

ROOT TO FRUIT - ABENDSONNE AFRIKA

CARBON OFFSET PROGRAMME

PROGRESS REPORT AT OCTOBER 2021



Introduction

This is an update from Root to Fruit (RTF) to report on the progress made with the project since Q1 2021 both at the Tree Club sites where your trees are planted and in the seedling nurseries.

Nursery Operations - Pot filling, local seed collection and sowing seeds

Since your first purchase of the carbon offset rights to trees planted at RTF Tree Club sites the team have been working on raising more seedlings for the coming years distributions, alongside monitoring the already planted trees.

Pot filling has been ongoing since the end of 2020/21 distribution to reach this year's target of raising 50,000 trees for distribution. We prepare a soil mixture that enables a solid growth of the seedlings, mixing a loam soil made up of one part sand, one part manure and two parts clay, which is calculated to maximise the potential for growth in the sandy area we plant our trees in. The manure is prepared throughout the year, and the loam soil mixed prior to germinating seeds, which for slow growing species is February/ March and for fast growing species is June/July. If we do not have enough manure we outsource it however, we have been running more manure workshops to teach the communities how to make a good manure and this provides us with better resources.



Pot filling in the nursery and a nursery assistant sowing seeds

Once the loam soil has been mixed, it is used to fill the tubes in preparation for sowing the seeds. For most species the team sows three seeds into each pot to increase the chance that at least one of the three germinates. If two or more germinate the other one or two seedlings are transplanted to empty tubes.

For the past two years we have also used the loam soil to prepare seed beds at the nurseries, to germinate seeds more easily and then transplant them to tubes once they begin to shoot. This is a new method that we anticipate shall improve survival rates in the nurseries, instead of sowing three seeds in each pot.



The seed beds, the tubes with small shoots transplanted and early progress of seedlings in their rows of 200 tubes

Once the tubes are ready they are placed in groups of 200 in rows in the nursery so that they can be counted easily and to identify the different species clearly. It also means that the nursery assistants can move around easily to perform the operations throughout the year as the seedlings grow.

We normally purchase a lot of seeds from Land Resource however, this year we have collected a much larger proportion during our local seed collection.



Local moringa seed collection and manure making workshops

Tree Species Types

We raise a combination of slow growing and fast growing species. We have now completed the sowing of the slow and fast growing species and can confidently report that we have exceeded the target of 50,000 seedlings in the nurseries.

It is crucial that we plant tree species with properties that we know will benefit the local environment and community, which is key to achieving longevity for the trees once planted.

The repercussions of Covid-19 have led to us focusing more on local seed and cuttings collection this year, rather than the purchase of seeds commercially from further afield, for example Land Resource in Malawi. This has led to us raising a much higher proportion of red mahogany and zambesi redwood for next year, which are both indigenous slow growing species that are good for restoring nutrients in the soils.



Red mahogany seedlings germinating and tree trunk from which cuttings of zambesi redwood are taken to germinate in the nurseries

General Feedback from Tree Clubs

In order to monitor the planting progress and subsequent survival rate of the seedlings that are distributed we undertake monitoring 4 times during the year. This takes place just after planting in January, then in March, June and August. We have now finalised entering the August count data in the database, which we use to monitor survival rate.

The trees that Abendsonne have been allocated are from a range of planting years, so you will have groups that range from between 2 to 6 years old.

During the recent monitoring the nursery assistants have engaged with the Tree Club members so we can get some detailed feedback on how the trees are growing and what benefits they are experiencing. There are many members that have taken on board the teaching at the manure workshops and they are using fallen leaves to make their own manure, which is a great example of a clear education platform between Root to Fruit and the Tree Clubs.

Many clubs have planted Albizia lebbeck along the watercourses over the past few years, following the advice of the RTF team and we have had recent feedback that it has been noted that the trees are helping with water retention.

Abendsonne Tree Club Feedback

We have collected stories from some of your specific Tree Clubs, some of which we share below.



Kazizwa Club

Kondwani, which literally means 'Be Happy' in English, said that they have planted their trees successfully from last year and says they are more than ready to receive more trees for planting as they have identified more bare pieces of land around their homestead. They have seen how the trees have provided shade and fresher air when they grow and want to do this at their home.

Harrison Tedi Tree Club

They have been planting trees with RTF since 2013. They wanted to have fresh air, as well as protection from winds. In addition, the ground was so bare, and the trees provided better soils as well as a windshield and shade. So far they have received 300 trees from RTF and 270 are recorded as still surviving. They have received many benefits and have suggested that they can provide seeds from their trees for future planting - an entrepreneurial mind at work!



Chitingulu Irrigation Club

Of the 900 trees that have been planted at this site, we have a survival rate of 687 trees, which is very impressive.

They have noticed improved fresh air. As they are heavily affected by the Mwera wind (a strong southern wind) the trees have made a huge difference in shielding homes, preventing them from being destroyed.

It was also commented that quite simply, they make them happy because they look beautiful.



Changasi FP School

This school started planting during the construction of the school in 2016. The land was very bare so they planted for protection but also to improve the soil because the erosion was very bad. They planted fruit trees for the children to have food at break times. The teacher talked to our team about the importance of the fresh air.

They have received about 1000 trees and about 900 are surviving. The school looks beautiful and they look forward to receiving more in the future. They say thank you for our time and trees to help them.

Monitoring of the Trees

Monitoring trees is something we take very seriously. The survival rate has improved over the past couple of years and we think this is a result of better communication through educating the communities on tree care as well as equipping our staff with better resources including counting clickers and improved IT equipment to track progress.

We are observing some areas where particular species are performing better than others and are noting down species more resilient to the climate, for example the Albizia lebbeck, the gliricidia and the senna siamea.

We have also more closely observed areas where the trees are more badly affected by termites. In these areas we intend to run community based workshops to teach about natural termite control methods that the community can use with resources that they have easily available to them.

Conclusion

We are commencing plans for this year's distribution, which will take place as normal over December so that the trees are planted ahead of the rainy season, to reap the benefit of the watering.

During this time, we take the opportunity to reinforce how to plant and care for the trees, to help us achieve success.