

DESIGN

CLIMATE ACTION

The Organic Tea farm



Solutions offered by nature- best practices that will help conserve, restore and reduce carbon dioxide from the atmosphere at the farm.

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Background

Growing up in the Kenyan Highlands, allowed me to engage in tea farming. Tea is one of the main cash crops in Kenya and offers a lot to the people. Over the years the production has decreased as a contribution of the high cost of farming, poor policies, overtaxing by the government, corruption of officials, brokerage in the tea sector and from farmers choosing other forms of farming.

Monopolization of the tea sector by the Kenyan government under KTDA has really killed tea farming. They control tea production, processing and selling of the tea. Fertilizer used in tea farming is provided by the government and at most it is not efficient.

Most times, after the application of the fertilizer, you find that you only pick the tea twice and the tea bud production decreases.

The fertilizer provided is chemical based and causes a lot of harm to the environment, not forgetting that injury caused by tea bushes can even lead to amputation of body parts. Over the years we have seen the decrease in flora and fauna native to the region around the tea zones. After Covid-19 hit the world, there was a shortage of fertilizer and the government was unable to procure fertilizer for farmers. We saw a return, though shortlived of some native frog species, snails, worms and insects in the area.

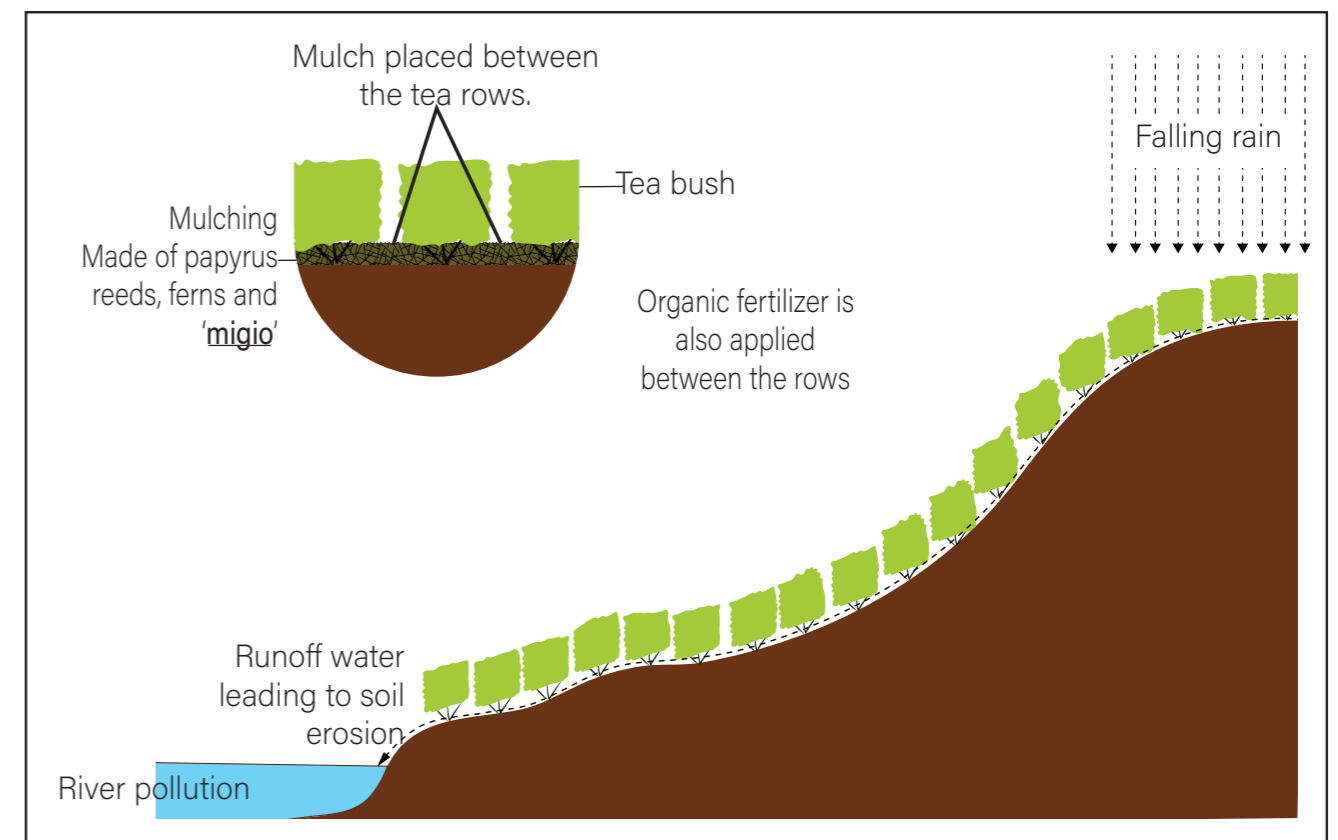
In conclusion chemical fertilizers cause a lot harm, are expensive and have little shelf life hence little production. They also contribute almost 2% of carbon dioxide emissions globally.

About

My father and I started a little project in 2020. We decided to make our own organic fertilizer at home. This would be applied to our tea fields. Though it takes time it more cost effective, environment safe and more productive. Production increased by over 60% in the first year and by 80% in the next.

Use of natural mulch also contributed to:

- Fertilization and aeration of the soil
- Increased production of very soft tea buds
- Storage of water with reduced soil erosion
- Reduced soil acidity
- Less fertilizer loss and wastage

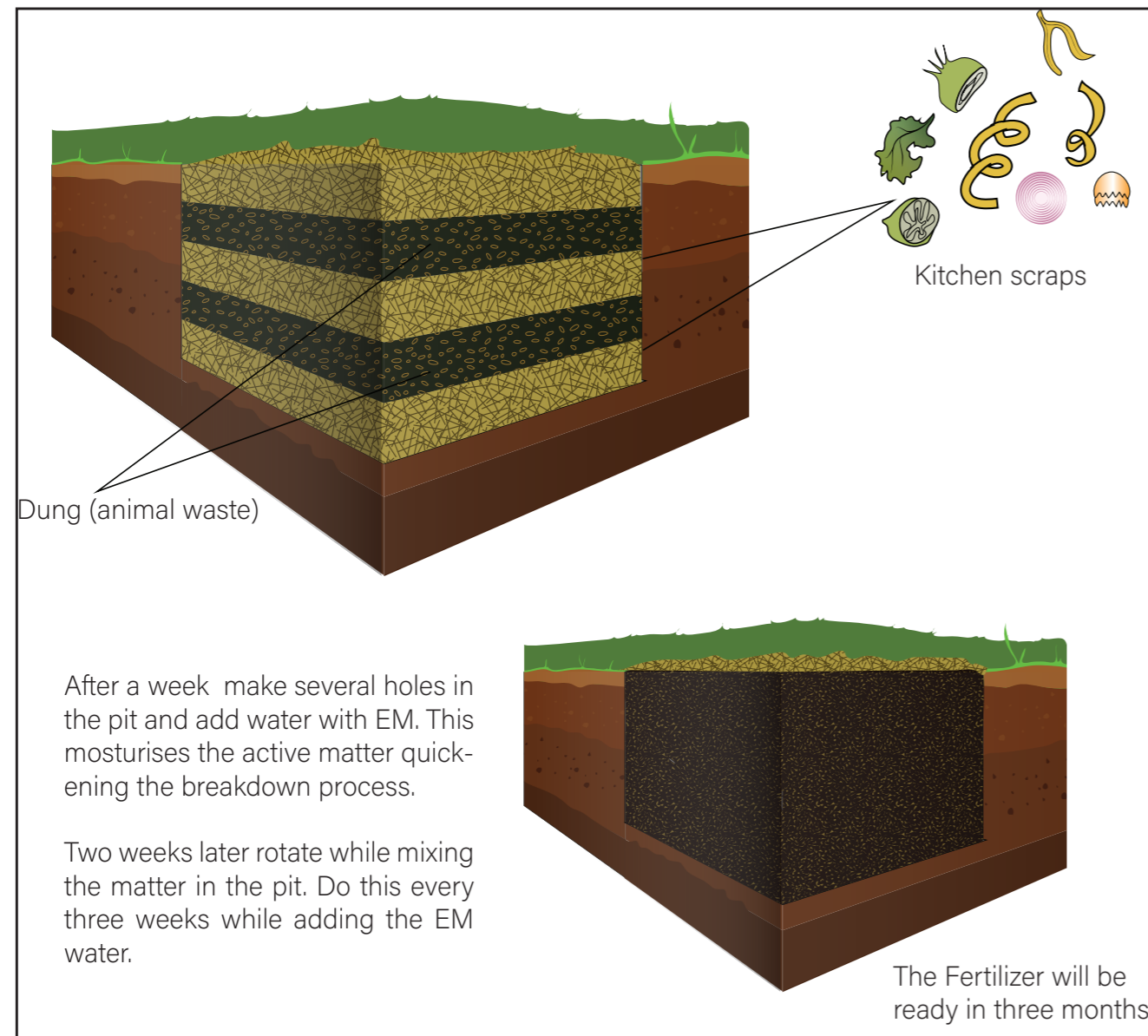


Fertilizer making process

Dig a pit 6ft*4ft with a depth of 3ft. Place kitchen scraps, unwanted tea buds, sliced ferns, papyrus reeds and sprinkle water with EM. EM is a mixture of:

- Eggs
- Sodom apple
- Blackjack
- **'Mahehe'**

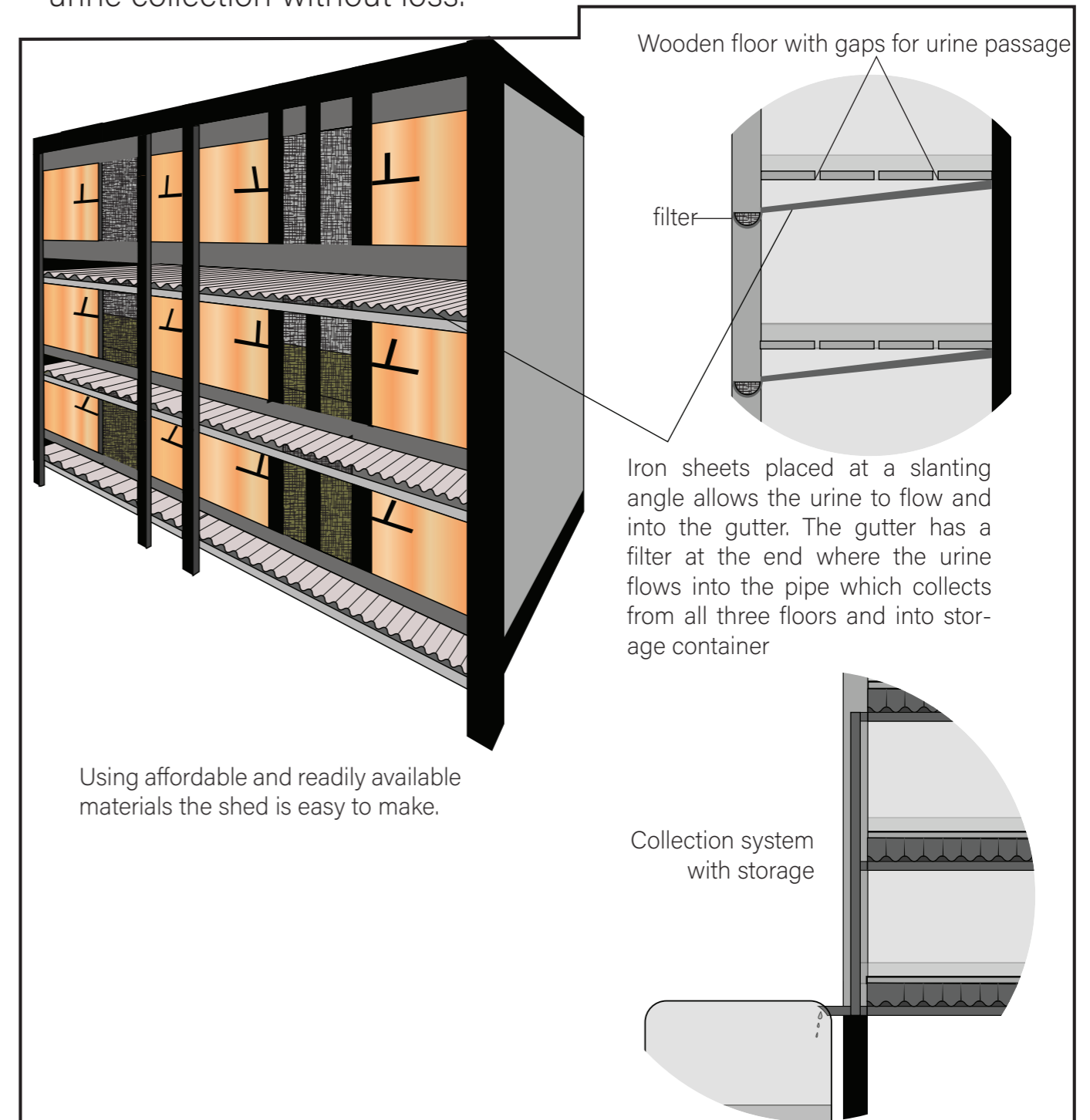
This is alternated in layers with cowdung, rabbit dung, pig dung or goat dung.



Rabbit urine collection

Rabbit urine is a natural fertilizer that can be used on almost every type of crop. It is a foliar fertilizer with a high nitrates concentration, improves crop and soil structure and acts as a pest repellent due to its strong smell.

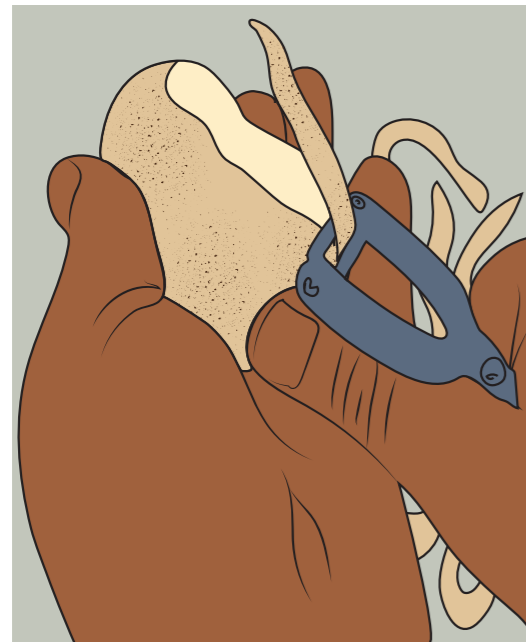
Below is a well engineered rabbit shed that eases the process of urine collection without loss.



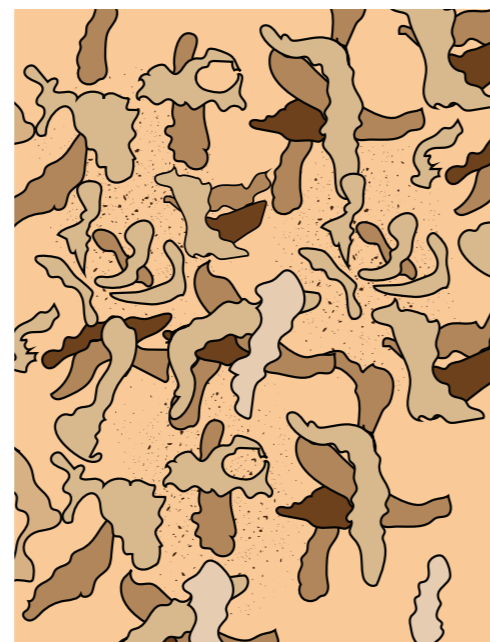
Potato Peel Foliar Fertilizer

Foliar fertilizer made from potato peels is very rich in potassium and can be applied to tea or garden crops.

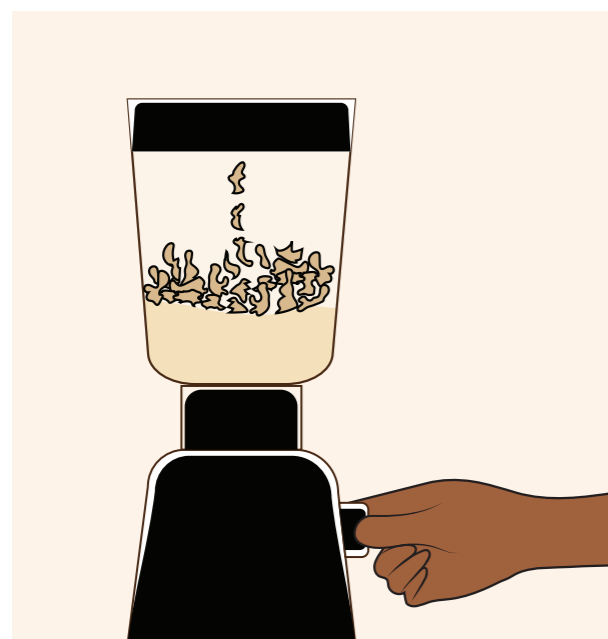
Making the fertilizer is a simple process.



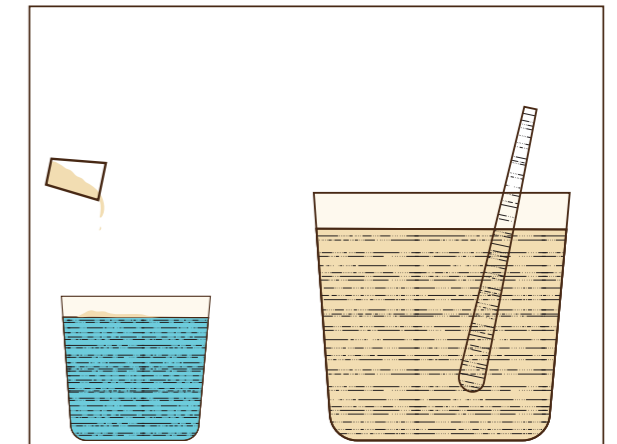
Peel potatoes or collect peels over a week.



Potato peels dry really quickly and it can be done indoors.



Grind the peels into a smooth powder and store well.



Pour a cup of the fine potato peel powder into ten litres of water and stir until well mixed.

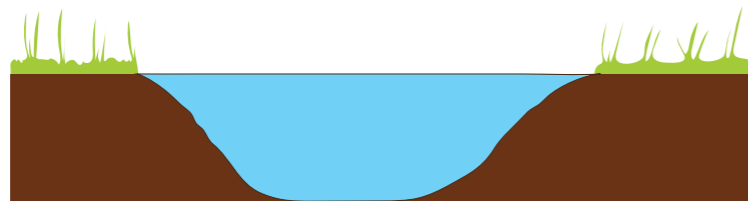


Both potato and rabbit urine foliar fertilizers can be sprayed on tea buds for increased production.

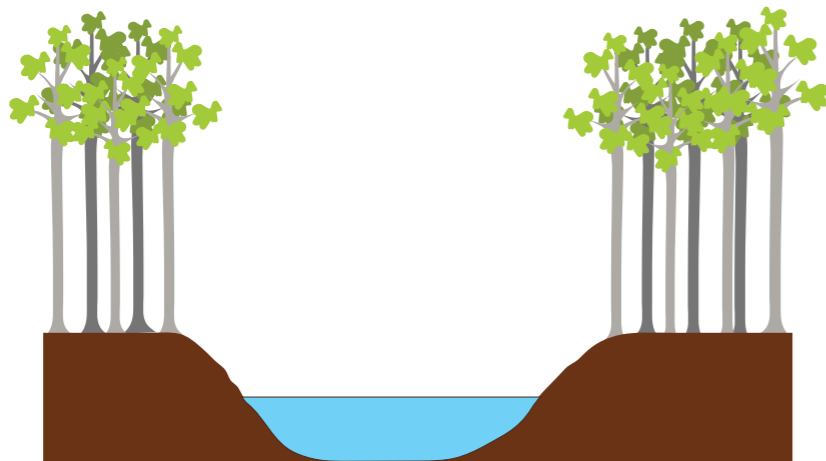
The Eucalyptus Disadvantage

Whereas the Eucalyptus can be used to reclaim wetmarshland into useful land, it can also lead to drying of rivers and streams.

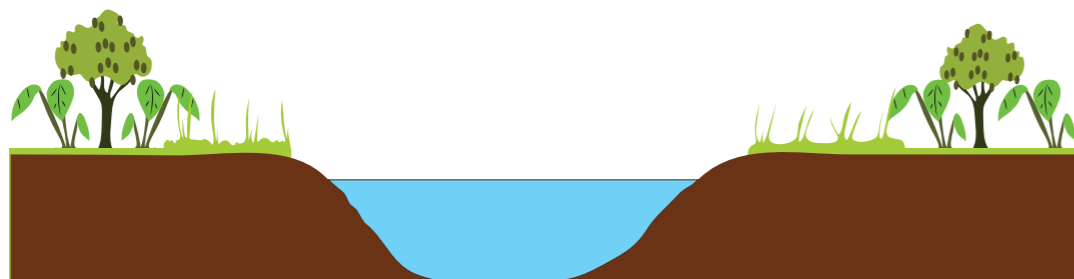
In many highland parts of Kenya eucalyptus trees are planted along rivers which has lowered water levels to an extent of even drying out some rivers. Dependng on the type of eucalyptus, water intake ranges between 50-100 litres a day.



Before the introduction of eucalyptus around 50 years ago. There were marshlands.



After the introduction of eucalyptus there has been a significant drop in water levels.



Over the last ten years a number of farmers have tried sustainable farming along rivers. Ten feet from the river farmers have introduced avocado mixed with arrowroot farming. The reeds filter out the soil(no siltation) and yams and avocado do not decrease the water levels.

Conclusion

Someone from an older generation told me that we the youth and the little efforts we make will die with us, as the government we elected are politicians and not leaders.

Due to increased tea production at our farm, farmers around us have started emulating our ideas. I believe over time our little efforts will bring change.