



Groasis has been awarded as National Icon by the Dutch Government for being one of the 3 most innovative projects of The Netherlands with a high social impact and supporting economic growth.

### Benefits of the Growboxx® plant cocoon for 'big trees' planting

With the Growboxx® plant cocoon you can plan a tree, in combination with plants, shrubs, or vegetables. In this video <https://www.youtube.com/watch?v=rTQqLKFkD3c> we tell this story. Until now you could only plant a small tree (sapling) with the Waterboxx® or Growboxx®.

However, there is a big request for planting older, more mature, big trees and help to protect them against dying through drying out. In general they are very sensitive for dying, because in the first year their evaporation is not in balance with the water absorbing capacity of the too small root system.

Cities must therefore use expensive drip irrigation (which has expensive infrastructural costs, maintenance, theft, pumps, energy, computers to manage, etc.) or they go weekly along planted big trees and give them water with a truck, while still losing up to 50% of their planted trees. Our solution is much cheaper and offers +90% survival rate.

The **breakthrough** is that we can now plant **any stem diameter** of big trees with the Growboxx® plant cocoon, in combination with plants or shrubs.

Here are the benefits of the Growboxx® plant cocoon:

- The Groasis Ecological Water Saving Technology offers 'Triple 90 benefits':
  - 90% cheaper
  - 90% less water use
  - +90% survival rate
- In principle one filling is sufficient, however, under certain extreme circumstances (extreme heat, extreme drought, very sandy soil, etc.) a refill is desirable
- There is an easy to open siphon – that prevents evaporation - to refill the box
- You can plant the box below the soil, invisible for theft or destruction, but a bit more difficult to refill
- You can also plant it just above the soil surface
- You can plant a big tree only
- You can also plant a big tree in combination with plants, soil covers, shrubs, bedding plants, native plants, fruits like straw berries or raspberries, or vegetables.
- You can also only plant such kind of plants, and not plant the big tree.
- The Growboxx® prevents the growing of competing weeds



Award” 2014

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- The water in the Growboxx<sup>®</sup>, cools down the soil below the box to approximately 20°C colder than the air temperature during the day
- The water in the Growboxx<sup>®</sup> balances the soil temperature during the night
- Therefore, the roots have no stress and grow within 12 months to 3 meters deep (10 feet)
- Once the roots reach this depth the tree doesn't need support anymore and grows without irrigation in a natural way
- Because the tree grows natural, branches are harder and break less, it is safer for the passing traffic or bikers
- Because the cover of the Growboxx<sup>®</sup> is fixed to the box, it cannot blow off, safer for passing traffic or on airports
- Because the trees grow without irrigation, they suffer less from funguses and insects.
- Therefore, no pesticides or fertilizers are necessary to keep them healthy
- After a year, the boxes will degrade automatically and nutrients will come available for the plants
- You can use the boxes on any place, on sandy soil, clay or rocks
- You can use the boxes on any inclination or any faraway place, no matter how difficult to reach. There is no expensive irrigation infrastructure necessary
- Road repair is easier, there is no irrigation infrastructure that can be damaged
- There are no pumps, 100% less energy use
- Because the trees have no growth stress, they grow approximately 30% faster than normal
- The Groasis Ecological Water Saving Technology for big trees is a disruptive breakthrough method for modern city and road landscaping, for forestry services, for planting new parks and creating green lungs in cities
- The fruit and vegetables combining capacity, makes urban farming in public areas possible. Citizens will start to love and protect their trees
- Clean the air, make shadow, reduce root and dust particles. Make a better climate to live in. Let's green our cities!



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