

Planting instruction

Growboxx[®]

TREES and VEGETABLES

Tharfood

General

This manual describes how to get the best out of the Growboxx[®] when you plant a tree in the middle and use the seed pockets for vegetables

First off all, BE PREPARED:

- Make sure that the plot is protected against animals, heavy winds and sand storms
- Make sure you have enough water; when you add vegetables, you will need refill the Growboxx[®] . We currently estimate that you will need about 100 liters to grow the tree and the vegetables in the first year



Trees

- Use local trees; they are adapted to the climate
- With the Growboxx[®] the root system of the tree will be developed enough after the first year to survive on its own. There is no irrigation needed after that. The tree uses the moist in the ground that is available in most arid zones. You can check that by digging a hole of 3 meter. If you find moist there, the tree will grow, also when the box is degraded. The roots will reach the zone with the capillary system; that can provide the tree with enough water. (video <https://www.youtube.com/watch?v=JOF5BYJTgh0>). That is why in this instruction we emphasize to keep the capillary system in tact.
- Good healthy saplings are crucial. If you need to store the saplings, make sure that they are in the shade and keep the soil moist
- Most forest trees can be planted almost all year long. Be aware that the tree will be strong and mature enough to resist heavy winds or sandstorms
- For fruittrees we advice the normal planting season, just after the rainy season

Vegetables

- Use local vegetables except for the vegetables, that grow under the ground, like potatoes and turmeric. You might damage the roots of the tree during the harvest of the vegetables.
- Make sure that both the tree and the vegetables have enough room to grow
- For climbing crops you will need support next to the Growboxx. We advice bamboo sticks.
- You will have the opportunity to grow vegetables for a year. Then the box is degraded. Make a plan for the year to get the best yield
- Explore your possibilities to sell the vegetables, like growing organic and sell the vegetables yourself or directly to your customers

Vegetables

- We advice to plant young vegetable plants in the Growboxx® in stead of putting seeds in the seed pockets. The roots will have better contact with the soil. This also prevents that you use seeds in the Growboxx® that will not germinate.
 - Grow from seeds to small plants yourself
 - We grow the seeds for two to three weeks to make sure the roots of the plants have a good connection with the water and soil in the Growboxx®
 - We use trays and a mix of 2/5 coco peat, 1/5 soil and 2/5 vermicompost
 - Or use potted plants



Cucumber after 4 days

Dig hole

Dig the planting hole
50 x 50 x 18 cm (20 x 20 x 7 inch)

Keep the capillary system of the soil intact. **Do not stamp the soil!**

Fill planting hole with water

- clay 20 liters (5 gns)
- sandy soil 30 liters (7.5 gns)
- dune sand 40 liters (10 gns)

This will further develop the capillair system in the soil

Leave it like this and go on the following day



Prepare hole

On the next day

Open top soil lightly with a shovel

Wait 10 minutes before start planting to let oxygen in



Prepare sapling

Cut off 5 cm of the bottom of the roots to get rid of horizontal growing roots

Use a sharp knife (not a serrated knife)

Through carefully cutting the bag, we keep the root system intact without damaging it



Plant sapling

Make the planting hole carefully without damaging the valuable capillary system of the soil at the size of the pot of the tree

The root system is only one centimeter off the still intact capillary system of the soil

Put the soil around the tree

- **do not use your feet to press** -
this will damage the root system
- later on you connect the roots
to the capillary system with
water



Evaporation cover

Place the anti-evaporation cover



Put sufficient soil on the anti-evaporation cover - the more the better



Place Growboxx®

Put the Growboxx® around the tree

Put the BioGrowsafe® around the tree

Only if you plant vegetables or other plants, fill the Growboxx up to the rib in the side wall

You can then also use compost mixed with soil. We use 50% soil with 50% compost.



Close the Growboxx®

Lock the cover so that it prevents the water from evaporating and cannot be blown away by the wind



Detail of how to lock the cover clamp.

If the cover does not lock properly, first add soil at the sides (page 14). Otherwise the box will puff up and leak water



Add water

Fill the Growboxx[®] with water through the siphon opening

until the water is coming through the seed pocket

Put the clay ball in the siphon to close it

Add 4 liters of water through the BioGrowsafe[®] to connect roots to the soil and to wash the soil on the anti-evaporation cover between the bottom of the Growboxx[®] and the soil



Close the gaps

Carefully add soil to the 4 sides
**Do not damage the
Growboxx®**



We are ready with planting the
tree



Prepare vegetables

Cut the paper out,
make the opening just big
enough

if you used trays

- Carefully take the plant out of
the tray (no picture)

if you used potted plants

- Cut the bag off the plant
- Break the roots up to the size
of the opening in the cover
that has been cut



Plant vegetables

The plant's roots inside the box are supported by the soil and compost that we put in the Growboxx®

You can use the healthy pot soil to close the opening of the cutting that was planted to help it cooling down and to prevent evaporation

