe.
- Other materials such as gravel, cut-up lids from boxes etc tried by other people, were not effective. The openings between the stones etc soon filled up with soil leaving no space for water.

- The three bottles hold about four litres of water. In winter and with only small seedlings growing, this is enough for several weeks. But in summer with a full crop of lettuce, beans, mini-cabbages, spinach, strawberries, parsley or other crops four litres of water can be used-up in three to five days.

Improvements to water storing

Soil is heavy and can compress and flatten a pipe (photo 1 below, right pipe). It still works, but does not hold as much water.

One way of dealing with this is keeping the bottles full all the time, for instance by daily watering. However, this means that the bottom layer of the soil is always in water. We don't know what effects this has on soils and micro-organisms. It is also ideal for mosquito larvae. Some people keep a lid on the vertical bottle to try and stop mosquitoes getting in. We prefer to let the bottles run dry briefly every now and then. That kills any larvae and aerates the soil.



Photo 1, reinforced and flattened pipes.



Photo 2, pipe and fill pipe (right).

A second way is prevention. The pipe (left one in photo 2) was put together as described in 'The easy-grow box'. We then cut four rings from a left-over bit of 90 mm PVC pipe and forced these over the pipe at the joints (photo 2). The pipe is then put into the box in the same way as before (photo 2). We checked after six months and it still worked, the rings have largely stopped any compression.

We also use a 45 cm length of PVC with a slot cut into it instead of bottles (photo 6 'The easy-grow box'). The cover at one end is to stop soil filling it up. Make sure to place the pipe with the slot down!

Another way is to water more often, manually or with a dripper in each box (photo 3) controlled by a timer (photos 4 and 5). The timer can be set to come on once every three or four days to prevent having saturated soil all the time.



Photo 3, drippers into a box.



Photo 4, timer.



Photo 5, twelve boxes.

The set-up in photo 5 is obviously not insect proof. But as it is a fair distance away from other crops, insects were no problem for most of the year. They only arrived with the recent warm and wet weather. The owners have now built two shade-houses.

Drainage

The worms tend to fill up the drain holes on the side of the box; these need to be cleaned out occasionally. Drainage is essential during wet weather.

Learning, especially when things go wrong

This web-site is basically about efficient use of water and your time. Unfortunately discussing topics such as nutrition, disease and insect control in detail is beyond its scope. There are many good web-sites that do that.

If you are new to growing vegetables, the best way to learn is to join a club, association or whatever, and learn by sharing experiences. Talking with fellow members encourages trying out new things and you can often swap seeds or cuttings.

Contact with other growers is especially helpful when things go wrong. That is never a failure. It is an opportunity to learn – a sign that more information, thought and experiments are needed.

If you are an experienced grower, please also join and share your knowledge. You will be much needed and appreciated.