

# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program  
www.tist.org

English Version

TIST is an innovative, time -  
tested, afforestation program led  
by the participants.



**Kingo TIST Cluster meeting Held on 25/8/2021. Topics trained during this meeting include Conservation Farming, Nursery Management and Climate Change. Next meeting will be on 29/9/2021.**

## **Inside:**

**Kamugaka A TIST Small Group: Growing Trees in Arid Areas. Page 2**

**Small Group Best Practices: Action Steps and Action Planning. Page 3**

**Kujengana: Don't miss the blessing for your Small Group and Cluster. Page 4**

**TIST: Waste Management. Page 4**

**Preparing Compost Manure - a natural fertilizer. Page 5**

**Conservation Farming: Time to prepare your shamba. Page 6**



# Kamugaka A TIST Small Group: Growing Trees in Arid Areas.

*By Jackson Maina, TIST SG member.*

**W**hen TIST was introduced in our area in 2008, many of us couldn't understand why this program decided on our arid areas for tree planting. We have always seen tree planting programs going to high potential areas or in the forests.

Nevertheless, we decided to give it a try. We were encouraged that trainings and registrations were free. So we knew this is a genuine program. We had nothing to lose except our time. As neighbours, we began attending their meetings. We learnt TIST has been in existence in Kenya three (3) years back – from the year 2005 – and it had spread really fast in Nanyuki and Meru areas.

The meetings helped us a lot. Importantly, we learnt how to organize ourselves in Small Groups. Prior to this, we were used to big groups that were not easy to run. So, Small Groups gave us an opportunity to work closely together. To us, this was a breakthrough. We began appreciating the importance of working and helping each other. We began working on our Small Group nursery. We shared work at the nursery. This enabled us to have all time care and attention to the nursery. Each member had a rotating duty to water the seedlings and weed it. For the first since we came here, our seedlings survived 100% in our nurseries. This was amazing! We were so much encouraged and motivated.

Sooner than later, we gave our group a name – Kamugaka A. It was given TIST registration 2008KE2222. A very special number that all members easily remember.

We continued attending cluster meetings. Our Cluster Kiriogo, began to grow. We helped in spreading TIST to our neighbors across the ridges and valleys. Many farmers got interested and joined

TIST. Mr. Jinaris Wagachoya was the TSE leader. He stewarded our Cluster growth very well. Other Clusters that were started by Jinaris were Wiyumiririe and Wamura Clusters. After TSE, we continued to expand by ourselves. Today, we have added two more Clusters – Sugurio and Nyambuguchi Clusters.

Back to Kamugaka A. our Small Group continued working together. We helped each other to prepare holes and in planting trees. Our tree planting goal has always been mixed species planting. We incorporate fruit trees, indigenous and exotic trees in our farms. Today, our farms are ever green. Top species are Avacado, Cyprus, Guava, Gravellia, Orange, Lemon, Custard Apple, Gravellia, prunus, mitero among others. The total group trees quantified is 2197. However, this number is higher because of skip counting. We decided to plant trees in less than 2 m spacing recommended by TIST so that we could thin some for our firewood needs as we let TIST trees to continue sequestering carbon from the atmosphere.

We are happy in TIST. We have earned many benefits including fruits, firewood, fodder for our animals and importantly, we have “created” our own special climate. Our farms are much cooler than ever before we planted trees. Winds are far much reduced. There is a lot of shade for our crops hence helping us get better yields especially when we practice Conservation Farming.

On payments, we have been receiving pre-payments. Last month, we received over Ksh 74,000 Carbon profit share revenue. We are grateful to TIST. We are now more energized to participate fully in TIST for our benefit and for the benefit of our community and the environment.



# Small Group Best Practices: Action Steps and Action Planning.

**T**IST groups do a lot of practical activities: Planting trees and improving agricultural techniques. When there is a lot of work to be done, it is good to create **action steps**. Each group member should tell the group what they are going to achieve that week. We are going to teach you and your Small Group how to do action planning. Please share this with other members of your Small Group during your meeting.

An action step is something that is:

- Specific.
- Observable (a fly on the wall can see you do it!)
- Measurable.
- Has a beginning and an end.
- Make sure your action step is realistic and that you can achieve it!

For example, saying 'I will plant trees' is not an action step because it is too general. 'I will work on three mornings this week to transplant 75 seedlings into our new grove' is an action step because it is **specific** (transplant 75 seedlings), **observable** (people can see you do it), **measurable** (75 seedlings, 3 mornings) and **has a beginning and an end** (at the end of three days you can see the results).

When your group meets again, allow ten minutes near the end of the small group meeting for each person to report on his or her action step. Each person quickly:

- (1) **Tells the group what their action step was for the past week.**
- (2) **States what they actually did.**
- (3) **States what action step they will take for the following week.**

If the person succeeded in his or her action step, the group celebrates the success.

If, as often happens to start with, the group member met only part of his goal, the group encourages him / her and does not criticize or blame. When people are able to freely share their successes and failures they will be encouraged to do better each

week. Encourage your Small Group members to think of possible action steps. Make sure each is specific, measurable and realistic! Share and celebrate the action steps that your Small Group has accomplished.

### Action Steps for Action Planning.

A similar method can be used when planning. Here an example is given in brackets. When your group is planning what to do, make sure your plans are:

**Specific** (Our TIST Small Group will plant 1000 trees at the local hospital by November 30)

**Measurable** (How many? - 1000 trees will be planted)

**Achievable/Realistic** (Our TIST Small Group can plant 1000 trees in 5wks – 100 trees per Tuesday and Thursday, 10 trees per person/per day)

**Time-bound** (Has a beginning and an end - we will plant the trees between October 15 to November 30)

**Observable** (A fly on the wall can see us planting)

This is the guide and test of your action steps for your plan and helps you be specific:

- 1) **What** – (Planting 1000 trees)
- 2) **Who** – (TIST Small Group members by name)
- 3) **When** – (October 15 – November 30)
- 4) **Where** – (At the hospital)
- 5) **How** – (We meet every Tuesday and Thursday afternoon after the heat of the day and dig holes, then plant the trees)
- 6) **Why** – (To improve the area around the hospital, have more shade for patients and visitors, people can sit under trees and the shade will make the hospital cooler)

Now, try to practice action planning in your next Small Group meeting.



## Kujengana: Don't miss the blessing for your Small Group and Cluster.

**K**ujengana is a very important part of your Small Group weekly meeting. It says in Ephesians 4:15 - 16 that we are to build each other up into the fullness of Christ. Each person in your TIST Small Group brings his or her own special talents and gifts to the entire group. One of the wonderful things that happen in the Small Group is recognizing, sharing and using those God-given talents.

Kujengana is a way to let those talents be seen and be used. There are two parts to Kujengana: Before the closing prayer, every person in the group says one specific, positive thing that the leader for that week did at that meeting. For example: they smiled, kept to time, made good plans, encouraged all group members to speak, greeted me and made me feel welcome, pointed out something that was going very well in the meeting or in the work the group was doing, etc. Each member needs to say something different. This is not optional. Everyone gives Kujengana to the servant leader. Some groups also give Kujengana to the co-leader.

In addition, if someone sees a gift shown by the leader, a group member can also say that. With Rotating Leadership, each week a new leader will

receive Kujengana. Through Kujengana, we encourage each other on the good things that week's leader did in the meeting and the talents the person showed. Kujengana is also the way we learn to look for positive things about people and then say them. We all need to train our tongues to say the positive. In addition, the whole group learns what that group thinks is important in a servant leader. The next leaders will benefit from what they have heard in Kujengana about previous leaders and know what the groups think is important in being a servant leader.

In response to Kujengana, that week's servant leader just says, "thank you" after each group member's specific, positive statement. There is no discussion about how it could have been done better, or differently. Often, the person is happy when he or she is told the good things he or she did during the meeting. Sometimes we learn things about ourselves we didn't know! Kujengana helps the leader on that day recognize his or her talents and keeps on using them. Kujengana also helps the Small Group because all the members improve their servant leadership as they learn. Kujengana is a double blessing!

## TIST: Waste Management.

**W**aste is any material that is a by-product of human activity and that may not have immediate value, which includes:

- Human excreta/waste.
- Domestic rubbish like left over food.
- Waste paper.
- Scrap metals and old batteries (dry cells)
- Polythene bags.
- Sewage sludge, etc.

### What Causes Rubbish Problems in your Community?

Waste is inevitable but is made more problematic by:

- Wasteful/inefficient use of resources.
- Lack of methods for reusing waste.
- Lack of waste disposal sites (Rubbish pits, latrines)
- Lack of knowledge about the dangers of waste management.

### Problems caused by poor waste management:

- Litter of fields and compounds.
- Loss of beauty of the area.

- Pollution of water, air and soil, disease outbreak
- Blockage of drainage channels.
- Toxic poisoning and fumes from old batteries.
- Children and animals may be poisoned or injured if they pickup and play with old batteries or other rubbish.

### What Can Your Small Group Do Help Solve The Problem?

- Reduce or minimize the generation of waste
- Consider using solar powered products instead of those that use disposal batteries when possible.
- Reusing-use materials again where possible. (i.e. plastic bags)
- Composting as a natural fertilizer for use in gardening (save organic waste from left over food and fodder)
- Dig a rubbish pit in your compound.
- Remember to only burn paper and cards.

- Do not burn batteries as they can explode, instead put them in the pit latrine.



## Preparing Compost Manure - a natural fertilizer.

**C**ompost manure is a natural fertilizer that helps your crops grow. It is better than chemical fertilizer because it is natural, free, and will not damage crops and the environment as some chemical fertilizers can. There are many ways to make compost manure, but the following method has been useful in some areas. Ask your neighbors in your Cluster what has worked well for them.

### Preparation of compost:

1. Choose an area for your compost pit measuring 4m by 4m.
2. Clean the area.
3. Dig a hole of diameter 3 - 4m and 1.5m deep.
4. Collect all the remains of the crops you have (e.g. leaves and stalks of maize, millet, beans) and cut these remains into small pieces.
5. Put these crop remains into the hole up to a depth of 0.5m.
6. Add five liters of ash.
7. Next add about 30cm (or as much as available) of animal dung (e.g. dung from pig, cow, goat or chicken).
8. Put another layer of crop leaves and stalks (0.5m).
9. Add another five liters of ash.
10. Repeat adding the leaves and stalks again until the hole is almost filled.
11. Finally add a layer of soil until the hole is filled.
12. While filling the hole with soil, put a long stick in the middle of the hole so it reaches the bottom.
13. Leave the compost pit for 90 days (three months).
14. During this period use your dirty water to water the compost pit. For example, after cleaning your house or clothes, empty the used water over the compost pit. If you have animals, you can also pour animal urine over the pit. This adds extra nitrogen to the compost.
15. Try to water the compost pit in this way every day, or whenever water is available.
16. After 90 days the manure will be ready.

Use the stick as a thermometer. When the compost is ready it should be hot and you may even see steam coming from the stick after you have removed it. Then stir all of the compost together so it is mixed well.

### Use of compost:

When you have dug your holes for planting maize, millet or other crops, add one handful of your compost manure to each hole. Watch for the results!



# Conservation Farming: Time to prepare your shamba.

**T**IST Small Group members who have practiced CF have testified it produces a greater harvest more reliably than traditional farming, especially when the rain is scarce. The holes help catch whatever rainfalls and make it available to the crop. This article will help you understand better how to practice kilimohai. Following these best practices can help you get better yields this coming season.

## Preparing the land

- Prepare your land at least one month before the rains
- Clear your plot of weeds and bushes, but do not plough
- Prepare your holes oblong (rectangle) shape. They should each be 15 cm wide, 35 cm long and 15 cm deep. Space holes at least 75 cm apart.
- Take some manure or compost manure and good topsoil and mix it together. Fill the hole with the mixture up to five cm below the surface.

## Planting

- When you plant maize seeds (1-2 days before rains start), plant four seeds in the soil across the hole.
- If you are planting sorghum, plant 5-6 seeds at each end of the planting hole, after a good shower of rain.
- Cover the seeds with 2.5 cm of the rich soil and manure mixture. After this the soil in the hole should be about 2.5 cm below the surface of the field.

- The space at the top of the hole enables water to get to the plants when the rains come.
- You do not need to use chemical fertilizer on the Conservation Farming plot. Your crops will still do better without chemical fertilizer, if you put enough manure.

## Weeding

- - Weed around the holes regularly
- Do not weed the entire plot completely. Outside the holes, plants can cover the soil, keeping it cooler and keeping it from eroding in rain and wind. Just weed in and near the holes. Use a panga to clear weeds between the lines or spaces from one hole to the other. Weed frequently to keep weeds from going to seed and spreading in the holes.
- Leave the weed residue in the plot to rot. This will help add soil fertility.

## Post harvest practices

- Do not burn off the remains on the plot. Leave the residue on the ground so that they make the soil more fertile. Crop remainders can also be used for compost manure.
- Do not graze cattle in the plot.

We will be glad to celebrate your successful harvest and learn from best practices in your area through this newsletter as well during your cluster meeting. Take pictures as you prepare the holes, and then every two weeks take a picture of your CF as it grows. Send all of the pictures to us. Start working now!

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**Kimereu Version**

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**Mkutano wa nguzo ya Kingo TIST Uliofanyika tarehe 25/8/2021. Mada zilizofunzwa wakati wa mkutano huu ni pamoja na Kilimo cha Uhifadhi, Usimamizi wa Kitalu na Mabadiliko ya Tabianchi. Mkutano ujao utakuwa tarehe 29/9/2021.**

### **Inside:**

**Kamugaka A TIST Small Group: Gukuria miti ndwandene. Page 2**

**Mitire iria miega buru ya ikundi bibinini: Matagaria na kubangira matagaria. Page 3**

**Gwakana: Bukaaga kitharimo kia gikundi kienu. Page 4**

**TIST: Kurungamira ruuko. Page 4**

**Kuthithia mboleo yaku gwengwa – fertilizer itiongeri into bia kuthithua ni muntu. Page 5**

**Ni igita ria kuthuranira munda jwaku niuntu bwa urimi bubwega. Page 6**



# Kamugaka A TIST Small Group: Gukuria miti ndwandene.

*Kuuma Kiri Jackson Maina, mumemba wa TIST.*

**K**agita karia TIST yaretirwe ntuura yetu mwaka wa 2008, antu baingi botoombaga kumenya gitumi murudi uju wa TIST uthuura ntuura yao Kiri uandi miti guntu gu kuumu. Miradi imingi ya uandi miti twonaga igiita guntu kuri na miitu na mbura ya kwigana.

Kunari ugu, nitwabangire kugeria. Nitwagiire na inya kumenya ithomo na nkinya kwi andikithia gutari na marihi. Tukinya muradi uju wari wa uuma. Kiri tukiraterere no mathaa aki. Ja aturi, nitwambiririe gwita micemano. Nitwombire kumenya ati muradi uju wari Kenya nkuruki ya miaka ithatu nuntu jwambiritie 2005 na ni jwari jugutamba na karugi ntuura jia Meru na Nanyuki.

Micemano ni yatetherie muno. Nkuruki, nitwamenyire kwibanga na tukundi tunini. Mbereni, twamenyeretie ikundi inene iria jiaru na inya gwitithia mbere. Nandi, tukundi tunini nitwombere gutua kanya ka gwita ngugi amwe. Kiri Batwi, buu bwari uhotani. Nitwambiririe gukenera gwita ngugi amwe na gutethania. Nitwambiririe kuritira nasari yetu ya miti ngugi. Nitwagaanire wira Kiri nasari. Bubu nibwatumbithirie kumenyera nasari yetu kagita konthe. O memba ari na kagita kawe ka gwikira ruuji na kurimira. Gwa kagita ka mbere miti ya nasari yetu yambwire yonthe 100%. Untu bubu bwari bwa gukenia muno! Nitwagiire inya inene.

Kuuma au nitwa ere gakundi geetu ritwa Kamugaka A. Gakundi gaka nikaerwe namba ya kwi andikithia ndeene ya TIST jayo 2008KE2222. Nimba iri uthu muno Kiri mumemba wonthe kuririkana. Nitwetire mbere gwita micemano ya clasta. Clasta yetu ya Kiriogo ikiambiria gukura. Nitwatetherie TIST gutamba ntuura ingi na nkinya irimene na miurone. Arimi baingi nibakenerere

muradi uju na kuthungira. Mr Jinaris Wagachoya niwe ari mutongeria wa TSE. Niatongeria bweega nkinya clasta yetu yakura.

Clasta ingi iria ambiririe ni ja: Wiyumiririe na Wamura. TSE igukinya muthia nitwetire mbere gutambia TIST turi twii ene. Nandi iji, nitwongerete clasta ijiri- Sugurio na Nyambuguchi.

Kiri Kamugaka A, gakundi nigetiire mbere gwita ngugi amwe. Nitwatethanirie kwinja marinya na kuanda miti. Kioneki gwetu ni kuanda miti mithemba I mingi. Miti ya matunda, ya kinduire na ya kigeni. Narua iji, miunda yeetu ni I mithongi muno. Miti iria mingi ni, mibokando, mitarakwe, mibera, mikima, michungwa, mithimu, mi apple, miiria na mitero na ingi I mingi. Miti ya gakundi geetu ni 2197. Miti yetu ni mingi nkuruki niuntu kuri nayo yatigagirua niuntu bwa gukuaniria. Nitwabangire kuanda miti na unini bwa mita 2 ja uria TIST yendaga nikenda tugaita imwe niuntu bwa nku nayo ya TIST iite mbere kuthondeka carbon.

Turi na gikeno kwithua turi Kiri Tist. Nitugwatite baita inyingi ja: matunda, nku, iria ria nyomoo, na nkuruki twathondeka karia geetu ga keega. Miunda yetu nandi iri na migunyi na murutira jukanyia gukira au mbere ya tuanda miti. Nkungu nkinya cio nicia nyiire. Kuri na migunyi ya kwigana Kiri imera cietu na tukoomba kugwata maciara ja mega muno riria twathithia CF (urimi umuthongi-kilimo hai)

Kiri marihi, nitwithiritwe tukigwata alubanjii. Mweri jwa August nitwagwatire nkuruki ya ksh 74,000 jia carbon. Turi na kugwirua ni TIST. Nandi ni twikiri inya inene gwita ngugi na TIST niuntu bwa baita cietu, aturi na nkinya riera.





## Mitire iria miega buru ya ikundi bibinini: Matagara na kubangira matagara.

Ikundi bia TIST nibiritaga ngugi inyingi iria cionekaga: kuanda miti na kuthongomia njira cia kurima. Riria kurina ngugi inyingi cia kugita, nibwega kubangira matagara. O mumemba wa gikundi nabati kwira gikundi nimbi bakomba gukinyira kiumia kiu. Tukaburitana na kuritana gikundi giaku uria matagara jabangagirwa. Itu gaana bubu na amemba bangi ba gikundi giaku igitene ria mucemano jwenu.

Itagara ni gintu kiri:

- Gikwirungamira kiongwa
- Gikwonekana (ngi iri ruthingone yomba gukwona ukithithia!)
- Gikuthimika
- Kirina mwambirio na muthia
- Menyeera ati itagara riaku rikombika na rikathithika!

Mung'uanano, kuuga 'Nkaanda miti' ti itagara niuntu giki ni gintu gikiarie. 'Nkarita ngugi mithenya ithatu kiumia giki kuthamiria miti ya kuanda mirongo mugwanja na itano muundene jwetu jumweru' ni itagara niuntu ni gintu gikwirungamira (kuthamia miti mirongo mugwanja na itano), gikwoneka (antu bagakwona ukithithia uju), gikuthimika (miti mirongo mugwanja na itano, mithenya ithatu) na kirina mwambirio na muthia (nyuma ya ntuku ithatu ukoona maciara).

Riria gikundi giaku gigatirimana kairi, ejana dagika ikumi muthiene jwa mucemano jwa gikundi gikinini nikenda o muntu wonthe aejana ripoti ya itagara riawe. O muntu wonthe nampwi:

- (1) **Eere gikundi itagara riawe ria kiumia kiu kithiri.**
- (2) **Akauga nimbi yongwa athithirie.**
- (3) **Akauga itagara riawe ria kiumia kiu kithingatite.**

Kethira muntu uju noombanire kiri itagara riawe, gikundi nikigwiranagirua amwe.

Kethira, ja uria jaria maingi kwithagirwa gukari, mumemba wa gikundi nombire kuthithia gicunci kia uria eendaga, gikundi nikimwikagira inya na gitimuthumbagia. Riria antu boomba kugaana batigukirana kuumbana na kugwa kwao, bagekirwa inyo kuthithia bwega nkuruki o kiumia. Ikira inya amemba ba gikundi giaku kuthuganiria matagara jaria boomba kujukia. Menyeera ati o itagara

nirikwirungamira, ni rikuthimika na rikoombika! Gaana na bugwirirue matagara jaria gikundi kienu gikinini kijukitie.

### Matagara riria bukubangira mantu jaria bukathithia

Njira ikwenda gukara uju no itumirwe kubangira. Aja mung'uanano nijuejani. Riria gikundi giaku gikubangira jaria gikathithia, menyeera ati mibango yenu iri:

**Specific- Yakuirungamira yongwa** (Gikundi gikinini gietu gia TIST gikaanda miti ngiri cibitari iria iri akui igikinya mweri jwa ikumi na jumwe tariki mirongo ithatu)

**Measurable- Ikuthimika** (Ing'ana? – Miti ngiri ikaandwa)

**Achievable/Realistic- Igakinyirika** (Gikundi gikinini gietu gia TIST kiomba kuanda miti ngiri ndene ya biomia bitano- miti igana o Jumanne na Alhamisi, miti ikumi o muntu o ntuku)

**Time-bound- Ithimiri mathaa** (Burina mwambirio na muthia – tukaanda miti gati gati ka Mweri jwa ikumi tariki ikumi na ithano na mweri jwa ikumi na jumwe tariki mirongo ithatu)

**Observable-Ikooneka** (Ngi iri ruthingone igatwona tukianda) SMARTO!

Jaja nijo ubati kuthingata kiri kuthithia matagara ja mubango jwenu nijagutethagia kuuga jaria jongwa bukwenda jairungamirite:

- 1) **Nimbi**– (Kuanda miti ngiri imwe)
- 2) **Nuu** – (Amemba ba gikundi gikinini gia TIST)
- 3) **Rii** – (October 15 – November 30)
- 4) **Naa** – (Cibitari)
- 5) **Atia** – (Tugatirimana o jumanne na jumatano ugoro mwanki jwa ntuku jwathira na kwinja marinya, riu tuande miti)
- 6) **Niki**– (Kuthongomia aria kuthiurukite cibitari, kugia irundu bia aajii na ageni bibingi nkuruki, antu no bakare rungu rwa miti na kirundu gigatuma cibitari igie gapio)

Nandi, gerieni bubangire matagara jenu ndene ya mucemano jou jungi jwa gikundi gikinini.



## Gwakana: Bukaaga kitharimo kia gikundi kienu.

**G**wakana ni gicunci kirina bata mono ndene ya mucemano jwa gikundi kienu jwa o kiumia. lugaga ndene ya Aefeso 4:15,16 ati nitubati gwakana tugakinyira uujuru bunthe bwa Kristo. Muntu wonthe ndene ya gikundi gikinini gia TIST naretaga talanta na biewa bia mwanya kiri gikundi kionthe. Gintu kimwe kiria kiri gia kurigaria kiria gikarikaga ndene ya gikundi gikinini ni kwona, kugaana na gutumira talanta iu tui ni Murungu.

Gwakana ni njira ya kureka talanta iu cionwa na citumirwa. Kurina icunci biiri ndene ya Gwakana:

- Mbele ya iromba ria muthia, o muntu ndene ya gikundi auge gintu kimwe gikieega gikwirungamira kiria mutongeria athithirie ndene ya mucemano. Mung'uanano, nathekerie, nekire mathaa, nathithirie mibango imiega, neekire amemba bonthe inya, nanketherie na natumire ndaigua nkinyite, naugire akwona gintu gigita bwega mucemano kana ngugine ya gikundi, na jangi jamaingi. O mumemba nagwitia kuuga gintu mwanya. Bubuti bwa kwithurira. Muntu wonthe naakaga mutongeria wa uthumba. Ikundi bimwe ibakaga kinya mutetheria wa mutongeria.
- Kwongera, kethira muntu akwona kiewa ndene ya mutongeria, mumemba noauge.

Gukurukira utongeria bwa kithiuruko, o kiumia

mutongeria umweru agakwa. Gukurukira Gwakana, nitwikanagira inya kiri into bibiega biria mutongeria wa kiumia athithitie mucemano na talanta iria muntu ou onenie.

Gwakana ni njira ya kinya kuthoma mantu jamega kwegie antu na riu kujauga. Twinthe nitugwitia gwitana nduume cietu kuuga mantu jamega. Kwongera, gikundi kionthe nikimenyaga jaria gikundi kithuganagia jarina bata kiri mutongeria wa uthumba. Atongeria bangi bakoona baitakuumania na jaria baigitue ndene ya Gwakana kwegie atongeria bangi na bakamenya jaria gikundi kithuganagia jarina bata kiri mutongeria wa uthumba

Ariki gwakwa, mutongeria wa kiumia kiu naugaga, 'lbwega' nyuma ya o mumemba wa gikundi auge gintu gikithongi na gikwirungamira. Gutikwariria uria aringi kuthithia bwega nkuruki kana na njira ya mwanya. Jaria maingi, muntu nethagirwa akeni erwa mantu jamega jaria athithirie mucemano. Rimwe na rimwe nitumenyaga mantu kwegie twingwa jaria tutikwiji!

Gwakana nigutethagia mutongeria wa ntuku iu kumenya talanta ciawe na gwita na mbele gwitumira. Gwakana kinya nigutethagia gikundi gikinini niuntu amemba bonthe nibamenyaga gutongeria bwega nkuruki o uria bakuthoma. Gwakana ni kitharimo nteere ijiri!

## TIST: Kurungamira ruuko.

**R**uuko ni gintu kionthe kiria kiuamanagia na maththio ja muntu na kiria gitona utumiri bwa oriu, na ni amwe na:

- Kiro kua muntu
- Matigari ndene ya nja ta irio.
- Maratasi jatina ngugi
- Miuko ya mubira
- Cuuma, maiga jatumiri
- Ruuko rwa sewage na jangi jamaingi

### Nimbi iretaga thina ya ruuko ndene ya ntuura yaku?

Ruuko rutieberekia indi nirwingiagua rukaa thina na njira ya:

- utumiri bubuthuku bwa biria turina bio
- Kwaaga njira cia kurutumira kairi
- Kwaaga antu a kuruta (ja boro bia oome)
- Kuaga umenyo bwa mogwati jaria joomba kuumania na urungamiri bubuthuku bwa ruuko

### Jaria jaumanagia na urungamiri bubuthuku bwa ruuko

- Kujura kwa ruuko bienine, kwaga uthongi bwa antu au

- Kuthukua gwa ruuji, ruugo na muthetu
- Kuumbuka kwa mirimo
- Kuingana gwa paipu cia kurita ruuji
- Sumu na ruugo ruruthuku kuumania na maiga jamakuru

Aana na ndithia no ciajithue kana ikagitarua riria ciajukia na guchetha na maiga jamakuru kana ruuko rungi.

### Nimbi gikundi giaku kithithia kuthiria thina iji

- Nyiyia mantu jaria jatumaga ruuko rwija.
  - Thugania gutumira into biria bitumagira mwanki jwa riu antu a biria bitejagwa riria uumbikia.
  - Tuumira kairi – tumira into kairi riria uumbikia (ja maratasi ja mubira)
  - Kuthithia mboleo- iika ruuko ruria rumba kwoora (irio biria bitigarite na bia ndithia) ja mboleo ya gutumira muundene
  - linja kirinya kia ruuko nja yaku.
  - Ririkana kuithia aki maratasi na kadi.
- Ukaithia maiga niuntu noja lipuke. Ikira kiorone.



## **Kuthithia mboleo yaku gwengwa – fertilizer itiongeri into bia kuthithua ni muntu.**

**M**boleo ya kuthithia na imera ni fertilizer ya kuumania na into bitina ugwati ya gutethia imera biaku bikura bwega. Ni injega nkuruki ya fertilizer cia nduka niuntu icithithitie yongwa na itina ugwati kiri imera na kiri naria kuthiurukite. Kurina njira inyingi cia kuthithia mboleo, indi njira iji ithingatite nitethetie ndene ya guntu kumwe. Uria muturi waku ndene ya cluster yaku jaria jibatethetie nkuruki.

### **Kuthithia mboleo:**

- 1) Taara antu aria ukeenja kirinya giaku kia warie bwa mita inya na uraja bwa mita inya.
- 2) Theria antu au.
- 3) Inja kirinya kirina warie bwa mita ithatu gwita inya na mita imwe na nusu kwinama.
- 4) Uthurania matigari ja imera biaku jaria urinajo na ugitange tue tunini. (mung'uanano mathangu na mati ja mpempe, miere na ming'au).
- 5) Ikira matigari jaja kirinyene mwanka gitigare nusu mita.
- 6) Ongeera lita ithano cia muju.
- 7) Riu wongere centimita mirongo ithatu (kana o iria ikwoneka) cia mburi kana nguku).
- 8) Ongera matigari ja imera nusu mita.
- 9) Ikira lita ingi ithano cia muju.

- 10) Ongera matigari ja imera kairi mwanka kirinya kiende kuujura.
- 11) Muthia, ikira muthetu mwanka kirinya kiujure.
- 12) Ukiujuria kirinya na muthetu, tonyithia muti jumuraja gatigati ga kirinya mwanka jukinye nthiguru buru.
- 13) Tigana na kirinya giki ntuku mirongo kenda (mieri ithatu).
- 14) Igitene riri tumira ruuji rwaku rwa ruko gwikira boleo. Mung'uanano, warikia kuthambia nyomba kana nguo ciaku, ituura ruuji ruru ugutumagira kirinyene. Kethira urina ndithia ituura maumago jacio iguru ria kirinya.
- 15) Untu bubu nibwongagira nitrogen kiri mboleo yaku
- 16) Geria wikagire kirinya kiu ruuji na njira iji ntuku cionthe kana oriria ruuji rurio.
- 17) Ntuku mirongo kenda ciathira, mboleo ikethira iri tayari.

Tumira muti kuthima mwanki – mboleo yayia no mwanka ithirwe irina mwanki mwanka toi yoneke ikiumaga mutine wajurita ku.

### **Utumiri bwa mboleo:**

Warikia kwinja marinya jaku ja kuanda mpempe, muya na imera bingi, ongera nkundi ya mboleo yaku kiri o kirinya. Etera wone uria gugakara!



# Ni igita ria kuthuranira munda jwaku niuntu bwa urimi bubwega.

**A**memba ba ikunbi bibinini bia TIST baria bageretie kurima na urimi bubwega nibaritite ukuji ati nibuciaraga iciara ririnene na riumba gweterwa guti na uguaa kiri urimi bwa kawaida, mono mono ririangai itikung'ana.

Marinya nijatethagia kugwatia ngai iria ikagua na gutuma ruuji ruru rwithirwa rurio kiri kimeru. Mantu jaja jagagutethia kwelewa bwega nkuruki uria ubati gutumira njira ya urimi bubwega. Kuthingatira miitire iji iria miega buru gugagutethia kwona iketha ririega nkuruki mbura iji ijite.

## **Kuthuranira muunda**

Thuranira munda jwaku no mweri jumwe kabele ka mbura.

- Rita maria na ithaka muundene jwaku. Ukarima.
- Thuranira marinya jaku. Nijabati kwithirwa jari na warie bwa sentimeta ikumi na ithano, uraja bwa sentimeta mirongo ithatu na ithano na kwinama sentimeta ikumi na ithano. Taarania marinya jaku na sentimeta mirongo mugwanja na ithano kana nkuruki.
- Jukia mboleo inkai na muthetu jumwega jwa iguru na uunganie. Ujuria kirinya na muunganio juju mwanka gikinye sentimeta ithano nthiguru ya nthiguru itirimi.

## **Kuanda**

- Waanda mbeu cia mpempe (ntuku imwe gwita ijiri mbele ya mbura kwambiria), anda mpindi inya kiri muthetu kugitania kirinya.
- Kethira ni ugimbi ukuanda, anda mpindi ithano gwita ithanthatu o muthiene jwa o kirinya gia kuanda nyuma ya mbura injega mma yaura.
- Kunikira mbeu na sentimeta 2.5 cia muunganio juria jwa muthetu jumunoru na mboleo.

Nyuma ya kwongera muunganio juju kirinya kibai kwithirwa kiri senimeta 2.5 nthiguru ya naria nthiguru itirimi.

- Kanya karia gagutigwa kirinyene iguru nigatethagia ruuji gukinyira imera riria mbura iijaga.
- Gutina aja ya gutumira fertilizer cia kuguura kiri muunda jwaurimi jumwega. Imera biaku bikathithia bwega kinya warega gutumira fertilizer, wekira mboleo ing'ani.

## **Gukuurira iria**

- Kuurira iria akui na irinya o igita o igita.
- Ugakurira munda junthe iria rionthe. Oome ya marinya, imera nobikunikire muthetu, bikajuika jurina gapio na bigatuma jutakamatwe ni mbura kana ruugo. Kuurira iria aki marinyene na akui na marinya. Tuumira kibanga gukurira iria gati gati kalaini kana itigatinekuuma kirinya gwita kingi. Kurira iria o igita o igita nikenda maria jatiraciare mbeu na jatamba marinyene.
- Tiga matigari jam aria muundene kenda joorera ku. Bubu bugatethia kuongera unoru bwa muthetu. aria ubati kuthithia warikia guketha
- Ukaithia matigari ja muunda. Jatige nthiguru nikenda jomba gutuma muthetu junora nkuruki. Matigari ja imera no jatumirwe kinya kuthithia mboleo.
- Ukarithia ndithia muundene. Itu rikana, tukagwirua mono gukeneera iketha riaku ririnene na kuthoma kuumania na miitire imiega buru ntuurene yaku gukurukira gazeti iji amwe na igitene ria mucemanio jwaku jwa cluster.

Ambiria kurita ngugi thaa iji!

# Mazingira Bora



## TIST

The International Small Group & Tree Planting Program  
www.tist.org

**Kikuyu Version**

*TIST is an innovative, time -  
tested, afforestation program led  
by the participants.*



Mkutano wa nguzo ya Kingo TIST Uliofanyika tarehe 25/8/2021. Mada zilizofunzwa wakati wa mkutano huu ni pamoja na Kilimo cha Uhifadhi, Usimamizi wa Kitalu na Mabadiliko ya Tabianchi. Mkutano ujao utakuwa tarehe 29/9/2021.

- Thiini** Kamugaka A TIST Small Group: Kurima Miti Kundu Kwaraga. Page 2
- wa** Mitaratara miega ya ikundi nini: Makinya ma ciiko na makinya ma mibango. Page 3
- ngathiti:** Riu ambiriria kurutithia mubango waku wira mecemanio uyu ungi uukite. Page 4
- TIST: Kuhurana na giko. Page 4
- Kuhariria thumu wa mborera – bataraita ya kimerera. Page 5
- Mahinda ma kuhariria mugunda waku niundu wa Kilimo Hai. Page 6



# Kamugaka A TIST Small Group: Kurima Miti Kundu Kwaraga.

*Mwandikini Jackson Maina, TIST SG member.*

**H**indi iria TIST yokire guuku gwitu mwaka wa 2008, aingi aitu matiataukiirwo uria mradi unguiciria guuka kundu kwaraga kuhandithia miti. Mahinda maingi twonaga miradi ya miti kundu kuria gukoragwo na mbura kana mititu-ini.

Ona gukiri uoguo, twitaugire tugerie. Nitwaheirwo hinya ni uratani na wandikithia wa ikundi wari hatari kuriha. Koguo tukiona ni mradi wa ma. Gutiri kindu tiga mathaa maitu tungiateire. Ta andu aitura rimwe, tukiambiriria guthiaga micemanio yao. Tukimenya ati TIST yambitie hau kabere miaka itatu – mwaka-ini wa 2005 – na niyatheremete na ihenya miena ya Nanyuki na Meru. Micemanio niyatuteithirie muno. Makiria tugithoma uria twagiriirwo kwibanga turi tukundi tunini. Hau kabere, twakoragwo na ikundi nene muno iria ciari na hinya na gutongoria. Koguo, tukundi tunini ni twatuheire kamweke ga kurutithania wira hamwe. Uyu wari uhoro wa gikiro kinene hari ithui. Tukiambiriria kuona bata wa kuruta wira hamwe na guteithania. Twambiriirie na guthondeka nathari itu hamwe. Tukigayana wira nathari-ini. O mumemba ari na duty yake yakuramata na kuhe maai miti. Njira ino niyatuteithirie gukoro na miti na gucuji 100% gukorwo igikura yothe nathari-ini itekuuma. Undu uyu niwatuheire hinya muingi wa guthii na mbere.

O kahinda-ini kau, tukihe gakundi gaitu titwa - Kamugaka A. Na gakiandikithio thiini wa TIST na namba 2008KE2222. Ino namba ni ya mwanya na ni huthu hari mumemba wothe na ikaririkana kwa uhuthu.

Nitwathire na mbere na guthii micemanio ya Cluster. Cluster itu Kiriogo ni yathire na mbere na gutherema. Nitwateithiriirie gutheremia TIST ng'ongo na miena yothe. Arimi aingi ni magiire na

wendi na makingira TIST. Muthuri ti Mr. Jinaris Wagachoya ni wee wari mutongoria wa TSE hindi iyo. Niateithirie Cluster itu ikure wega. Clusters ingi ciambiriirie ni Jinaris ni hamwe na Wiyumiriririe na Wamura. Thutha wa TSE, nitwathire na gwitheremia ithui ene. Umuthi ni tutheremete na gukugia na Clusters ingi igiri – Sugurio na Nyambuguchi Clusters.

Nitucooke Kamugaka A. Gakundi gaitu gathiite na mbere na kuruta wira hamwe. Nituteithanagia kwenja marima ma miti hamwe hamwe na kumihanda. Kioneki giitu hari uhandi wa miti ni kuhandia miti ya mithemba ngurani. Tuhandaga miti ya matunda, ya kiunduire nay a guuka. Umuthi migunda itu ikoragwo iri miruru hingo ciothe. Miti iria tuhandite ni ta Avacado, Cyprus, Guava, Gravellia, Orange, Lemon, Custard Apple, Gravellia, prunus, mitero na ingi miingi. Miti iria tutariirwo ni 2,197. No namba itu ni makiria tondu twonire tuhande miti ikuhaniriirie nigetha tukagetha iria iri gatagati wa 2m tukona ngu nayo miti ya TIST igathii na mbere na gutheria riera.

Twina gikeno turi TIST. Nitwonete maciaro maingi ta matunda, ngu, mahuti ma mahiu and makiria tugathondeka riera ria mwanya migunda-ini itu. Migunda-ini itu ina riera ihoreru gukira mbere ya tuhandite miti. Ona ruhuho rukanyiha. Miti nayo ikahe irio iria tuhandite kigunyi na tukona maciaro mega makiria riria turimite urimi wa Conservation Farming (CF)

Uhoro wigie marihi, nitukoretwo tukiamukira marihi ma warubaji (Pre-payment). Mweri muthuru ni twamukiririre makiria ma shilingi 74,000 ci faida ya kaboni. Twin a ngatho kuri TIST. Riu nitugite hinya mweru wa guthii na mbere na TIST nigetha tuthii na mbere na gwiteithia, guteithia andu aitu o hamwe na maria maturigiciirie.



# Mitaratara miega ya ikundi nini: Makinya ma ciiko na makinya ma mibango.

**I**kundi cia TIST niciikaga maundu maingi makwoneka: kuhanda miti na kwagirithia urimi. Riria kuri na wira muingi wa kurutwo, niwega guthondeka makinya ma ciiko. O memba wa gikundi niagiriirwo nikwira aria angi uria magiriirwo ni gwika kiumia kiu. Nituguguthomithia ohamwe na gikundi kianyu uria muguthondeka mubango wa ciiko. Menyithia amemba aria angi uhoro uyu mucemano-ini.

Mubango uyu ni kindu ta giki:

- Maundu ma bata.
- Maundu maria maroneka
- Maundu maria mangithimika.
- Maundu maria mari na kiambiriria na muthia.
- Tigirira makinya maku nomahoteke.

Kwa muhiano, kuga niukuhanda muti ti giiko. Kuga (giroko ithatu niguhanda miti 75 mugunda-ini) ni giiko tondu undu ucio uri na bata na niurauga kaundu(kuhanda miti 75), niuroneka (andu nimakuona) nouthimike (miti 75, irooko 3) na uri na kiambiriria na muthia (thutha wa matuku 3 niukuona maciaro).

Gikundi giaku giacemania ringi, itikiria ndagika 10 mucemano ugithira niguo o mundu aheane mubango wake wa ciiko. Omundu naihehnya:

- (1) **Ira gikundi mubango wao wa kiumia kihituku.**
- (2) **Hutia maundu maria mekite.**
- (3) **Uga mibango iria igukorwo kuo kiumia giukite.**

Murimi angihota gukinyaniria mubango wa ciiko aria angi niagiriirwo ni kumukenerera.

Na angikorwo, ta uria maita maingi gukoagwo andu makiambiriria ati mukinyaniirie ciiko imwe, gikundi nikiagiriirwo gwikira murimi hinya na matikamurute mahitia. Riria andu mari na kamweke ga kwiyaria na kuga maria mahotete na

maria matanahota nimahotaga kugia na hinya wa guthii na mbere a kiumia. Hinyiriria arimi a gikundi giaku makorwo na mubango wa ciiko unghoteteka. Tigirira ati mubango ucio niuraririria kindu! Araniriai na muonanie ciiko iria muhotete.

## **Makinya ma mbango wa ciiko.**

Njira ihanaine no ihuthirwo riria urehariria. Haha hari na cionereria.

**Kwaririria kindu** (gikundi gitu kia TIST nigikuhanda miti 1000 thibitari-ini tugikinyiria November 30)

**mangithimika** (Miti iigana? Miti 1000 niyo ikuhandwo)

**Ingihoteteka** (Gikundi gitu gia TIST nokihande miti 1000 hari ciumia 5 – miti 100 o wakeri na wakana, miti 10 o mundu o muthenya.)

**Mahinda** (turi na kiambiriria na muthia-nitukuhanda miti gatagati ka October 15 – November 30)

**Ingioneka** (nginya ngi niirakwona ukihanda miti) Smarto.

Giki nikigeranio giakuonania kana niurarumirira mubango waku:

1. **Kii?** (Kuhanda miti 1000)
2. **Uu?** (Riitwa ria memba wa TIST)
3. **O ri?** (October 15 – November 30)
4. **O ku?** (Thibiari-ini)
5. **Atia** (tucemanagia o wa-keri na wa-kana miaraho thutha wa kuruta wira na tukenja marima na tukuhanda miti)
6. **Niki?** (niguo kwagirithia thibitari niguo kuhe arwaru handu ha kiiruru)

Niwega kugeria maundu macio mucemano-ini wa ikundi cianyu.



# Riu ambiriria kurutithia mubango waku wira mecemanio uyu ungi ukite.

**K**ujengana: Ndukahitukwo ni irathimo thiini wa gikundi kianyu. Kujengana ni gicunji kia bata thiini wa TIST micemanio-ini ya o wiki. Thiini wa Ephisians 4:15,16 ati twakane turi thiini wa kristo. O mundu thiini wa gikundi kinini kia TIST arehage kiheo giake kia mwanya na akahe gikundi giothe. Maundu mamwe ma magegania mahanikaga thiini wa gikundi ni gukurana na kuhuthira iheo iria mahetwo ni Ngai.

Kujengana ni njira ya kuona na kurutithia iheo wira. Kuri na miena iiri thiini wa Kujengana:

- mbere ya mahoya ma kuhinga, o mundu thiini wa gikundi akauga kindu kime kirahutia kaundu na nikiauthii wa na-mbere karia mutongoria eka thiini wa mucemanio. Kwa muhiano, atheka, aiga mathaa, akorwo na mubango mwega, ekira arimi hinya kwaria, angeithia na atuma njigue ndi mucii, auga kaundu thiini wa mucemanio na gatuma mucemanio uthii na-mbere wega. O mundu agiriirwo nikuga kaundu ngurani. Kaundu gaka ni ka muhaka. O mundu auge kaundu ga kujengana kuri atungata. Ikundi ingi niciheanaga kujengana kuri munini wa mutongoria.

- Na makiria, angikorwo mundu nionete kiheo kuma kuri mutongoria, no age uguo.

Tukihuthira utongoria wa guthiururukana, o kiumia mutongoria mweru niakwamukira kujengana. Kuhitukira Kujengana, niturahinyiriria arimi na mutongoria guthii na-mbere na maundu mega kiumia kiu.

Kujengana ni njira njega ya gukurana na kumenya kiria mundu arathimiirwo. Ithuothe twirute kwaragia maundu meega. Na makiria gikundi gikona maundu maria mega na mabata mekitwo ni atungati. Mutongoria uria uguka niagukorwo athomete kuma kuri atongoria aria angi.

Hari kujengana ututngati wa kiumia kiu agacokeria andu ngatho o thutha wa o mumembakuheana uhoru wake. Mutikariririe uria kaundu kangiekirwo wega na njira ngurani. Muno, mundu niakenaga riria erwo maundu mega maria ekite thiini wa mucemanio na makiria nituthomaga maundu maitu maria tutoi!

Kujengana niguteithagia mutongoria kumenya kiheo giake na guthii na-mbere na gugitumira. Kujengana niguteithagia atongoria kwagirithia utongoria o magithomaga, Kujengana ni kirathimo maita meeri.

## TIST: Kuhurana na giko.

Giko ni kindu kiumanaga na andu kuruta wira na niindo ta,

- Mai ma mundu.
- Matigari ma irio.
- Maratathi mahuthiku.
- Cuma nguru na betiri huthiku.

### Nikii kirehaga giki matuuraini?

Giko gitingiithemwo no nikiingihagio ni:

- Njira njuru cia uhuthir wa indo.
- Kwaga njira cia kuhuthira indo ringi.
- Kwaga njira cia gute giko.
- Kwaga umenyo wa mogwati ma giko.

### Mathina maria marehagwo ni giko.

- Maratathi ma kihaaro na miciiini.
- Kwaga uthaka miciiini.

- Guthukio kwa riera, maai na tiir ohamwe na gututhuka kwa mirimu.
- Guthingana kwa njira cia maai.
- Guthukio kwa riera ria kuhuhia.
- Guthukio gwa ciana riria cirathaka.

### Niatia gikundi kianyu kingika niguo kunyihia thina uyu wa giko?

- Kunyihia njiracia kurehe giko.
- Kuhuthira njira cia riuu handu ha betiri.
- Kuhuthira ringi indi.
- Gutua giko thumu wa kuhuthira mugundaini.
- Kwenja irima ria kiara.
- Gucina maratathi.

- Ndugacine betiri tondu nocituthuke, cikie kioro kia irima.





## Kuhariria thumu wa mborera – bataraita ya kimerera.

**T** humu wa mborera ni bataraita ya kimerera iria iteithagia mimera gukura wega. Bataraita ino ni njega gukira ya nduka tondu I ya kimerera, ndiri thogora, ndithukagia mimera hamwe na maria maturigiciirie ta uria bataraita imwe cia nduka ciikaga. Kuri njira ngurani uria unghota gwithondekera thumu waku wa mborera. Hari njira imwe iria tuguthomithia iria ikoretwo igitumirwo ni andu aiangi. Niwega urie arimi aria angu muri mucemano wa cluster ni njira iria matumagira.

### Kuhariria guthondeka thumu:

1. Chagura handu haria ikwenja irima riaku ria mita inya kwa inya.
2. Theria handu hau.
3. Haririria kana uchimbe irima ria warie wa mita ithatu nginya inya na iriku wa mita imwe na nuthu.
4. Cokereria hamwe maragara maku moth eta mahuti, mabebe , maboco kana muhia na umatinangie tuchunji tunini.
5. Iki maragara macio irima-ini riaku kwa uriku wa nuthu mita.
6. Ongerera lita ithano cia muhu.
7. Thutha ucio, ongerera thumu wa ng'ombe kana mburi kana nguku kana nguruwe kwa uriku ta fiti imwe.

8. Ongerera maragara mangi inguru ta nuthu mita.
9. Ongerera lita ithano cia muhu.
10. Ongerera maragara maku nginya irima riaku rikirie kuiyura.
11. Wa muthia, humbura na tiiri nginya iria riyyure.
12. Hindi iria urahumbira na tiri, handa kamuti nginya kahutie irimariaku gitina.
13. Eterera gwa kahinda ka thiku 90 kana mieri itatu.
14. Gwa kahida gaaka korwo ugiririria thumu waku maai maku ma giiko. Ungikorwo ni ukuhota ona mathugumo ma mahiu maku uitiririe.
15. Mathugumo ni mateithagia kuongera nitrogen.
16. Geria guitagiriria maai na muthugomo kwa mahinda makuhi.
17. Thutha wa thiku mirongo kenda, thumu waku ugakorwo uri muhiu.

Tumira kamuti karia uhandire ta githimi giaku. Hindi iria thumu waku wahia, wagiririrwo gukorwo wi muhiu na wacomora kamuti niwagirirwo ni kurata ndogo ya urugari.

### Uhuthiri wa thumu waku wa mborera:

Warikia kuhariria marima maku ma mbembe kana muhia kana o mimera iria ingi urahanda, ikira thumu muigana wa m oko maku o hari o irima. Eterera wone maciaro!



# Mahinda ma kuhariria mugunda waku niundu wa Kilimo Hai.

Arimi aria marimite na Kilimo Hai mari na uira ati magetha ni maingi gukira urimi wa ki-nduire na makiria riria mbura iri nini.

Marima nimateithagia maai ma mbura kuigika na guteithia mimera na njira iria njega.

Uhorro uyu niuguguteithia gutaauko wega uria unguiteithika na Kilimo Hai. Kurumirira mitaratara miega niguguguteithia kugia na magetha mega.

## Kuhariria mugunda waku.

- Hariria mugunda waku mweri umwe mbere ya mbura yurite.
- Tuguta mahuti maria mari mugunda-ini, ndukarime.
- Enja marima ma rectangle. Magiriirwo nigukorwo na warii wa 15cm na uraihu wa 35cm na uriku wa 15cm na umataganie na utaganu wa 75cm.
- Ikira thumu na tiiri wa iguru na utukanie. Ikira mutukanio ucio na utigie 5cm.

## Kuhanda

- riria wahanda mbembe(matuku 1-2 mbere ya mbura yurite), handa mbegu 4 irimaini.
- Wahanda muhia, handa 5-6 irima-ini thutha wa mbura kuura.

- Humbira mbegu na tiiri muigana wa 2.5cm.
- Haria irima ritaiyurite hateithagiriria kuiga maai.

Ndurabatara gutumira fertilizer ukihuthira Kilimo Hai. Mimera yaku no igukura wega ona hatari fertilizer ungikira thumu muiganu.

## Kurimira.

- rirmira irimaini maita maingi.
- Ndukarimir mugunda wothe. Nja ya irima, mimera no ihumbiretiiri, niguo kuuiga uri mugunyu. Rimira hakuhi na irima. Huthira ruhiu kwehutia riia riria riri gatagati-ini ka mimera. Rimira maita maingi niguo riia ritikaingihe irima-ini.
- Mahuti ma riia riria watuguta matige mugunda-ini. Njira ino niyongagirira unoru tiiri-ini.

## Maundu ma thutha wa kugetha.

- Ndugacine mahuti mugunda thutha wa magetha. Tiga mahuti macio mugunfa-ini niguo manorie tiiri. Matigari ma mimera nomathondeke thumu.
- Ndukariithie mahiu mugunda-ini, ririkana nitugakena tugikunguira magetha maku na guthoma kuma kuri wee.

Ambiriria wira riu.

# Mazingira Bora



## TIST

The International Small Group & Tree Planting Program  
www.tist.org

**Kiswahili Version**

*TIST is an innovative, time -  
tested, afforestation program led  
by the participants.*



**Mkutano wa nguzo ya Kingo TIST Uliofanyika tarehe 25/8/2021. Mada zilizofunzwa wakati wa mkutano huu ni pamoja na Kilimo cha Uhifadhi, Usimamizi wa Kitalu na Mabadiliko ya Tabianchi. Mkutano ujao utakuwa tarehe 29/9/2021.**

- Ndani  
ya  
Gazetti:**
- Kamugaka Kikundi Kidogo cha TIST: Kupanda Miti katika Maeneo Kame. Uk. 2**
  - Mienendo bora zaidi ya vikundi vidogo ya kufanya mambo tofauti: Hatua za kuchukua na kupangia hatua. Uk. 3**
  - Kujengana: Msikose baraka ya Kikundi chenu. Uk. 4**
  - Usimamizi wa taka. Uk. 4**
  - Kutengeneza mbolea kutokana na mimea – mbolea ya kiasili. Uk. 5**
  - Ni wakati wa kutayarisha shamba lako la Kilimo hai. Uk. 6**



# **Kamugaka Kikundi Kidogo cha TIST: Kupanda Miti katika Maeneo Kame.**

*Na Jackson Maina, mwanachama wa TIST SG.*

**W**akati TIST ilianzishwa katika eneo letu mnamo 2008, wengi wetu hatukuweza kuelewa ni kwanini mpango huu uliamua juu ya maeneo yetu kame ya upandaji miti. Tumeona kila mara mipango ya upandaji miti ikienda kwenye maeneo yenye uwezo mkubwa au kwenye misitu.

Walakini, tuliamua kujaribu. Tulihimizwa kuwa mafunzo na usajili ulikuwa bure. Kwa hivyo tulijua hii ni programu ya kweli. Hatukuwa na chochote cha kupoteza isipokuwa wakati wetu. Tukiwa majirani, tulianza kuhudhuria mikutano yao. Tulijifunza kuwa TIST imekuwa ikiwepo Kenya miaka mitatu (3) nyuma - kutoka mwaka 2005 - na ilikuwa imeenea haraka sana katika maeneo ya Nanyuki na Meru.

Mikutano ilitusaidia sana. Muhimu, tulijifunza jinsi ya kujipanga katika Vikundi Vidogo. Kabla ya hii, tulikuwa tumezoea vikundi vikubwa ambavyo haikuwa rahisi kukimbia. Kwa hivyo, Vikundi Vidogo vilitupa fursa ya kufanya kazi kwa karibu. Kwetu, hii ilikuwa mafanikio. Tulianza kuthamini umuhimu wa kufanya kazi na kusaidiana. Tulianza kufanya kazi kwenye kitalu chetu cha Kikundi Kidogo. Tulishirikiana kazi kwenye kitalu. Hii ilituwezesha kuwa na utunzaji wa wakati wote na umakini kwa kitalu. Kila mshiriki alikuwa na jukumu la kuzunguka kumwagilia miche na kuipalilia. Kwa kwanza tangu tulipokuja hapa, miche yetu ilinusurika kwa 100% katika vitalu vyetu. Hii ilikuwa ya kushangaza! Tulitiwa moyo sana na kutiwa moyo.

Hivi karibuni, tulilipa kikundi chetu jina - Kamugaka A. Ilipewa usajili wa TIST 2008KE2222. Nambari maalum sana ambayo washiriki wote wanakumbuka kwa urahisi.

Tuliendelea kuhudhuria mikutano ya nguzo. Nguzo yetu Kiriogo, ilianza kukua. Tulisaidia katika kueneza TIST kwa majirani zetu katika viunga na

mabonde. Wakulima wengi walipendezwa na wakajiunga na TIST. Bwana Jinaris Wagachoya alikuwa kiongozi wa TSE. Alisimamia ukuaji wetu wa Nguzo vizuri sana. Makundi mengine ambayo yalianzishwa na Jinaris yalikuwa Makundi ya Wiyumiririeand Wamura. Baada ya TSE, tuliendelea kupanuka na sisi wenyewe. Leo, tumeongeza Vikundi viwili zaidi - Sugurio na Vikundi vya Nyambuguchi.

Rudi Kamugaka A. Kikundi chetu Kidogo kiliendelea kufanya kazi pamoja. Tulisaidiana kuandaa mashimo na katika kupanda miti. Lengo letu la upandaji miti daima imekuwa upandaji wa spishi mchanganyiko. Sisi hujumuisha miti ya matunda, miti ya asili na ya kigeni katika mashamba yetu. Leo, mashamba yetu ni ya kijani kibichi kila wakati. Aina bora ni Avacado, Kupro, Guava, Gravellia, Chungwa, Limau, Apple ya Custard, Gravellia, prunus, mitero kati ya zingine. Jumla ya miti ya kikundi imehesabiwa ni 2197. Walakini, nambari hii ni kubwa kwa sababu ya kuhesabu kuruka. Tuliamua kupanda miti katika nafasi isiyozidi m 2 iliyopendekezwa na TIST ili tupate nyembamba kwa mahitaji yetu ya kuni tunaporuhusu miti ya TIST iendeleo kutafuta kaboni kutoka angani. Tunafurahi katika TIST. Tumepata faida nyingi pamoja na matunda, kuni, lishe kwa watoto wetu na muhimu, tume "unda" hali yetu ya hewa maalum. Mashamba yetu ni baridi sana kuliko wakati wowote kabla ya sisi kupanda miti. Upepo umepunguzwa sana. Kuna kivuli kingi kwa mazao yetu kwa hivyo kinatusaidia kupata mavuno bora haswa tunapofanya kilimo cha Uhifadhi.

Juu ya malipo, tumekuwa tukipokea malipo ya mapema. Mwezi uliopita, tulipokea zaidi ya Ksh 74,000 mapato ya hisa ya Carbon. Tunashukuru TIST. Sasa tuna nguvu zaidi ya kushiriki kikamilifu katika TIST kwa faida yetu na kwa faida ya jamii yetu na mazingira.



# Mienendo bora zaidi ya vikundi vidogo ya kufanya mambo tofauti: Hatua za kuchukua na kupangia hatua.

Vikundi vingi vya TIST hufanya kazi nyingi zinazoonekana: kupanda miti na kuboresha mbinu za ukulima. Wakati kuna kazi nyingi inayohitaji kufanyika, ni vizuri kufanya mpango wa hatua zitakazochukuliwa. Kila mwanakikundi afaa kuambia kikundi ni kitu gani wataweza kufanya katika wiki hiyo. Tutawafunza nyinyi na kikundi chenu jinsi ya kufanya mpango wa hatua zitakachochukulia kufanya kazi hiyo. Tafadhali gawana haya na wanakikundi wengine wakati wa mkutano.

Hatua ya Utekelezaji ni iliyo:

- Maalum.
- Inayoonekana (Nzi iliyo ukutani yaweza kukuona ukifanya!)
- Inayopimika.
- Iliyo na mwanzo na mwisho.
- Hakikisha hatua yako ya utekelezaji ni itakayowezekana na unayoweza kufikia!

Kwa mfano, kusema ‘Nitapanda miti’ si hatua ya Utekelezaji kwa sababu ni taarifa ya ujumla. ‘Nitafanya kazi asubuhi tatu wiki hii kupandikiza miche sabini na tano shambani letu jipya’ ni hatua ya utekelezaji kwa sababu ni **iliyo maalum** (kupandikiza miche sabini na tano), **inayoonekana** (watu waweza kukuona ukifanya), **inayopimika** (miche sabini na tano, asubuhi tatu) na **ina mwanzo na mwisho** (mwishoni mwa siku tatu utaona matokeo).

Kikundi chako kitakapokutana tena, ruhusu dakika tano mwishoni mwa mkutano ili kila mtu aripoti kuhusu hatua yake mwenyewe ya utekelezaji. Kila mtu haraka:

- (1) **Aambie kikundi hatua yake ya utekelezaji ya wiki iliyopita.**
- (2) **Aseme ni nini chenyewe alichofanya.**
- (3) **Aseme hatua yake ya utekelezaji ya wiki inayofuata.**

Kama huyo mtu alifanikiwa katika hatua yake ya utekelezaji, kikundi kinasherehekea fanikio hilo. Ikiwa, kama mara mengi inavyotokea, mwanakikundi ameweza kufanikiwa kufikia kiwango fulani cha lengo lake, kikundi kimtie nguvu na kisimkosoe au kumtia lawama. Watu wanapoweza kugawana bila hofu kuhusu mafanikio na kutofaulu kwao, watahimizwa kufanya vyema zaidi wiki inayofuatilia. Himiza wana kikundi chako kufikiria hatua za utekelezaji zinazowezekana. Hakikisha kila mojawapo ni

maalum, inapimika na inawezekana! Gawana na msherehekee hatua za utekelezaji kikundi chako kilichotimiza.

## Hatua za utekelezaji unapofanya hatua za mipango

Njia sawa yaweza kutumiwa unapopangia kitu. Hapa ni mfano katika mabano. Wakati kikundi chako kinapopanga kitakavyofanya, hakikisha mipango yenu ni:

**Specific- Maalum** (Kikundi chetu cha TIST kitapanda miti elfu moja katika hospitali mtaani kabla ya tarehe thelathini, Novemba)

**Measurable- Inapimika** (Ngapi? - Miti elfu moja itapandwa)

**Achievable/Realistic – Inayoweza kufikiwa** (Kikundi chetu cha TIST chaweza kupanda miti elfu moja katika muda wa wiki tano- miti mia moja kila jumanne na alhamisi, miti kumi kwa kila mmoja kila kila siku)

**Time-bound- Inapimiwa muda** (Ina mwanzo na mwisho- tutapanda miti kati ya tarehe kumi na tano, Octoba hadi tarehe thelathini Novemba)

**Observable- Inaonekana** (Nzi ukutani yaweza kukuona tukipanda miti. )  
SMARTO!

Huu ni mwongozo na kipimo cha hatua zako za utekelezaji na unakusaidia kuwa maalum:

- 1) **Nini** – (Kupanda miti elfu moja)
- 2) **Nani** – (Wana Kikundi kidogo cha TIST kwa jina)
- 3) **Lini** – (Octoba 15 – Novemba 30)
- 4) **Wapi** – (Hospitalini)
- 5) **Aje** – (Tutakutana kila Jumanne na Alhamisi alasiri baada ya joto la siku na kuchimba mashimo, halafu tupande miti)
- 6) **Kwa nini** – (Kuboresha eneo linalozunguka hospitali, tuwe na kivuli zaidi kwa wagonjwa na wageni, watu waweze kukaa chini ya miti na kivuli kitafanya hospitali iwe baridi zaidi.)

Sasa, jaribu kujioesha kufanya hatua za mipango katika mkutano wako wa kikundi kidogo ujao.



## Kujengana: Msikose baraka ya Kikundi chenu.

**K**ujengana ni sehemu muhimu sana ya mkutano wa kila wiki wa kikundi chako. Inasema katika Aefeso 4:15,16 kuwa tujengane hadi tuwe na utimilifu wa Kristu. Kila mtu katika Kikundi chako cha TIST huleta talanta na zawadi zake maalum kikundini. Moja ya vitu vya kuajabisha inayotokea katika kikundi kidogo ni kujua, kugawana na kutumia talanta hizo ulizopewa na Mungu.

Kujengana ni njia moja ya kufanya hizo talanta kuonekana na kutumika. Kuna sehemu mbili za Kujengana:

- Kabla ya ombi la kufunga, kila mtu katika kikundi aseme kitu kizuri maalum ambacho kiongozi amefanya katika mkutano huo. Kwa mfano, alitabasamu, aliweka masaa, alifanya mipango mizuri, aliwatia nguvu wanakikundi wote kuongea, alinisalimu na alinifanya nijisikie nimekaribishwa, alisema kitu kilichokuwa kinaendelea vizuri katika mkutano ama katika kazi iliyokuwa ikifanywa na kikundi, na kadhalika. Kila mwanakikundi anahitajika kusema kitu tofauti. Hili si la kujichagulia. Kila mtu ajenge kiongozi wa utumishi. Vikundi vingine hujenga hata msaidizi wa kiongozi.
- Kuongezea, ikiwa mtu ameona zawadi iliyoonyeshwa na kiongozi, mwanakikundi anaweza pia kusema ni zawadi ipi.

Kwa kupitia uongozi wa mzunguko, kila wiki kiongozi mpya hujengwa. Kupitia Kujengana, tunatiana nguvu kati yetu kuhusu vitu vizuri alivyofanya kiongozi wa wiki hiyo mkutanoni na talanta alizoonyesha mtu huyo.

Kujengana pia ni njia ya kujua kuangalia vitu vizuri kuwahuu watu halafu kuvisema. Sote twahitaji kufunza ndimi zetu kusema yaliyo mazuri. Kuongezea, kikundi chote hujua ni nini kikundi kinafikilia ni muhimu katika kiongozi mtumishi. Viongozi wanaofuata watafaidika kupitia waliosikia katika Kujengana kuhusu viongozi waliopita na kujua ni nini muhimu katika kuwa kiongozi.

Kujibu wakati wa kujengana, kiongozi wa wiki hiyo atasema, "Asante." baada ya kila mwanakikundi kusema taarifa nzuri iliyo maalum. Hakuna kujadiliana kuhusu vipi kungekuwa kuzuri zaidi ama tofauti. Mara nyingi, mtu huyo hufurahi anapoambiwa kuhusu mambo mazuri aliyofanya wakati wa mkutano. Wakati mwingine, huwa tunajua mambo kujihusu ambayo hatukuwa tunajua!

Kujengana husaidia kiongozi wa siku hiyo kujua talanta zake na kuzidi kuzitumia. Kujengana pia husaidia kikundi kidogo kwa sababu wana kikundi wote huboresha uongozi wao wa utumishi wanapozidi kujifunza.

Kujengana ni baraka mara mbili!

## Usimamizi wa taka.

**T**aka ni kitu chochote kinachotokana na mazi za binadamu na yaweza kukosa utumizi wa mara moja, na ni pamoja na:

- Choo cha binadamu
- Uchafu wa nyumba kama mabaki ya chakula.
- Makaratasi yasiyotumika
- Mifuko ya mpira
- Chuma, betri zimeisha (seli kavu)
- Maji taka sludge nk

### Ni nini husababisha shida za taka katika eneo lako?

Taka haiwezi kuepukika lakini yafanywa kuwa shida zaidi na:

- Matumizi mabaya ya rasilimali
- Ukosefu wa njia za kutumia tena
- Ukosefu wa mahali pa kutupa taka (mashimo ya taka, vyoo vya kuchimba)
- Ukosefu wa ujuzi wa hatari za usimamizi mbaya wa taka

### Usimamizi mbaya wa taka husababisha.

- Uchafuzi wa mashamba na viwanja, kupoteza urembo wa eneo hilo

- Uchafuzi wa maji, hewa na udongo
- Kuenea kwa magonjwa
- Kufungana kwa paipu za kuondoa maji taka
- Sumu na moshi mbaya kutokana na betri nzee

Watoto na wanyama waweza kupata sumu au kuumizwa wakiokota na kucheza na mawe mazee na taka nyinginezo.

### Kikundi kidogo chako chaweza kufanya nini kutatua shida hii?

- Kupunguza kutengeneza kwa taka.
- Fikiria kutumia vifaa vinavyotumia nishati kutokana na jua badala ya nishati inayotokana na betri inapowezekana.
- Kutumia tena – tumia vitu tena inapowezekana (mfano, mifuko ya mpira)
- Kutengeneza mbolea – weka uchafu unaoza (mabaki ya chakula cha binadamu na cha mifugo) kama mbolea ya kutumia katika kulima.
- Chimba shimo la taka kiwanjani mwako.
- Kumbuka kuchoma makaratasi na kadi pekee. Usichome betri kwani yaweza kulipuka. Yaweke katika vyoo vya shimo.



# Kutengeneza mbolea kutokana na mimea – mbolea ya kiasili.

**M**boleo ya majani ni mbolea ya kiasilia ya kusaidia mimea yako kukua. Ni bora zaidi ya mbolea za viwanda kwani ni ya kiasili na haina athari za kuumiza mimea na mazingira. Kuna njia nyingi za kutengeneza mbolea, lakini njia ifuatayo imekuwa saidifu katika baadhi ya maeneo. Uliza majirani zako katika cluster yako ni gani imewaonekana.

## Utayarishaji wa mbolea:

- 1) Chagua eneo lenye upana wa mita nne na urefu wa mita nne la kuchimba shimo lako la taka.
- 2) Fagia sehemu hiyo.
- 3) Chimba shimo la mduara lenye upana wa mita tatu au nne na mita moja na nusu kina.
- 4) Kusanya masala yote ya mimea uliyo nayo na uyakate kuwa sehemu ndogo ndogo ( kwa mfano majani na mashina ya mahindi, mtama, maharagwe).
- 5) Weka masala haya ya mimea katika shimo ilo hadi kina cha nusu mita.
- 6) Halafu ongeza lita tano za jivu
- 7) Halafu uongeze centimita thelathini (ama kiwango kilichopo) za kinyesi cha mifugo (kwa mfano kinyesi cha nguruwe, ng'ombe, mbuzi au kuku).
- 8) Ongeza safu nyingine ya majani ya mimea na mashina (nusu mita).
- 9) Ongeza lita zingine tano za jivu.
- 10) Ongeza majani na mashina tena hadi shimo likaribie kujaa.
- 11) Hatimaye, ongeza safu ya udongo hadi shimo lijae.
- 12) Unapokuwa ukiweka udongo shimoni, ingiza fimbo ndefu katikati mwa shimo hadi ifike chini ya shimo.
- 13) Liache shimo la taka kwa miezi mitatu (siku tisini).
- 14) Katika kipindi hiki tumia maji yako machafu kuweka katika shimo hili. Kwa mfano, baada ya kuosha nguo au nyumba, yamwage maji uliyotumia juu ya shimo. Ikiwa una mifugo waweza pia kumwaga mikojo ya mifugo juu ya shimo.
- 15) Jambo hili litaongeza naitrojeni kwa mboleo yako.
- 16) Jaribu kuweka maji kila siku kwa njia hii, ama wakati maji yapo.
- 17) Baada ya siku tisini mbolea itakuwa tayari.

Tumia fimbo kama kipima joto – mbolea inapokuwa tayari lazima iwe na joto na waweza kuona mvuke ukitoka kwa fimbo hiyo baada ya kuitoa.

## Matumizi ya mbolea hii:

Ukishachimba mashimo yako ya kupanda mahindi, mtama au mimea mingine, ongeza mboleo kiwango kinachotoshea katika kiganja chako katika kila shimo. Angalia ili kujua matokeo!



# Ni wakati wa kutayarisha shamba lako la Kilimo hai.

**W**anaTIST katika vikundi vidogo ambao wamelima kwa kutumia njia ya Kilimo hai wameshuhudia kuwa ukulima bora una vuno bora na la kuaminika kuliko ukulima wa kawaida, san asana wakati mvua haitoshi. Mashimo husaidia kushika mvua wowote unaonyesha na kuyawezesha haya maji kupatikana kwa mmea.

Makala haya yatakusaidia kuelewa zaidi kuhusu jinsi ya kujaribu kilimo hai. Kufuatilia mienendo bora ifuatayo kutakusaidia kupata mavuno bora zaidi msimu unaokuja.

## **Kutayarisha shamba.**

Tayarisha shamba lako angalau mwezi mmoja kabla ya mvua.

- Ondoa magugu na vichaka kutoka shamba lako. Usilime.
- Tayarisha mashimo yako ya umbo la mstatili. Yapaswa kuwa na upana wa sentimeta kumi na tano, urefu wa sentimeta thelathini na tano na kina cha sentimeta kumi na tano. Nafasi kutoka shimo hadi lingine iwe sentimeta sabini na tano.
- Chukua mbolea na udongo wa juu na uchanganyishe. Jaza shimo kwa huu mchanganyiko hadi sentimeta tano chini ya ardhi ya kawaida.

## **Kupanda.**

- Unapopanda mbegu ya mahindi (Siku moja au mbili kabla ya mvua), panda mbegu nne kuvuka shimo.
- Kama unapanda wimbi, panda mbegu tano au sita katika kila mwisho wa shimo la kupanda baada ya mvua tosha.

- Funika mbegu kwakutumia mchanganyiko wa udongo na mbolea. Baada ya haya udongo katika shimo uwe sentimeta mbili na nusu chini ya ardhi ya kawaida.
- Nafasi iliyopo juu ya shimo itasaidia maji kufikia mimea mvua ijapo.
- Hauhitaji kutumia mbolea za viwandani katika shamba lako la kilimo hai. Mimea yako itafanya vizuri hata bila ya mbolea za viwandani.

## **Kuondoa magugu.**

- Ondoa magugu kuzunguka mashimo mara kwa mara.
- Usipalilie shamba lote. Nje ya mashimo, mimea yaweza kufunika udongo, huku ikiuweka baridi na kuuzuia kumomonyeshwa na mvua au upepo. Tumia panga kutoa magugu katikati ya mistari au katika nafasi iliyopo kati ya mashimo. Palilia mara kwa mara kuzuia magugu kuzaa na kuenea mashimoni.
- Yawache mabaki ya magugu shambani ili yaoze. Haya yatasaidia kuongeza rutuba ya udongo.

## **Unayofaa kufanya baada ya kuvuna.**

- Usiyachome mabaki ya shamba lako. Yawache udongoni ili yaongeze rutuba ya udongo. Mabaki ya mimea yaweza pia kutumiwa kutengeneza mbolea.
- Usiwalishe ng'ombe shambani lako. Tafadhali kumbuka, tutafurahi kusherehekea vuno lako kubwa na kuijua mienendo bora katika eneo lako kupitia jarida hili pamoja na katika mkutano wako wa cluster.

Anza kufanya kazi sasa!



# Mazingira Bora



# TIST

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www.tist.org

**Kikamba Version**

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tested, afforestation program led  
by the participants.*



Ngwatanio ya TIST Kingo, wumbanoni wa matuku 25/8/2021. Kilakyamanyiiw'e wumbanoni uyu ni nima ya kusuvia (CF), Kusuvia Kivuo, movinduku ma Nzeve. wumbano wukite niwa matuku 29/9/2021.

**Inside:** Kikundi kinini kya TIST Kamugaka A kuvanda miti isioni sya mang'alata. Page 2

Mawiko maseo ma tukundi tunini, matambya maosa na walany'o wa meko/wiko. Page 3

Kwakana: Ndukavitukwe ni uathimo wa kakundi kaku kanini. Page 4

TIST: Kusuvia Kiko. Page 4

Kuseuvia vuu wa yiima -Vuu ute na kemikoo. Page 5

Ni ivinda ya kuseuvia miunda kwa nima ya kusuvia. Page 6



# Kikundi kinini kya TIST Kamugaka A kuvanda miti isioni sya mang'alata.

*Na Jackson Maina, TIST SG memba.*

**Y**ila TIST yamanyithaniw'e kisioni kii mwaka wa 2008, aingi maitu tuyaeleawa niki walanio uyu watw'ie kisio kitu kila ni ing'alata kukivanda miti. Nitweethitwe tuyona uvandi wa miti uyiebddea kula kwi miti ta mititu na isio ila ndulu.

Vailye oou nitweetikilile utata. Nitwathuthiw'e kana kumanyiw'a na kwiyandikithya ni mana. Vau nivo twamanyie walanio uu ndwina wangangania. Tuyaina wasyo eka wa ivinda yitu. Ta atuiio nitwambiie uvika mbumbanoni. Nitwamanyie kana TIST yithitwe kenya kwa ivinda ya myaka itatu - kuma 2005 na ni iyaiikite isioni sya Nanyuki na Meru.

Mbumbano ii sya tutetheeisyevanene. Kyavata twamanya undu tutonya kwivanga tukundini, mbee wa uu tweemanyitwye kwikala twi nguthu ila itakwatania uthukumini na walanioni nesa. Kwoou tukundi tunini twatunenga ivuso ya uthukuma kwa vakuvi vamwe. Kwitu wai ukilyo. Twambiia kwona useo va vata wa kuthkuma vamwe na kutethania. Twambiia kwa kuseuvia kivuio kya kakundi kaitu, kuaana wia ula wi kivuioni na tweethiwa tutonya ikwata ivinda kila umwe kuthukuma na kusuvia kivuio. Kila memba eethiwa na muthenya wake wa kungithya na kiumia tu kyumanisya kithyululu. Kwambee tweethiwa na mbeu itekwaa kivuioni ya 100% kuma twambiia walanio uyu. Uu wai usengy'o! Nitweew'ie twathuthika na kwikiwa vinya.

Okwa mituki tweenenga isyitwa Kamugaka A. Na tweeyandikithya na tist 2008KE2222. Ila ni numba ya mwanya kwa amemba maitu na matonya umililikana kwa mituki.

Nitwaendeeie uvika mbumbanoni sya ngwatanio yitu ya TIST Kiriogo na twambiia kwiana. Nitwatethheisye kunyaiikya Tist isioni ila tutuanie muingo wa usi na syandani. Aimi aingi nimendeeiw'e

na kulika nthini wa TIST. Mr. Jinaris Wagachoya niwe wai mutongoi wa TSE. Niwatongosye kwiana kwitu nesa na ngwatanio ingi sya TIST ila syambiwe ni Jinaris nita Wiyumirire na Wamura. Itina wa TSE, nitwambiie uthathaa uithyi. Umunthi nitusyaite ngwatanio ingi sya TIST ta Sugurio na Nyambuguchi.

Kakundi kaitu ka Kamugaka A kuendee kuthukuma vamwe. Nitutethanitye umwe kwa ungi nitutethanasya kwa kwisa maima na kuvanda miti. Mwilooto witu wa kuvanda miti ni kuvanda mithemba kivathukano.

Nituvuklanitye miti ya matunda , ya kiene na yakuka miundani yitu. Umunthi miunda yitu yikalaa yi ngilini.

Twina mikolovea (mivakato), Cyprus, Ivela, Gravellia, Misungwa, Mitimo, Custard Apple, Prunus, Mitero na mithemba ingi. miti ila ithianitwe na kuvitukithw'a ya kakundi kaitu ni 2197 onakau namba ino yiyiulu muno nundu wa kukilwa kuitalwa. nitwaamuie kuvanda miti yina utaaniu utavikite mita 2/ matambya eli ala metikilitw'e ni TIST nikana tukasea na kuketha imwe yangu na mavata angi tuyieka ila ya TIST iendee kwiana kwa uti wa nzeve itavisaa.

Twii atanu nthini wa TIST. Nitukethete vaita ta matunda, ngu, uithyo wa indo situ na kyavata kwailya mawithyululuko maitu. Miunda yitu yu nimithithu kwivau tenange tutanamba uvanda miti. Kiseve kingi nikioleku kwina muunyi undu wa mimea yitu na kwao kututetheesya kukwata ngetha nzeo tweeka nima ya kusuvia (CF).

Ngaliko ya Ndivi, nitwithiitwe tuikwata ndivi ya mukovo. Mwai muthelu nitunakwatwi mbee wa silingi Ksh74,000/= vaita wa kuaiwa kuma kwa uti wa nzve itavisaa. Twina muvea kwa TIST. Kwa yu twiekie vinya wa kuthukuma na TIST kwondu wa vaita witu ene na kwa vaita wa mbaitu na mawithyululuko.



## **Mawiko maseo ma tukundi tunini, matambya maosa na walany'o wa meko/wiko.**

**N**gwatanio na ikundi sya TIST nisyikaa maundu maingi ta kuvanda miti na kwongela utuika wa nima. Yila kwina wia mwingi ni useo kwosa matambya na kutavya kila umwe kila wailwe nikwithiwa avikiite kyumwa kiithela. Nituu mumanyisya undu wa kuvanga na matambya maosa. kwandaia neenanisyai kana utavye angi ma kakundi kenyu yila mwakomana mbumbanoni.

### **Itambya ya meko ni kindu:-**

- Kiamuitwe nikiva.
- Kitonya kwoneka.
- Kitonya uthimwa.
- Kina mwambiio na muthya.
- Ikiithya itambya na wiko yila woosa noyivikike na yina kitumi.

Kwa ngelekany'o 'Ni nguvanda miti' usu nuneeni ti wiko. "Kyumwa kii nithukuma mithenya itatu kumya miti 75 kivuioni na kumivanda vala yaile" yii ni itambya ya meko nundu niwinengete nginya ivinda ya kukuna wia uu. No yoneke nundu nukwoneka uivanda, ve kwambiia na kumina nundu itina wa ila mithenya itatu nitukwona undu wikite.

Yila kakundi kenyu koombana mwiikithya nimwoosa ndatika ta 20 kila umwe kuweta itambya ya meko yila wosete okwa mituki.

Kila umwe akaweta:- Itambya yila wosete kyumwani kiu kithelu Mawete kila mekite Na maiweta ni itambya na wia ungi mwau mekwika kyumwa kiatie.

Kethiwa umwe ni wa vitukiwa ni itambya yake kikundi kyothe kikatana nundu wa kwithiwa niwikite nesa.

Na ethiwa mundu akivikia yusu ya walany'o wake kikundi kikamuthuthya kumina indi ti kumutula muti na kumutalila makosa. Nundu yila andu meyelene na ukethia useo kwa umwe kana uvaluku nomawetanie na kuthuthania kwindu wa kwika nesa mbee. Thuthania tukundi tunini na kutaana iulu wa matambya na mawalany'o ala mutonya kwika kwona kila umwe akitana na kuvikia mawendi ma TIST kwa vamwe.

### **Itambya ya wiko na walany'o wa itambya**

Nzia ino no itumike kwia walany'o ta wa mbee kwa ngelekany'o yila kakundi kenyu ke kwia walany'o ikiithya.

**Amuai undu mukwika** (Kakundi kaitu ka TIST nikeuvanda miti 1,000 tuivika November 30th)

**Kithimo** (Yiana? - 1000 miti nikuvandwa)

**Niuvikiika** ( kakundi kaitu no kavande miti 1000 kwa ivinda ya sumwa itano - 100miti kila wakeli na waka, mitiikumi kwa kila umwe kwa muthenya mithenyanu isu)

**Ivinda** (vena kwambiia na kumina - ta twivanda miti kuma October 15 kinya November 30)

**Kwoneka** (wia uyu no woneke ona ni kaki ke ukutani)

**UI!** Kii ni kithimi kya matambya na mawiko na ni kitetheeasya kwithiwa na kuamua

1. **Ata** - Kuvanda miti 1000.
2. **Nuu** - Kakundi kanini ka TIST - ene kwa masyitwa.
3. **Indii** - Oct 15 - Nov 30.
4. **Va** - kiwanzani kya sivitali.
5. **Kwa nzia yiva** - Kukomana kila wakeli na wakana iya mawiyoo na kwisa maima naindi kuvanda miti.
6. **Niki** - Kwailya mawithyululuko ma sivitali , kwithiwa vena muunyi awau na ala mavika vau sivitali matonya kwikala na kuikiithya ona sivitali niyeethiwa na uthithu kumana na nzeve ila ikuma mitini.

Yu tatai kwosa itambya ya kwika itambya ya wiko yila muukomana ingi wumbanoni.



## Kwakana: Ndukavitukwe ni uathimo wa kakundi kaku kanini.

**K**wakana ni kwavata muno nthini wa kakundi kanini yila mwakomana kila kyumwa. Nthini wa Aveso 4:15 - 16 yiasya tuthuthanie ithyi kw aithyi kwindu wa uima wa Klisto. Kila umwe kakundini kenyu kanini nuetae kinengo kivathukany'o kwa kakundi kenyu. Kindu kimwe mwaile ni kwika ni kwona na kwakana na inengo ila Ngai umunengete.

Kwakana ni kueka inengo ila mwinasyo kwoneka kila kimwe kiithukuma. Ve nzia ili sya kwakana

- Mbee wa mboya sya mwiso/kuinga wumbano kila umwe niwaile uweta undu wa kuthuthia ula mutongoi wikie nthini wa wumbano usu. Kwa ngelekany'o, kukeny'a, kusuvia masaa, walany'o museo wa mivango, uneeni wa uthuthia andu maneene, ngethi itumie mundu ew'a e muthokye wumbanoni, kumya mwolooto iulu wa undu uwetiwe na weekwa ni kakundi kaa na weethiwa wi museo mbee kwa kila umwe na angi maingi. Kila umwe nowaile uneena undu onakau ni kwenda kwa mwene.
- Ethiwa nimwoona kineng'o kinenganitwe ni mutongoi wenyu nimwaile ukiweta nikana onake amanye na kwiyikia vinya.

Na utongoi wa kumanisya/kithyululu kila kyumwa mutongoi mweu akaakawa. Kwakanani kila umwe watongosya kyumwa kiiu akeethiawa akikite nundu kinengo kyake kila kitena ungi akeethiawa atonya utavya na kuthuthw'a iulu wakyo ni amemba ala angi yila meuneenea kwakana.

Kwakana ni nzia ingi ya kusisya maundu ala maseo munduni na kumaweta, ithyoonthe nitwailwe uvundisya nimi situ kuneena mauseo ma umwe kuthi ula ungi. Nikana withie kila umwe niwoona na kusoma kuma utongoini wa uthukumi wa kila umwe wanyuvwa kutongosya. Mutongoi ula ungi mukanyuva akeethiwa emanyiity'e maundu meu kuma kwakanani kwenyu kula mwaaka mutongoi ula ei mbee wake. Ethiwa mukaneenany'a kwa kwakana ukeethia vaina mundu ukuthi anyungunyisya ayasya undu, unduu uu wialile kwikwa nundu kila umwe ena muyo na nimwianie nikwithiwa ethiwa motongoi ona akitie kwasya "nimuvea" kila umwe ena muyo na vai mundu ukwiw'a ataile na mundu atavya useo wake nutanaa na kumanya undu uteisi iulu wake mwene.

Kwakana ni uathimo keli nundu ula uteisi kinengo kyake akimanya nuendeeaa na kukitumia na ungi akevundisya kuma kwake kwoonda wa utongoi ula wanengwa.

## TIST: Kusuvia Kiko.

**K**iko ni kindu kyothe kithiawa kitena vaita kyumanaa na utumii wa syindu wa mundu ila ni ta:-

- Mai ma mundu/ Maumao
- Matiolyo ma liu, kiko kuma miioni
- Mathangu matenawia
- Syuma ila nguu na mavvia ma tosi
- Mathangu ma nailoni
- Kiko kuma kambunini

### Ni Kyau kietae thina wa mavuti kisioni kyenyu?

Kiko na mavuti no movaka indi utwikaa nthina ethiwa

- Ethiwa syindu iitumiwa nesa
- Kukosa nzia sya usyoka utumia kiko/takataka usu
- Kukosa kundu kwa kwikya kiko ta Syoo namaima ma kiko
- Kukosa umanyi iulu wa muisyo wa kiko

### Thina ula uetawe ni kuko kyalea kuungamiwa undu vaile

- Kiko na mavuti kila vandu
- Kukosa wanake wa vandu
- Kuthokoania kiw'u, muthanga na kuete ma uwau
- Vinga nzia sya kiw'u
- Kumya miuke yi sumu ta mavvia ma tosi makua
- Syana na indu ni ilikwa ni sumu uyu ta syana iithauka na mavvia ma tosi makuu na kiko kingi

### Nata tutonya kwika ta kakundi kanini kutetheesya nthina uyu?

- Kuola nzia ila ietae kiko
- No tutumie vinya wa sua vandu va mavvia ma tosi
- Kutumia ingi kila kitumiika ta mathangu ma nailoni ma ukua syindu
- Kuseuvya vuu wa yiima wa kutumika mundani.
- Inza yiima musyi kwaku ya kiko
- Lilkana kuvivya mathangu ala mate ma niloni.
- Ndukavivye mavvia ma tosi maikavulike na kuuvivya indi ikia kyooni.



## **Kuseuvya vuu wa yiima - Vuu ute na kemikoo.**

**V**uu wa yiima ni vuu useuvitw'e vate ndawa na mimea kuma muundani na nutumaa mimea yiana nesa. Ni museo kwi vuu wa kuuu ula wina kemikoo nundu niwakuma mniemani na niwamana ti wakuu na nwanangaa liu kana mawithyululuko ta vuu /vatalisa wa kuuu. Ve nzia mbingi sya useuvya vuu uyu, lakini ve nzia imwe nzeango kwi syothe isioni imwe. Kulya mutui waku wa ngwatanio yenyu kila kithukumite nesa kwoo.

### **useuvya vuu wa yiima.**

- 1) Kusakua kisio kya matambya 4 x 4m na kwisa yiima.
- 2) Enga kisio.
- 3) Inza yiima uthathau wa 3 - 4m na 1.5uliku.
- 4) Kolany'a matialyo ma mavemba, muvya, mavoso na uitilanga tulungu tuniini.
- 5) Ikia yiimani itumie uliku wa 0.5m.
- 6) Ikia muu wa lita itano.
- 7) Ongela kyaa kya indo ethiwa kivo kya uliku wa 30cm ethiwa vaii oundu kiana (uyu ni vuu wa nguluwe, ng'ombe, mbui kana nguku).
- 8) Ongela matu na makusa uliku ungi wa 0.5m.
- 9) Ikia muu ungi wa lita itano.

10) Ongela matu na makusa withie yiima notayausua.

11) Ususya yiima na muthanga.

12) Uyususya yiima ikia muti muasa kati withie utinite yiimani ungu.

13) Eka yiima yiu yiyiue vandu va myai itatu kana mithenya miongo kenda.

14) Ivindani yii yonthe osaa kiw'u kila kina kiko uketa vo ngelekany'o kila wavua nakyo kana kuthambya miio. Ethywa wina maumao ma indo no wite vo.

15) Kii nikyongelaanzeve ya Nitrogen nthini wa vuu.

16) Tata navinya ungithye yima yii kila muthenya kwa nzia ila utonya.

17) Itina wa mithenya miongo keenda vuu wiithiwa wi tayali.

Tumia muti uyu wikati ta kithimi kya uvyuvu. Vuu wasuva ukeethiwa wimuvyu na nowone muti uuyu waumya uitoa.

### **Utumii wa Vuu wa yiima.**

wenza maima ma uvanda mbemba, muvya kana o mimea ingi ikia ngundi imwe ya vuu kila yiimani. Syaaisya wone kila ukwata kuma vo!



## Ni ivinda ya kuseuvia miunda kwa nima ya kusuvia.

**T**ukundi tunini twa TIST tula twithitwe tuitumia nzia ino ya nima ya kusuvia (CF) nimaendee na kukwata ngetha mbingi na nzeo kwi yila mana tumiaa nzia sya kitene sya nima ona yila mbua nini.

Maima nimatetheesya kutumania kiw'u yila mbua yaua kwoou uyithia kivakui kwa mimema.

Ithanguu niyikutwetheesya kuelewa na kumanya mbee iulu wa Kilimo hai. Kuatiia nzia ithi nikuukutetheesya kukwata ngetha nzeo mbua ino yukite.

### Kuseuvia muunda.

Seuvia muunda waku vainyiva mwai umwe mbee wa mbua kwambiia.

- Thesya kisio withie kiina yiia kana ikuthu. Ndukaime.
- Seuvia maima maku mema kona inya. Kila yimwe yaile ithiwa yina uthathau wa 15cm, uasa wa 35cm and uliku wa 15cm. Utaaniu wa maima waile ithiwa wi 75cm.
- Osa vuu na muthanga wa iulu uvulany'e na uyususya yiima yii ta 5cm na muvulany'o usu.

### Kuvanda.

- Yila ukuvanda mbemba (mithenya ili ka umwe mbee wa mbua kwambiia) vanda matonya ana muthangani usu ikelene ma mbemba.
- Ethiwa wi vanda muvya vanda matonya 5-6 kithylulu mwisoni wa yiima itina wa mbua kua nesa.

- Vwika mbeu na muthanga muvulanye na vuu uliku wa 2.5cm itina wa uu yiima yitiwa yina mwanya wa 2.5cm.
- Mwanja uyu watiwa niw'o utetheesya kiw'u kuvikia mbeu/ngii yila mbua yaua.
- Tilasima utumie mbolea ya kuua (fertilizer) yila ukwika uimi wa kusuvia muundani waku. mime yaku noikwika nesa watumia vuu wa yiima.

### Kuimia.

- ima uthyululukite maima kaingi
- Ndukaime kisio kiu kyothe savali umwe vuu. Nza wa maima, mimea noivwike muthanga na kutetheesya kuuthithya na kusiiia kukuwa kwa muthanga ni nzeve kana mbua. Ima tu vakuvi na yiima na yimani. Tumia kilovoo/kivanga kwenga yiia yila yi mwanyani ula uaanitye maima. Ima kaingi kusiiia yiia kuvikia mimea .
- Tia mavuti aya na yiia moe kisioni kiu, nundu moa meendee na kuete unou wa muthanga.

### Kuvutha Itina wa ngetha.

- Ndukavivye matialyo/mavuti muundani. Ekana namo nundu ni unou wa muthanga, kana ukue ukama inde yiimani usevuye vuu/mbolea.
- lilikana ndukaingie indo muundani wamina ngetha.
- Kwa ndaia lilikana kana tukatana naku weethiwa na ngetha nzeo itina wa kwimanyisya na kuatiia nzia nzeo sya uimi wa kusuvia kwisila ithanguni yii na mbumbanoni sya ngwatanio yaku sya kila mwai.

Ambiia uthukuma oyu!

# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program  
www.tist.org

**Kipsigis Version**

*TIST is an innovative, time -  
tested, afforestation program led  
by the participants.*



**Mkutano wa nguzo ya Kingo TIST Uliofanyika tarehe 25/8/2021. Mada zilizofunzwa wakati wa mkutano huu ni pamoja na Kilimo cha Uhifadhi, Usimamizi wa Kitalu na Mabadiliko ya Tabianchi. Mkutano ujao utakuwa tarehe 29/9/2021.**

**Inside:** Kurupitab TIST nebo Kamugaka A: Miine ketik en Meleweet. Page 2

Practice che koron en Groupishek che meng'ech: Steps chebo boishonik ak panganet. Page 3

Techet 'ab ge; Rib men kosirin koberuret nebo groupit ngung'. Page 4

TIST Ngetunonik che chang. Page 4

Ketoo keturrek chebo minutik. Page 5

Kasarta nepo, chopet 'tap imbaret kokany. Page 6



# Kurupitab TIST nebo Kamugaka A: Miine ketik en Meleweet.

*Bunu Jackson Maina, membayatab Kurupit ne Ming'in nebo TIST.*

**K**iin ketoo TIST en emenyon en kenyitab 2008, ko che chang' en echek ko mokikuye amunee asi kelewen emenyon ne melewet asi keminchi ketik. Kigeere en abokora kemine ketik en komoswek che yakwoen anan ko osnosiek.

Anganda uu noton, ko kikiyan keyomten. Kikikonech cherseet kele konetisiet ak siretab gee k obo buch. So kikinai kele inoni ko tetutiet nebo iman. Kima komi kiy agetugul ne kibeete kobateen kasarta kityo. Kou chebo kokwet, ko kikinaam kebe tuiyosiekuak. Kikinai kele TIST ko kikobur en Kenya kenyisiek somok che kikosirto - kong'eteen kenyitab 2005 - ako kikitestai missing en komoswekab Nanyuki ak Meru.

Kitoreteech tuiypsiechoton missing'. Nebo komonut ko kikinetegee ole kimuche ketetitengee en Kurupisiek che Mengechen. En tai, ko kikakenaite kurupisiek che yechen che mokimuche ketononchi. So, Kurupisiek che Mengechen ko kikoneech kimuch keboisien en kibagenge. En echeek, ko kiik inoni kobelisiet. Kikinam keboiboienchi keboisien en kibagenge ak keboisiechi gee. Kikinaam keyai boisiet en betitab Kurupit Ne Ming'in. kikipjeichigee boisionik en Kabeti. Inoni ko kikoneech kasarta keriiip ak ketokyi gee betit. Membayat agetugul ko kitindo kasartanyin nebo boisietab ketumchi beek ketik en betit ak kemberchi. En kasarta ne tai kong'eteen kiin kebwan yu, kokisobcho ketik tugul en betit ne momi ne kime akot agenge. Kibuchi kwong'eet! Kikoneech cherseet ak kokimiteech missing'.

En nematian, ketochi kurupinyon kainet – Kamugaka A. kikikochi nambaitab siretabgee 2008KE2222. Nambait nebo kwong'eet ne imuche membaek tugul kobwaat.

Kikitestai kebe tuiyosieka Kilasta. Kilastainyon Cluster Kiriogo, ko kiinam koet. Kikinaam kepjeite logoiwekab TIST koityi kokwotinwek che kirupegee en tembonok ak

tulonok. Kicham temik che chang' ak kochut TIST. Mr. Jinaris Wagachoya ko kikondoindenyon nebo TSE. Kiket Kilastainyon komie. Kilastaisiek alak che kiitoo Jinaris ko Kilastaisiekab Wiyumiririe ak Wamura. Kiin kobata TSE, ketestai ketesage echeket. En raini, ko kiketes kilastaisiek alak oeng' - Kilastaisiekab Sugurio ak Nyambuguchi

Ngewekingee Kamugaka A. Kurupinyon ne Ming'in ko ki kitestai keboisie komie. Kikitoretgee kebal keringonik ak kemin ketik. Minsenyon nebo ketik ko kikiburuch ketik che terterchin. Mi koboto ketik chebo logoek, ketikab kipgaa ak ketik chemobo kipgaa en mbarenikiok. En raini, ko mbarenikiok ko nyolileen. Chemi barak ko Avocado, torogonik, sebesebe, machungwek, ndimo, *prunus*, *mitero*, *guava* ak alak. Ketik tugul che kikiit ko 2197. Kobateen nambaini ko mi ng'wony amun mi ketik che kitwoldoen yon kite. Kikimiin ketik en loindo ne mo sire mitaisiek oeng' kou ole mwoito TIST asi kimuuch ketil alak keboisien en kwenik olon kibokogtoi chebo TIST kotestai koekitun asikomuch koisto koristo ne yai en soet.

Kiboiboi en TIST. Kikenyorchigee kelunoik che chang' cheu logoek, kwenik, amitwogikab kiyagik ak nebo komonutiet missing' ko itondab emet ne kikechob kokararaniit. Mi koititiet mbarenikyok missing' mosiir en taa kin kotomo kemiin ketik. Kikobosok usonet missing'. Mi uronok che chang' en minutikyok ako niito ko tese kesutikyok missing' ko yon kokiboisien temisiet ne Riibe Itondab Emet.

En lipanet ne kinyorchingee, ko en abokora kinyorchingee rapisiekchon bo taa kotomo koit lipanet. En arawanikonye ko kikinyoru Sh. 74,000 en pjeutikab melekwekab koristo. Kitindoi kimnatet neo nguni keboisien en TIST asikenyorchingee kelunoik ak konyorchigee emenyon ak itondab emet.





## Practice che koron en Groupishek che meng'ech: Steps chebo boishonik ak panganet.

**G**ropishek en TIST koyoe kasishek che hchang che practical: minet'ab ketik ak ripetnywai, ak koimproven temishet. Yon miten kasit newo ne keyoe, ko kararan kechob **action steps**. Membayat ake tugul komwoi ki neyochin groupit wiki noton. Kipendi kinetok ak groupishek kwok o;e kichopto action planing. Kaikai omdech in membaek alak chebo groupishek chemeng'echen yon omi tuyet.

Action step ko kit ne:

- Mwoe direct.
- Tokunot.
- Pimonoshek.
- Tinye kanamet ak mwisho.
- Yoche ko itchinoshek panganet!

Yon kotuyo kora gropitngung', ichomchi minutishek tamain ko aror chitugul agobo action plan nenyinet. Chi ake tugul en harak:

- (1) **Kit ne kiu action plan nenywan .**
- (2) **komwa tuguk che kiyai.**
- (3) **Komwa action plan che tinye en wikit ne isupu.**

Ango ko kibor chito en action plan nenyinet koboiboyenchin groupit.

Angot koimuch kotimisan membayat action plan nenyinet, kokochin muguleldo groupit inendet. Yon kakomuch pik kopchei kabutoshechwaik ak siroshekchwai koibu ki bageng'e en groupit. Igil membaek chebo groupishek che meng'echen koker ole tot kochopto action steps chechwaget. Yoche ko pimonoksek, itchinoksek alak tugul en action steps ichuton. Yon kokotar chi tugul, obchei chuton akityo oboiboyenchi chuton.

### Action Steps chebo Action Planning

Kimuche kora keboishen oret noton yon kiyoe planning. Ne isubu ko koborunet. yon yoe groupit neng'ung pang'anet iker ile pangonuti choton kou ni:

**Che tetoyotin** (Groupishek che meng'ech en TIST ko mine ketik 1000 en sipitalishek chebo karibu kotomo koit November 30)

**Pimanoksei** (Ata? – Ketik 1000, che kemine)

**Itchinoksei**, (Groupishek che meng'ech komuche komin ketik 1000 en 5wks – 100 ketik en Tuesday ak Thursday, ketik 10, chito age tugul kila petut)

**Tinye kanamet ak mwisho** (October 15 agoi November 30)

**Togu. SMARTO!**

Inoni ko kit ne iborun ako testen action plan ne karo chob:

- 1) **Ne**– (Minet 'ab ketik 1000)
- 2) **Ng'o**– (TIST membaek 'ab groupishek che meng'echen)
- 3) **ou'**– (Oct 15 – Nov 30)
- 4) **Ano** – (En sipitali )
- 5) **namna gani**– (kituitosi kil Tuesday ak Thursday jioni yon kokobata asita nepele ketik , akityo kemin ketik)
- 6) **Amune** – (Kikararanit compound nepo sipitali ak kechopchi uronok pik che mionidos ak pik chenyokokotisie )

Ingunon jaribunanan oyai action planning en tuyet ne isubu nebo groupit.



## Techet 'ab ge; Rib men kosirin koberuret nebo groupit ngung'.

**T**eghet 'ab ge en groupit ko bo maana en groupishek che mengechen chebo TIST. Mwoe en Ephesians 4:15,16 yoche ketech ke en kanyitet 'ab Christ. Chitukul en groupishek che meng'echen en TIST koibu talentaishek chwoik kobwa TIST. Kit agenge ne kararan en groupishek ko naet 'ab talentaishek che kikekonech.

Techet 'ab ke ko oret ne kimuche keboishen talentaishek chok. Miten komoswek oeng' en techet 'ab ge;

- Kotoma kesa saaet ne letu, kesom chitugul komwa kit ageng'e ne kararan agobo kandoindet. Tuguk cheu, kitoreti chi tugul en boishoni, kiiborwon kit ne kitomosich etc.. Yoche komwa membayat age tugul kit ne terchin. Inoniton komo optional. Chitugul kokochin teget' kandoindet nekobo kasara ton. Ogo groupishek kokochin kujeng'ana toretik 'ab kondoik.

Yon miten zung'uganet 'ab kandoinatet, kila wikit konyoru kandoindet Kujengana. En Kujengana, Keti ke en tuguk che kororon che koyai

kandoindet nebo wiki noton ak talentaishek che koibor chi choton.

Kujengana kora kotoretech kenai ole kicheng'toi tuguk che kororon en membaek. Yoche kinet ng'elepwokik chok komwa tuguk che tech' . kora, konoe groupit noton kit neibwote kole bo maana en kandoik. Kandoik che rube konete ke en ng'alek che kakas en kujengana akopo kandoik che kokobata ak konai kit ne ibwote membaek kole yomeke en servan leaders.

En wolunet nebo Kujengana, komwoe kandoindet nebo wiki noton kole 'kong'oi', yon kakomwa membayat age tugul. Inoniton koboiboite kandoindet 'ab wiki noton yon kakemwochi tuguk che kororon che koyai en groupit ak tuyoshek. En yuton kimuche kinet ke tuguk che kimoging'en akobo ehek!

Kujengana kitoreti kandoindet 'ab kasaraton konai talentaishek che tinye akotakoboishen. Kujengana kora kitoreti groupishek che meng'echen, ang'amun kandoik tugul kotese skills chebo kandoinatet. Kujengana ko berurto konyil oeng'

## TIST Ngetunonik che chang.

**N**getunonik chuton ko kitagetugul ne mogitinyen komonut missing; kou:-

- Omitwogik che mongunen chito.
- Ngetunonik chebo omitwogik
- Kartasisiek.
- Ole kiunchin beek che yachen en town.

### Ne anyun negonu yoitioni en ole kimenye?

- Wegetat tuguk chekitinye
- Mogitinye ortinwek che kimuchi keboisien kora.
- Mogitinye ole kimuchi kirurugen (korik chemengechen)
- Mogitinye kabwuatet agobo ngoyondit neimuch kobit.

### Kewelnatet ne bitu yon mogirib.

- Ngetunonik en kaa
- Monyoru keret ne kararan kaa.
- Nyabiretab beek, koristo, ngungunyek ak bitu myonwek.
- Timoksei ortinwekab beek.
- Beterisiek kogonu sumu.
- Bitu ngemisiet en logok ak tong'ik.

### Kogi kurubit ketoretitoi ano?

- Kebal korik chegiboisien ak keringoik chegimetechin.
- Keboisien solaisiek ak kemete baterisiek.
- Kegetingei keboisien cheimugosei (kou plastic).
- Keboisien koik keturek en cheimugosei.
  - Mat kebel baterisiek, torchin keringet.



## **Ketoo keturrek chebo minutik.**

**K**eturek ko toreti mising minutik kochok en ngungunyek. Ago kororonen amun motinye ngemet en rurutik ago nyumnyum kenyor ago motiye oliyet neo mising, motiye ngemet en agobo ltondab emet.

Miten anyun orinuwek chechang che kimuchi ketounen keturek en koborunet ne isibu ko kigoyomnda biik chechang temik. Otebenge en Kilasta ole kiboisioto biik alak.

### **Tounet ketoo kechob keturek.**

1. Lewen ole imuchi ichoben keturek (4m by 4m).
2. Itilil yoton.
3. Bal keringet netinye kokwoutik 3m - 4m - 1.5m kochut orit.
4. Iyum anyun ngetunanikab imbar tugul ak itonaton komengegitun ak itorchi keringet chon ko kou (sogegab ketik mobekkab bandek, ngendek) ak alakau.
5. Torchi keringt koit 0.5m.
6. Tesin beekab 5ls chebo orek.
7. Tesin sorowekab tuga, neng, lgogenik kot koit 30cm.
8. Tesin ngetunanaik kot koit 0.5m.

9. Tesin beek 5ls chebo orek.
10. Testai itesi ngetunanik got konyi keringet.
11. Tesin baragut ngungunyek.
12. Ye itestai icheng bitoiyot ne koi ak ilumchi kwenutab keringet kot kotiny kwony.
13. Igomuny keringet kotar betusiek 90(orowek somok).
14. En kasariton tugul itestai itumchi beek chon kiunen tuguk en kaa. Ingot itinye tuga imuchi iyum sogororek asi itesi keringet.
15. Niton kotesin nitrogen.
16. Yai kouniton en betusiek tugul.
17. Ye kagobata orowek 3 ko koruriyo keturek.

Togunen burgeyet ne mi keringet.

### **Boisiyetab keturek:**

Ye kagoit ichob imbaret inam ibal keringonik kosibgei ak minutik cheimoche igol. Keringet angenge koibe keturekab rubeito, rib anyun wolutik che bitunen imbarengu.



## **Kasarta nepo, chopet ‘tap imbaret kokany.**

**G**roupishek chepo TIST che kikonetke akopo CF, kokobaoryan kole chang’ ruutik kosir yon kakiminso keboishen oratinwek chepbo kenya, sanasana yon wo robta.

Toreti kering’oik chhoton bek koma rwai en imbar, ak ko’kochi minutik bek che yomotin.

Ng’alek chuton kotoretin inai kilimo hai komye ak ole kiboishoten. Ang’ kot isib oratinwek che choton kochong’oite ruru.

### **Ole kitayorishondo imbarenik.**

l’ngol imbaret arawet ageng’e kotomo kobwa robwek.

- l’tilil imbaret koisto ke chema’si .Amati ng’ol.
- Bal kering’oik che rectang’ular . Nyolunot ko 15 cm en boroindo , 35 cm koindo and 15 cm loindab kering’et. Lochindap kering’oik keyoche ko 75 cm.
- inde mbolea safi che ing’olotin ak mbolea chebo duka, ng’ung’unyat ‘ab barak. Inyit kering’et ak kong’olanik choton agoi 5 cm.

### **Minet.**

- Yon imine keswek ‘ab andek (betushek 1-2 kotomo konam robta),Min kewek 4 kong’et kering’et.
- Ang’ot imine , min 5-6 keswek en mwisho nebo keringoik yon kokorobon.
- Tuch keswek ak ng’ung’unyek ak mbolea 2.5 cm. Koboch yuton konyolunot koloindab ng’weny ko 2.5 cm kong’eten barak.
- Nafasi nemiten barak ko’kochin.

- Molazima iboishen mbolea chebo fertilizer en Conservation Farming plot. Keswek kuk korurtos ogot ang’o meboishen mbolea chebo fertilizes .

### **Istoet ‘ab saratik en imbar.**

- Isten saratik en kering’et kila weekit.
- Mati’iste saratik en imbaret tugul.Tobonwokik ab kering’oik ,Minutik kotuche ng’ung’unyek, koko’koite ng’ung’unyek agityo koter komoib robta ana ko koristo. Iten saratik chemi yebo kering’et kityo. Boishen panget ltilil imbaret koistoke saratik. Isten saratik kila mara asi maibista kochut kering’et.
- Bakaten saratik che’ketutu en imbar asi konuno. Tese bombonindab imbaret.

### **Tuguk che kiyoe yon kakebutis.**

- Matibel saratik che kong’et en imbar.Bakagten saratik choton en imbar asi kotes mbolea en imbar. Kimuche kora keboishen ke chobe manure .
- Amati bokokchi tuga koaget en imbaret.Kaikai ibwat ile,Tun kiboiboienchini tugul tun koruryo minutik kuk ak inetke en youtik che miten en erea neng’unget ak tuyoshek ‘ab cluster asi kotesak rurutik.

Inam ing’unon!