

First test results are great!



In September 2018 the team of Tharfood started planting trees in the Thar desert. This was the first project in India where the Growboxx® was used. Although this was our first practical experience with this new device, we achieved a survival rate of 94% after two months.

This demands a follow up. During our work we designed a new way with both reforestation of the desert and benefits for the local community. Our aim is high, we want to show that the reforestation of the surroundings of the small village of Kandiyala is possible in a cost neutral way.

If it works here, it will work in lots of other places



A description of the first test

Location

Almost one hour away from the city of Jaisalmer we fenced a plot of 300 by 450 feet. The climate is typical for the region:

- hot summer days with temperatures higher than 40° C/110° F
- cold winter nights with temperatures lower than 5° C/40° F
- an average of 3 to 5 days with all together 200 mm per year

We have chosen this location to test the first delivery in India of the Growboxx®. The main reasons were the availability of a substantial water pond and the challenge. If it is possible to plant trees here, it can be done in lots of other places.

Growboxx®

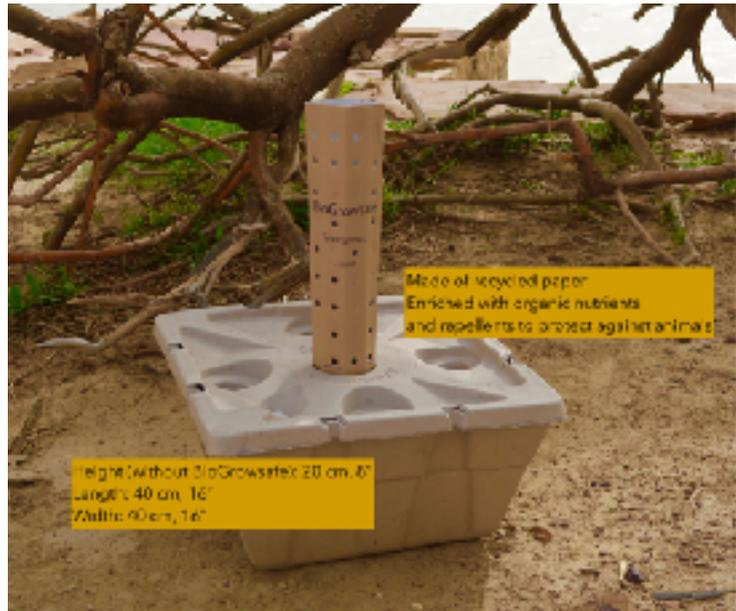
In 2017 the UN recommended the Growboxx® in their Global Opportunity Report. Next to that this device has won several awards. The mass production started in August 2018.

The box is made of recycled paper and promises a high survival rate. In earlier tests they achieved 95% and more. Also important is the limited usage of water. We used 30 liters to prepare the soil and another 20 liters during planting. After that refilling the box with extra water does not seem to be necessary.

Research questions

Our focus was on the following questions:

1. What is the survival rate of the trees?
2. How much water is needed?



Method

At first we would have liked a more scientific approach to do this first test, but soon it became clear that we were not ready for that. Due to practical issues and our lack of experience with the Growboxx® we stepped into a learning experience. Now we can say we have a solid method to plant trees.

For the selection of trees our starting point was the preference for indigenous species. In the cities of Jaisalmer and Jodhpur we found high quality nurseries.

In september our supplies arrived and we started planting 370 trees.

Testresults

The 24 different species are planted in the period from 21/10/2018 till 7/12/2018. On 12/12 we counted 370 plantations and a 22 mortalities. This means a survival rate of 94%. This result confirms the tests of the supplier Groasis.

The main cause for mortality we discovered in the first two weeks. Termites ate the paper box, which causes leakage and drought. Roots did not develop and the tree died. The second cause was our inexperience with planting the small apple ber saplings. Normally we cut the main root for planting to activate the root system. For the apple ber saplings this was not a good idea. This tree survives better with an uncut root.

Statistics

Status			
OK	Dead	Total	Survival rate
348	22	370	94%
Age			
Average	Modus	Min	Max
23d	27d	5d	52d
Period	Min	Max	
	21/10	7/12	

The usage of water was a little bit more than expected. During the preparation of the soil we used 30 liters of water. This is done to develop the capillair system in the soil. While planting we used about 20 liters of water to put in the box. Due to leakage and some big sized saplings we had to refill sometimes. The refill took 5 liters per tree. This mainly concerned the trees that were planted in the first three weeks and has suffered from termites. .

Trees

Amaltas	10	Jamun	21
Amla	9	Khejri	7
Annar	7	Khumbat	10
Apple ber	79	Mango	24
Aradu	12	Mendi	11
Babul	9	Mossmi	9
Ber	10	Nimbu	16
Champa	13	Pommegranate	2
Chikku	14	Rohida	2
Gourel	6	Sesame	5
Guava	27	Siris	17
Gunda	36	Vig	5
Gundi	9		

Planting improvements

During this learning experience we discovered the following useful improvements:

1. Tobacco powder and neem extract are useful to fight the termites. After the limited application of the tobacco powder in the ground and in the box we did not discover anymore damage from termites.
2. One day before planting you can soak the mixture compost, soil and water. Then the retainment of the water will be better

We realize that this is an early stage to report results. Some trees are struggling, but most of them look healthy with new leaves and green butts. Therefore we are hopeful that the final results will be high. Based on our improvements and the health of the more recent planted trees we expect an improvement of the survival rate in future plantations.

Bonus

Because cattle could not graze in our fenced area, sewan grass had the time to mature. It was confirmed by the local people that if there has been rain, the grass will grow almost everywhere around the village. This is also typical for the region. Sewan grass is the main source of fodder for the goats, sheep, cows and wild life that inhabits the area.

Conclusion

The first results are very hopeful. Now it is too early to draw conclusions but it seems that we can confirm the previous results of the supplier and that it is possible to plant trees on arid grounds with a high survival rate with a minimum amount of water.

Next steps

In the upcoming period we will extend our plantation within a new fence on a more remote location. There we will plant 32 trees we think are best for a new forest. These trees will most likely not be cut by people because of their religious meaning (peepal and banyan) or added value (neem)

Next to the tree the Growboxx® has seed pockets to grow vegetables, flowers or other plants. Until now we are not able to grow vegetables in a cost effective and successful manner. The main opponent is mice and the climate. Our search for the right species and planting method will be continued.

Until now there are two successes, basil and green peas:



Project Green Kandiyala

In May 2019 we would like to start the follow up. These components will be the main part of our scope:

- 12.000 trees
- a fenced area of 125 ha
- rainwater harvesting; the amount harvested should be enough for our own project
- sewan grass, the whole year long, preferably dress green grass
 - estimated yield: Rs 30.00.000
 - local farmers will have acces to high quality food for their cattle
- agreement with the government
 - after the temporary usage of the land, the governance will go form the project organization to a local NGO; a better way of land utilization will be a major part of their duty
- scientific approach
- a business case for future projects

- our aim is to build a forest for free and help the local community

The whole project can be a showcase for reforestation of the desert and the development of rural India.

In the upcoming months we will reach out to possible partners.

The next report will be written in February 2019.

Contact

If you want to see more about us, you can follow us on our [website](#) and on our social media: [Youtube channel](#), [Facebook](#) and [Instagram](#).

Tharfood is a Dutch-Indian cooperation.

Yours sincerely,

Wim van der Zwan, founder and investor