

# Mazingira Bora



# TIST

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

English Version

An Environmental, Sustainable  
Development and Community Forestry  
Program.



Tist farmers from Kiang'ondo Cluster during their Cluster meeting last month.

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## Good trees for TIST: Fruit Trees.

In TIST, we plant trees for the long-term. Co-benefits from these trees, like their fruit and nuts, can be really valuable, especially when we organize to market fruit and other products together. Here are some trees that can be very beneficial.

### Avocado (*Persea americana*)

**Ecology:** Grown in all moist areas.

**Pre-treatment:** soak seeds in cold water for 24 hours, then plant directly into pots. Use fresh seeds as they do not store. Seedlings can also be grafted. Germination takes 3-4 weeks and spacing should be at least 6m. These trees are normally planted around the homes.

**Uses:** Firewood, charcoal, food, shade, cosmetics, oil. The fruit is nutritious, rich in fat, protein and vitamins. Bark, leaves and seeds are toxic to browsing animals. Seedlings can be intercropped with beans when young. This tree can be a good income-earner.

### Guava (*Psidium guajava*, Kikuyu: Mubera)

**Ecology:** Drought resistant but can't tolerate water-logging.

**Seeds:** No pre-treatment. Germination: 3 weeks. Spacing: 4m.

**Uses:** Firewood, charcoal, poles, food, edible fruit rich in vitamin C and vitamin A. Bears fruit in 3-4 years. Wood is termite resistant. The dried ripe fruits are recommended as a remedy for dysentery, while the leaves and fruits are used as a cure for diarrhea. Oil exhibits anti-inflammatory properties. The leaves or bark are made into a lotion for skin complaints, ringworm, wounds, and ulcers. The leaves are also used for digestive tract ailments, cold, and high blood pressure, trauma, pain, headache, and rheumatism. Juice is used to help hepatitis, gonorrhoea, and diarrhea. **Intercropping:** Performs well when intercropped with fodder crops such as maize, sorghum and cowpeas. Guava can be invasive in some areas and take over a field.

### Mango (*Mangifera indica*)

**Ecology:** Does not tolerate flooding and needs well-drained soil. It can do quite well in dry areas.

**Seeds:** No pre-treatment required, although nipping the seed helps germination. Seeds can be stored for a month at room temperature, fresh seeds are best. Can also use grafts.

**Uses:** Fuelwood, fruit, fodder, bee-forage, windbreaks, mulch, shade, soil conservation, gum.

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## Kirindini Cluster: We are proud to share our good Green Gram Harvest.

By Annet Kaari, Cluster Servant.

We, members of TIST Kirindini Cluster Green Gram project met on 26/2/2013 at our Cluster meeting venue. TIST Green Gram organizer, Jeniffer Kithure, also attended the meeting. We are happy to announce that we had a good harvest of high-quality and good yield. From the five Helped to Help (H2H) pioneers, we managed a harvest of 1,205 kgs. Each of us had received 25kgs of N26 seed variety, which grows particularly well in dry conditions because of its early maturity.

The Green Gram organizer, Jeniffer Kithure, and the cluster champion, Gilbert Kirimi Bundi, congratulated us for good work done in achieving our goal and following TIST Values of Accuracy, Honesty, Transparency and Low Budget. Here are the harvest results from five pioneers:  
Edith G. Kamundi - 280kgs

Gilbert Kirimi- 180kgs  
Bernard Gitonga -260kgs  
Carey Micheni - 280kgs  
James Micheni -205kgs

In the coming planting seasons, the benefits of growing green gram will grow and spread in our cluster as pioneers pass on the seeds to the next beneficiaries. Already, 15 beneficiaries have received seeds from us. Further, we agreed to help Karama Cluster with 5kgs of seed as they try growing this crop on their shamba, so that others in TIST can also see if green gram is beneficial in their area. We would like to encourage other TIST clusters to join green gram program to plant for food and for commercial purposes. For more information, you and your cluster representatives can contact Jeniffer Kithure at 0726319539.



## Good trees for TIST: Indigenous trees.

### a. *Terminalia brownii* (mwalambe, mbarao)

This drought-resistant indigenous tree, with its rounded, spreading crown, spirally arranged leaves, and spikes of small white or cream colored flowers, can be a good choice to grow along with crops since it improves soil. The tree is widespread: it grows in the high rainfall woodlands, bushlands, and wooded savannah of the arid and semi-arid regions but can also be found in the sub-humid areas. It is often found near rivers in very dry areas.

Be careful when collecting seeds to gather only those that are free from insect damage. Seeds can be dried and stored for up to a year. Seedlings and young trees grow slowly, but can grow faster if given more water.

**Uses:** Timber from this tree is durable, and the tree also produces good charcoal. Leaves make good fodder for livestock, and produce a good mulch that improves soil. It is used medicinally as well, with its fibres chewed in treatment of yellow fever, an extract from its leaves used to treat pink-eye in livestock and a medicine from the bark is used in the treatment of hepatitis. It also is a good ornamental or windbreak.

### b. *Ekebergia capensis* (Cape Ash, mununga; muchogomo)

This indigenous tree is good for intercropping with coffee and bananas and is also a good choice in areas where controlling erosion is important. The tree, found in varied habitats, from high altitude evergreen forests to riverine forests, is evergreen or semi-deciduous and can grow from 7 to 35 m tall. The tree's trunk is sometimes swollen or buttressed and may be fluted in forests, but may be much shorter or unfluted in open areas. It can be identified by its grey-brown or almost black bark, often mottled, sometimes flaking in small circles or squares or slashed red with white streaks, by its compound, opposite leaves, long sprays of white or pink flower sprays that develop into small, apple-shaped fruits with four seeds.

To grow cape ash from seed, soak seeds in water for a day and then scrub with a brush to remove the fleshy part. Sow in trays filled with river sand or normal soil mix, and plant shallowly, not deeper than 5mm. They germinate in 4 - 8 weeks. It is more easily and quickly grown from cuttings. Tip or hardwood cuttings can be planted in trays or polytubes filled with river sand until roots establish or can be planted directly into the ground. Cape ash grows best with abundant water (up to 2,000 mm per year), but can also tolerate

light drought and survive in areas with 750 mm rain per year. It grows well in areas with deep, sandy soils.

**Uses:** Cape ash makes a good shade in the garden. It has light and soft wood that is easy to work with, and with its straw color, it makes attractive furniture, though the wood requires treatment against insects. The bark is used as an emetic, for treating dysentery, and is also used for tanning. The tree is excellent for increasing biodiversity since birds and other animals enjoy the tree's fruit. Its flowers are good for honeybees, and livestock enjoy eating the tree's leaves, especially during drought.

### c. *Faidherbia albida* (*Acacia albida*, Apple Ring Acacia)

This fast-growing tree can be a good choice for agroforestry in both farm fields and pastures, since it improves soil and provides valuable, protein rich fodder for animals, and because it grows leaves during the dry season and sheds them during rains, so that it does not shade crops. It is one of the largest thorn trees, with rough, dark brown or smooth green-grey bark, leaves made of many leaflets, with thorns that thicken at the base of the leaf. The fruit is a curled, large pod containing 10 to 29 brown, shiny seeds. It grows on banks of rivers and where water flows in rains in areas with between 250 and 1000 mm of rain.

When growing *Faidherbia*, seeds need to be treated because they have a tough seed coat. Take care to harvest seeds early when they ripen, since they otherwise may be damaged by beetle larvae. Treatment of seeds can be done by pouring on boiling water and letting seeds soak for a day, or by nicking the seed coat. Cuttings may also be successful. Plants may need to be pruned well to remove low branches in the first years of growth.

**Uses:** This tree, if planted at a low density (perhaps as much as 10 m spacing) can improve crop yields for maize since it adds nitrogen and organic matter to the soil, or create more, better fodder for raising animals. Fodder: Domestic animals eat leaves and pods, which can be an important source of protein for livestock in the dry season. Beekeeping: For beekeepers, it is useful because it flowers at the end of the rains while few other plants are flowering. It therefore becomes the main source of pollen and nectar at this time. Fuel: The plant stems are used as fuelwood.

(we thank ICRAF for information on tree species)



## Hygiene & Sanitation: Hand washing.

Hand washing with soap is among the most effective and inexpensive ways to prevent diarrheal diseases and pneumonia, which together are responsible for the many child deaths in Kenya.

Hands often act as vectors that carry disease-causing pathogens from person to person, either through direct contact or indirectly via surfaces. Humans can spread bacteria by touching other people's hand, hair, nose, and face. Hands that have been in contact with human or animal feces, bodily fluids like nasal excretions, and contaminated foods or water can transport bacteria, viruses and parasites to unwitting hosts. Hand washing with soap works by interrupting the transmission of disease.

Washing hands with water alone is significantly less effective than washing hands with soap in terms of removing germs. Effective hand-washing with soap takes 8 - 15 seconds, followed by thorough rinsing with running water.

### ***Critical times in hand washing with soap***

Here are some critical times to clean your hands:

1. Before and after meals and snacks
2. Before caring for young children
3. After touching a public surface.
4. Before and after preparing food, especially raw meat, poultry, or seafood
5. After using the restroom
6. When hands are dirty
7. After touching animals
8. When you or someone around you is ill

### ***Awareness of hand washing with soap***

Hand washing is likely to be especially important where people congregate (schools, offices, church, meetings), where ill or vulnerable

people are concentrated (hospitals, nursing homes), where food is prepared and shared and in homes, especially where there are young children and vulnerable adults.

### ***A simple facility for washing hands after visiting toilet***

The simplest facility is just to have a small jerry can filled with water placed outside latrines. Soap should also be provided.

However, this method is not ideal as people have to touch the jerry can before and after washing their hands which can still spread germs. An alternative hand-washing facility can be made like this:

1. Make a simple wooden frame with a nail in the middle for a peg.
2. Make a soak pit for the waste water by digging a hole around the frame and filling it with stones. This will let the waste water drain away into the soil.
3. Get one big open container (a barrel or cut-open jerry-can) and fill it with water.
4. Find a smaller open container, like a cut-open water bottle.
5. Make a small hole in the bottom of this container and fix a handle to it.
6. Dip the small container into the larger one to fill it with water.
7. Hang the small container on the peg so that the water starts to drip through the hole like a tap.
8. Wash your hands with soap.

The advantage of this system is that you only touch the small container once to fill it with water.





# TIST Mobile Website is Working: An open letter.

by William Mwito.

Dear Fellow TIST Servants and Farmers,

These days, it has become very easy for me answer questions to serve Small Groups well, wherever I meet with them.

Some of the questions we can easily answer now include:

How many trees does each member have? This is useful especially in cases where they have misplaced their Quantification summary sheet.

Have we ever been paid? If so, when? If not, what do we need to do to get paid? We are able to easily tell Small Groups if they have fewer than 500 trees or have not signed Greenhouse Gas Contract, so that they can take the necessary action to get paid.

Moreover, it is very easy to learn what is happening in every Cluster and share this information with them.

As a Quantifier and Cluster Servant, the TIST mobile website is useful in that it is easy to view information including grove information, Cluster meeting dates, information on Groups of Clusters (GOCs) and regions, addresses and phone numbers of TIST members, Training Materials, Standard Operating Procedures (SOPs), date of audit, and maps showing nearby groves during quantification—especially useful when you are in Clusters you don't know well.

I would encourage everyone to begin using this important and helpful tool.

Here's how:

1. Go to **[www.tist.org/mobile](http://www.tist.org/mobile)**
2. If you have a TIST email address, log in with this email address and password.

3. If you don't have a TIST email address, you can log in as a guest. Enter your name and organization and tap log in. Organization can be name of your Small Group.
4. You will be directed to the next page. At the top, you will find "Cluster", "Groups", "Groves" and "Log out"
5. If you want to view your Cluster, tap on "Cluster". You will be directed to a page that shows TIST project areas worldwide. Choose and tap an area of your interest (for example, Meru). From here, you will move to the next page where you will find a list of Clusters under Meru (or any other area you chose) with number of groups and trees listed plus the next meeting dates and last election.
6. Tap your Cluster (for example, Ciakanyinga). A new page will open and you will find Small Groups listed by their names, TIST number, Number of trees and last date of quantification.
7. Tap on your Group. (for example, TARADA). This will take you to a new page. You will find details about this group, including payment eligibility and whether the group has met requirements to take part in the carbon market.

Thank you and God bless you,

William Mwito, Maua GOC Cluster Servant.



# What can we do to prevent water pollution ?

*By Joseph Gituma*

Water pollution, even when we can't see it, can poison and kill plants and animals, including people. Polluted water used for cooking, washing and drinking can cause many human diseases such as intestinal worms, skin diseases, cholera and diarrhea. How we can avoid Water pollution.

## What can we do about pollution?

1. Don't throw rubbish or pour waste into water sources. Encourage others to keep waste away from water, too.
2. Plant trees along riverbanks and lakes. Plant roots are excellent at filtering out waste and also stop soil from entering water bodies through erosion.
3. Avoid growing crops too close to rivers, lakes or wells to avoid fertilizer reaching the water source
4. Encourage people to build far from riverbanks.
5. Ensure that wells and boreholes are managed properly
6. Fence the water source to prevent animals from contaminating water.
7. Do not permit people to wash near the pump.
8. Ensure pit latrines are at least 50 meters away from water sources. Make sure there is adequate drainage and create channels to drain water away ending in a soak pit, a hole filled with stones where water can drain away.
9. Repair all cracks on the cover slab as soon as possible when they occur and clean the area regularly.
10. If you are unsure about water quality, boil it before drinking to kill microbes that can make you sick. Boiling cannot remove all contaminants, and may leave chemicals, like pesticides or fertilizers that can make us sick, but it will lessen risk of diseases like cholera and of parasites like worms.

# Mporoko TIST Cluster: Working Together To Establish a Cluster Tree Nursery.

*By Joseph Gituma*

We believe in unity and togetherness. We, members of Mporoko Cluster, have been working together to help each other in TIST. Currently, we are working towards establishing a Cluster Tree Nursery for the coming season planting. We make sure our nursery has mixed species of trees including indigenous, exotic and fruit trees. This helps meet the diverse needs of our members.

We are glad to have partnered with a local Water Resource Users Association, BWRUA. This association has supported us with tools including spades, wheelbarrow, rakes, water tank, watering cans and polytubes.

On our side, we provide labour, care and management of the tree nursery. We further volunteer to plant some of the indigenous trees along the riparian areas. We feel we have a collective

duty to conserve Mporoko swamp. Our members receive a good share of the seedlings to plant in our own shambas where we take care of them as TIST trees.

Today, through our combined efforts, Mporoko swamp has now increased its water recharge so that downstream communities and the wildlife in Meru National Park are getting more water as well. We are grateful to TIST. It is through TIST that we have learnt more about indigenous trees, best practices in nursery preparation, protection of riparian areas, the effects of climate change and much more. Importantly, we now appreciate why we should actively participate in improving our local environment as well as being good global citizens actively fighting climate change and deforestation.

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**Kimereu Version**

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Tist farmers from Kiang'ondo Cluster during their Cluster meeting last month.

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## Miti imiega kiri TIST: Mitunda.

Ndene ya TIST nituandaga miti ya igita riraja. Baita iria ciijaga na miti iji ta matunda na nkandi nociithirwe iri inene mono, mono twabangania kwendia matunda na into bingi amwe. Nthiguru aja ni imwe ya miti iria iumba kureta baita inene.

### Mubukando (*Persea americana*)

**Naria jubujaga:** Juandagwa guntu kunthe kuria kwina ruuji.

**Kuthuranira kuumithia:** Riinda mbeu iji ruujine rwa mpio mathaa mirongo iiri na janna, riu uande mibukone. Tuumira mpindi orio watura gitunda nontu mpindi itikarakaraga. Nijuumaga na biumia bithatu gwita bina na ibati kuandwa itarenie na nkuruki ya meter ithanthatu. Miti iji niandagwa mono akui na nja.

**Utumiri:** Nku, makara, irio, kithiiki, guaka mwiri, maguta ja kuruga. Gitunda nigikiega kiri mwiri, kina maguta, nigiakaga mwiri na nigitethagia mwiri kwinga mbajua. Gicau, mathangu na mpindi ni sumu kiri nyomoo iria irijaga imera. Muti juju nijuretaga mbeba inyingi.

### Mubera (*Psidium guajava*, Kikuyu: Mubera)

**Naria jubujaga:** Jutiigagua uumo indi jutikara antu kwina ruuji ruigarite.

**Mbeu:** Itiitagia kuthuranirwa. lumaga na biumia bithatu. lbati kuandwa itarenie na meter inya.

**Mootumiri:** Nkuu, makara, ikingi, irio, gitunda kirijagwa

kina vitamin A na B. juciaraga nyuma ya miaka ithatu gwita inna. Rubao rwaju rutirijagwa ni muthwa. Matunda jaju jamagundu nijatethagia murimo jwa kuugia, mathangu na matunda najo nijatethagia kworia kioro gikiuthu. Maguta jaju jatigwataga mwanki. Mathangu na gicau kiaju nibitumagirwa kuthithia maguta ja gwaka ja kuthiria thiina cia mwiri, mathainya, ironda na ulcers. Mathangu nijatumagirwa kinya kuthiria thiina cia mwiri cia naria irio biitagira, mpio na gwitia kwa ndamu, kuthangika nkoro, murimo, mutwe na mbajua ya kugia murimo icunci bibingi bia mwiri. Ruuji rwaju nirutumagirwa gutethia aji ba hepatitis, gonorrhoea na kioro gikiuthu. Kuandaniria na imera: nijuthithagia bwega riria jwaandanirua na imera bia ndithia ta mpepe, muya na ncugu. Mibera noiume antu amwe imingi na iujure muundene kana kienine.

### Muembe (*Magnifera indica*)

**Naria jubujaga:** Jutiumba kubua antu ruuji ruigaraga na nijuendaga muthetu jutigwika ruuji igita ririnene. Nojuthithie bwega guntu gukuumo.

**Mbeu:** Can also use grafts. Mbeu itiendaga kuthuranirwa mbele ya iandwa, kinyethira gukunyakunya mpindi nigutethagia kiri kuuma. Mpindi nocikare mweri antu gutina mwanki, indi mpindi ciaritwa orio nicio njega nkuruki.

**Mootumiri:** Nkuu, matunda, iria ria ndithia, irio bia njuki, kunyiyia ruugo, gukunikira muthetu, kithiiki, gwika muthetu bwega, gum.

## Cluster ya Kirindini: Nitugwikumiria kugaana iketha rietu ria ndengu.

*ni Annet Kaari, nthumba ya Cluster*

Batwi, amemba ba mubango jwa ndengu ndene ya cluster ya TIST ya Kirindini nitwatirimanire tariki mirongo iiri na ithanthatu mweri jwa iiri mwaka 2013 antu aria twitaga micemanione ya cluster. Mubangiri wa mubango jwa TIST jwa ndengu, Jeniffer Kithure kinya we naari mucemanione. Turina wiru kuuga ati nitwonete iciara ririega ria ndengu inthongi na inyingi. Kuumania na ambia ba mubango juju jwa Tethua Utethie batano, nituumbite kwona iciara ria kilo ngiri imwe, Magana jairi na ithano. O umwe wetu naerwe mbeu kilo mirongo iiri na ithano ya muthemba jwa N26, iria ikuraga bwega nkuruki ndene ya ntuura injumu niuntu bwa gukura kurio. Mubangiri wa mubango jwa ndengu, Jeniffer Kithure, na bingwa wa cluster, Gilbert Kirimi Bundi, nibatucokerie nkatho niuntu bwa ngugi injega ya gukinyira kioneki gietu na kuthingata jaria TIST iikirite tajo kuthingatarajaria jario jongwa, uumma, weru na ngarama ya nthi.

Aja ni maciara ja kuumania na aambia batano:

Edith G. Kamundi - 280kgs  
Gilbert Kirimi- 180kgs  
Bernard Gitonga -260kgs  
Carey Micheni - 280kgs  
James Micheni -205kgs

Mbura iji ijite ya kuanda, baita cia kuanda ndengu ikaingia na igatamba ndene ya cluster yetu niuntu aambiria mubango juju nibaejene mbeu kiri bangi. Gukinyira narua, antu ikumi na batano nibakinyiri ni mbeu kuuma kiri twi. Kwongeeera, nitwetikaniririe gutethia cluster ya Karama na kilo ithano cia mbeu nikenda bageria kurima ndengu miundene yao nikenda bang indene ya TIST boona kethira ndengu cirina baita ndene ya ntuura ciao. Nitukwenda gwikira moyo cluster ingi cia TIST gutonya mubangone jwa ndengu nikenda boona irio na bomba kwendia ingi. Ukenda kumenya nkuruki, ugwe na arungamiri ba cluster yaku nobwarie na Jeniffer Kithure 0726319539.





## Miti imiega kiri TIST: Miti ya gintwire.

### a. **Prunus africana** (Kikuyu: Muri, Kimeru: Mweria)

Muti juju jwa gintwire jwonekaga mono ndene ya miitu. Mpindi niciithagirwa cirri miitune igita riria kuumi. Oja ntunda iria aki cigarukite rangi ciairua na iria cigundi kuuma kiri muti kana nthiguru.

Riita kiu kithiurukite mpindi na njira ya kurinda tunda mathaa mirongo iri na jannari unyarie iguru ria wire. Ara utirikanirite antu ari na ruugo na kirundu nikenda ciama- indi ugakurukia mathaa janna. Mpindi itumbaga gwikwa kwou tuumira woja orio. Gukunikira mbegu na mabura jarina ruuji nikunyiagia kuura kwa ruuji igitene ririkai ria gukamata na gwika. Anda munandene kana maratasine. Kuuma kwijaga nyuma ya biumia bitantatu gwita banana.

**Utumiri:** No juinge tunyomoo tumwe turia tugitaragia imera niuntu bwa mununko jwaju. Maua jarina sukari ya kung'ana kuthithia naicu. Jurina nkuu injega mono. Ndawa: Ruuji kuuma gicaune nirutumagirwa kworia kunenea kwa prostate. Mathangu nijatumagirwa gukucia niuntu bwa gwitia kwa mwanki jwa mwiri kana jakanyuwa jakimeneue nikenda muntu omba kwenda kuria irio. Ruuji nirwongagirwa kiri gicau gikimeneue, na ruuji ruru rutune nirutumagirwa kworia kiu; gicau no gitumirwe kiri ndithia. Kunyiyia ukamati bwa muthetu: Miti noiandwe nterene cia mitaro na naria kwini, niejanaga kirundu kiri na baita na ninyiagia ruugo. Nijuthongomagia muthetu: Mathangu no jatumirwe gukunikira muthetu na ta mboleo imbithi. Kuthongomia: Nijuejaga muti jumuthongi jwa kuanda kienine jwa kuejana kirundu.

### b. **Peacock Flower** (*Albizia gummifera*, Kikuyu: Mukurwe)

Muti juju mono nijwonekaga naria gutina ibari na miitune iria iri guntu kwa mbura na ndene ya mathaka jaria jatirimagwa akui na miitu

Mpindi cioji orio itiendaga uthuraniri. Mpindi (mbegu) iria ikarite ceki nicirindagwa ruujine rwa murutira na rugatigwa kwora mwanka mwanki jwa nyomba. Gikonde kia mpindi no gikunywe aria mpindi yumagira nikenda yumba kuumanga. Mpindi niurangaga, na ntuku ikumi. Mbeu niibati gutua cirri mutine nikenda tunyomoo tutikacigitarie. Mpindi no ciikwe nkuruki ya mwaka aki ciekwa antu gukuumo na aria gutina tunyomoo na njira ya kwongerera muju jwa riiko.

**Utumiri:** Nijutumagirwa ni njuki kuthithia naicu, nkuu, mpao, gum, tannin, ndawa -kuumania na mpindi cikimitwe nicinyunyagwa kworia thina cia kiu na ruuji kuumania na gikonde kia muti rugatumirwa kworia rwagi, Kunyiyia ukamati bwa muthetu (uria miri iri nigutethagia kugwata muthetu na kunyiyia ukamati bwa ruuji ni ngai). Kirundu, gwikira ruugo rwa Nitrogen muthetune (kuthongomia

muthetu), kuria kujukagua kuri njira inthongi ya gukunikira muthetu niuntu mathangu nijaguaga jamaingi igitene riago riakugua. Kuthongomia (Nijuandagwa njirene ya town niuntu bwa uthongi bwaju). Kuanda mianka, Mathangu nijatumaga marigu jakagundanga.

### c. **Olea africana** (*African Wild Olive*, Kikuyu: Mutamaiyu, Kimeru: Muthata)

Muti juju nijwonekaga guntu gukwingi mono akui na nduui na nterene cia miuro iminini n kinya ndene ya miitu ya mpao iminene. Jutigitaragua ni mpio inyingi kana uumo.

Mpindi ciumite muundene orio nicitumagirwa kuanda. Mpindi inkuru no cirindwe ruujine rwa mpio ntuku ijiri.

Mpindi niciambaga kuthuranirwa na njira ya kuuna gikonde na gantu ga kugwata na njara kana kwingiritiria iiga iguru ria mpindi iu. Bubu nibuthithagua niuntu kurita gikonde giki nigutumaga muti jukaumanga. Mpindi iji no ciikwa atu gukuumo miaka imikai.

**Utumiri: Irio:** Biria muti juju juejanaga na wingi ni maguta na ntunda cia kuria. Imera bibi nibirijagwa ni ndithia mono. Kinya nijutumagirwa ta nkuu, mpao, makara, mirashi ya maigo na kuthongomia. Gucokia uria munda jwari: Uumbi bwaju bwa gutuura kinya igita ria uumo nibutumaga jukaa muti jumwega jwa kuanjia miitu kairi guntune gukuumo ndene ya Africa. Kuthongomia: Muti juju nijumbaga kuthongomia uria muunda jukari

### d. **Waterberry** (*Syzygium guineense*, Kikuyu: Mukoe, Kimeru: Muriru)

Muti juju nijwonekaga ndene ya miitu ya mbura iria iti irimene na kinya iria iri irimene. Mono niurangaga guntu kurina ruuji rionthe, mono kinya ndene ya ruuji, na niithagirwa mono nterene cia nduui inini.

Mbegu itiendaga kuthuranirwa mbele ya kuandwa, niuntu kuuma nikwijangaga na kwambagaria o rimwe. Nijukurangaga niuntu nijwithagirwa jukunenea mono ndene ya ntuku mirongo iiri gwita mirongo itano. Kuanda o rimwe turatasine nigwiikagirwa. Matunda nijathukangaga na kwou nijabati kwojangwa nthi jarikia kugua orio. Kinya nojojwe warikia kwinaia muti na rwogoro. Joojwa, matunda jaja nijabati kuandwa orio niuntu nijathukangaga jooma. Kethira bubu butiumbika, itunda noriikwe ntuku inkai jaumbiki kiri sawdust na jari mikebene itikuniki nyomba iri na ruugo rurwega

**Utumiri:** Irio (gitunda), kuthithia naicu, Mpao, Nkuu, Kirundu, Ndawa (gitunda giki nikioragia mutimo jwa dysentery, ruuji kuumania na gicau nirutumagirwa kwinga kioro gikiuthu). Menyeera: gicau kiu kiri sumu nikirikanite no gitume muntu akue, kwou nubati kwamba kuuria baria batumirite gikonde pkia muti juju kiri kuthithia ndawa.



## Utheru: Kuthambia njara.

Kuthamba njara na sabuni ni njira imwe ya iria njega buru na iria itina goroya kuebera miromo ya kuugia na ndimoni, iria amwe citumaga gukua kwa aana babaingi ndene ya Kenya.

Njara jaria maingi niikamataga tuginyo turia tutumaga antu baajua kuuma kiri muntu umwe gwita kiri uungi, rimwe gukurukira gutong'ana na ringi gukurukira gutonga aria bangi batongete. Antu nobatambie mirimo tunginyo tutu batonga njara, mutundu, nyiuru kana uthiu bwa antu bangi. Njara iria itongete kioro kia antu kana nyomoo, nduujia cia mwiri ta mamira na irio kana ruuji ruri na ruuko no rukamate bacteria, virusi natunginyo. Kuthambia njara na sabuni nikuritaga ngugi ya kunogokeria gukamatwa guku.

Kuthambia njara na ruuji ruunka ni kuritaga ngugi inkai mono nkuruki ya kuthambia na sabuni tugitaraga ngugi ya kurita tunginyo. Kuthambia njara gukwega ni kwa secondi inyanya gukinya ikumi na ithano, kuthingatite kuthamikura na ruuji rugwitika.

### **Magita jaria ubati kuthambia njara**

Aja ni magita jaria ubati kuthambia njara ciaku:

1. Mbele na nyuma ya kuria irio
2. Mbele ya kumenyeera twana tutunini
3. Nyuma ya gutonga antu gugutongangwa ni babaingi.
4. Mbele na nyuma ya kuthuranira irio , mono nyama itirugi, nguku kana irio bia iriene
5. Nyuma ya gutumira kioro
6. Riria njara cirina ruuko.
7. Warikia gutonga nyomoo
8. Riria ugwe kana muntu uri akui nagwe aajitue

### **Mantu jaria ubati kumega jegie kuthambia njara na sabuni**

Kuthambia njara kurina bata mono aria antu batirimanite (cukuru, ofisi, kanisene, micemanione), aria aajie kana baria bagwatangagwa ni mirimo bangei (cibitari, nja cia kumenyeera ajie), aria irio bithuranagirwa, bikagaanwa na nja, mono naria kurina aana babanini na antu babanene baria baajangagua.

### **Gantu ka kuthithia na uuthu gakuthambiria njara warikia kuuma kioro**

Gantu karia koothu buru ni kwithirwa urina kibuyu kiujuritue na ruuji giiki oome ya bioro. Sabuni niibati kwithirwa irio.

Indi-ri, njira iji itibui niuntu antu nibatongaga kibuyu mbele na nyuma ya kuthambia njara, untu buria bado bugatambia tunginyo. Ngantu kangi karia koomba kuthithua nit a uju:

1. Thithia karubao karina mucumari gatigati jwa kugwatia.
2. Thithia kirinya gia kunyua ruuji rwa ruuko, winje kirinya kithiurukirite karubao na ukiujurie na maiga. Bubu bugetikiria ruuji rwa ruuko rutonye muthetune.
3. Cua gikebekimwekiruguri gikinene ( mukebe kana kibuyu kigiti) na ukiujurie na ruuji.
4. Cuaa gakebe kangi karuguri gakanini, ta chuba ya ruuji igiti.
5. Tura karinya rutere rwa nthi rwa gakebe gaka na wikira njara ya kugwata.
6. Tonyithia gakebe gakanini kiri gikinene na ukojurie na ruuji.
7. Curia gakebe gakanini mucumarine nikenda ruuji rwaambiria gwitikira karinyene ja tapu.
8. Thambia njara na sabuni.

Wega bwa njira iji ni ati ugatonga gakebe gakanini rimwe aki gukojuria na ruuji.



# Website ya thimu ya TIST nandi nigwita ngugi: Baruga iruguri iumite.

*kiri William Mwito.*

*Kiri nthumba na arimi endwa ndene ya TIST,*

Ntuku iji, nikugiite uuthu kirini gucokia biuria gutungatira ikundi bibinini bwega, riria ntirimanaga nabio.

Some of the questions we can easily answer now include:

Ni miti ing'ana o mumemba arinayo? Bubu buri bata mono riria bateete karatasi karia kaandikiri miti iria batarirwe.

Turariwa? Kethira ii, niri? Kethira tutariwa, niatia tuumba kuthithia nikenda turiwa? Nituumbaga kuumenya na uuthu kethira gikundi kirina miti imikai kiri Magana jatano kana kethira gitisainite kandarasi ya GhG, nikenda boomba kuthithia uria babati nikenda bariwa.

Kwongera, ni kuuthi mono kirini kumenya mantu jaria jagukarika kiri o cluster na kugaana umenyo bubu nabo.

Ja mutari miti na nthumba ya cluster, website iji ya thimu ya TIST irina bata niuntu niethagia gutega mantu jegie miunda, tariki cia micemano ya cluster, kwegie ikundi bia cluster (GOC) na guntu, namba cia thimu cia amemba ba TIST, into bia uritani, mitire ya kuthithia mantu (SOPs), ntuku ya utegi ngugi, na mapu ikwonania miunda iria ikuiritie igitene ria uteri muntu—iria irina bata mono riria uri ndene ya cluster utikumanya bwega.

Nigwikira antu bonthe inya yakwambiria gutumira njira iji irina bata na igutethia mono. Aja niatia:

1. Ita kiri [www.tist.org/mobile](http://www.tist.org/mobile)
2. Kethira urina namba ya email ya TIST, tonya na namba iji na ritwa riaku ria witho.

3. Kethira utinayo, no utonye ja “guest” kana mugeni. Ikira riiwa riaku na ria kambuni yaku na utonge “log in”. Kambuni no yee riiwa ria gikundi giaku.

4. Ugetithua pengi iu ingi. Iguru ukethira “Cluster”, “Groups”, “Groves” na “Log out”

5. Wenda gutega cluster yaku, taara “Cluster”. Ugaikua pangi ikwonanaia naria TIST iri ndene ya nthiguru yonthe. Taara na utonge aria ukwenda (ja Meru). Kuuma aja ugeeta pengi iria ukethira cluster iria cirri Meru (kana antu angi aria ugataara) amwe na ni ikundi bing'ana na miti iandiki na ntuku ya mucemano jou jungi nay a ithurano bia muthia.

6. Taara cluster yaku (ta Ciakanyinga). Aria gukaruguka ukoona mariitwa ja ikundi bibinini biandiki na mariitwa, namba ya TIST, namba ya miti na nntuku ya muthia ya uteri miti.

7. Taara gikundi giaku (ta, TARADA). Ugaikua antu angi. Ukethira mantu jegie gikundi giki, amwe na kethira bakariwa na kethira gikundi nigikinyithitie jaria kibati kenda gitonya thokone ya ruugo.

Ibwega na Murungu abutharime,  
William Mwito, nthumba ya cluster ndene ya GOC ya Maua.



# Niatia tuumba kuthithia nikenda twebera kuthukua kwa ruuji ?

*Ni Joseph Gituma*

Kuthukua kwa ruuji kinya riria tutigukwona, no gwikire sumu na kuuraga imera na nyomoo, amwe na antu. Ruuji rwina ruuko rugatumirwa kuruga, kuthambia na kunyua no rutume mbajua cia antu ta njoka cia kiu, thina cia ngozi, cholera na kuugia. Uria tuumba kwebera kuthukua ruuji.

## Niatia tuumba kuthithia kwegie kuthukua na ruuko?

1. Ugaata ruuko kana utuura ruuji rwa ruuko nduujine. Ikira kinya bangi inya yagwika ruuko kuraja na nduuji.
2. Aanda miti nterene cia nduuji na iriene. Miiri ya imera ni imiega kiri gucuunka ruuko na gutigithiamuthetu kuumania na gutonya nduujine riria jukamati.
3. Ebera kuanda imera akui mono na nduuji, maria na ithima nikenda fertilizer itigakinye ruujine.
4. Ikira antu inya gwaka kuraja na nteer cia nduuji.
5. Menyeera ati ithima na ithima bia kwinja

nibikumenyeerwa bwega.

6. Irigira ruuji ni kenda nyomoo itikaruthukie.
7. Ugeetikiria antu kuurira akui na pampu.
8. Menyeera ati biero biri nkuruki ya mita mirongo itano kuuma kiri kiumo kia ruuji. Menyeera ati kurina njira ya gwita ruuji na kuthithia njira cia kuumaria ruuji na kurwikia kirinyene, kirinya kiujuritue maiga aria ruuji rugatonya muthetune.
9. Thithia naria gwatuki nkunikine orio gwatuka na utherie antu aja o nyuma ya o igita.
10. Kethira utigwitikia ruuji nirutheri, rutherukie mbele ya kurunyua nikenda uuraga tunginyoturia tumba gutuma wajua. Guchamukia ruuji gutiritaga ruuko ruunthe, na norutige ndawa imwe, ja ndawa cia tunginyo na fertilizer iria ciumba gutwajithia, indi gukanyinya kuumbika gwa kwajua ni cholera na njoka cia kiu.

# Cluster ya TIST ya Mporoko: Kuritaniria ngugi kuthithia munanda jwa cluster.

*Ni Joseph Gituma*

Nitwitikanagia na urumwe na gwitaniria ngugi. Batwi, amemba ba cluster ya Mporoko, nitwithirite tugitaga ngugi gutethania ndene ya TIST. Nandi, nitugwita ngugi ya kwambia munanda jwa miti jwa cluster mbura iji iijite ya kuanda. Nitumenyagiira ati munanda jurina mithemba ya miti iungene amwe nay a gintwire, ya kwija na mitunda. Bubu nibutethagia gukinyira mahitaji jamaingi ja amemba beetu.

Turina wiru kwithira tukiritanagiria ngugi na kambuni ya Water Resource Users Association, BWRUA. Kambuni iji niitwete na into amwe na iciko, wiribaro, rakes, itangi bia ruuji, mikebe ya gwituura ruuji na mibuko.

Ruterene rwetu, nituejanaga ngugi yetu, umenyeeri na urungamiri bwa munanda jwa miti. Kwongera nitucitaga kuanda miti ya gintwire nterene cia nduuji. Nitukwigua nitubati kumenyeera

iria ria Mporoko. Amemba beetu niboona miti imiega ya kuanda miundene yao aria tumimenyagira ta miti ya TIST.

Narua, gukurukira ngugi yetu ya kugwatanira, iria ria Mporoko niriongerete ruuji nikenda ntuura iria cirri bwagaiti na nyomoo cia kithaka ndene ya Meru National Park nicikwona ruuji rurwingi kinyacio.

Nitugucokeria TIST nkatho. Ni gukurukira TIST tuthoomete jamaingi kwegie miti ya gintwire, mitire iria miega nkuruki ya kuthuranira minanda, kumenyeera miunda iria iri nterene cia nduuji, mantu jaria jaumanagia na kugaruka kwa reran a jangi jamaingi. Burina bata nkuruki, nandi nitukumenyaniki tubati kuthongomia naria gututhiurukite amwe na kua raia babega ba nthiguru yonthe, kurua na kugaruka kwa reran a kugitwa kwa miti.



# Mazingira Bora



# TIST

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

**Kikuyu Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



Tist farmers from Kiang'ondo Cluster during their Cluster meeting last month.

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## Miti miega ya TIST: Miti ya matunda.

Thiini wa TIST, nituhandaga miti ya gutura. Mawega maria mangi ma miti ino ta miti ya matunda na nathi noikorwo iri na bata na muno makiria twebanga kwendia matunda na indo ingi iria ciumaga miti-ini.

### Makorobia

Makuraga kundu guothe.

Ikia mbegu maai-ini mahehu gwa kahinda ka mathaa<sup>24</sup> na huande nyungu-ini. Handa mbegu iria citaikarite muno. Nouciarithanie miti ino. Imeraga thutha wa 3-4 weeks na utaganu wagiriirwo gukorwo wi 6m. Miti ino ihandagwo hakuhi na mucii.

Miti ino ihuthagirwo na ngu, makara irio, kiiruru, kugemia na maguta. Matunda nimari hinya, mari maguta mega na nimakoragwo na vitamins. Gikoni mahuti na mbegu nimakoragwo na toxin. Nourie mboco kuria kuri na miti ino.

### Mbera

Niitiragia riuu.

Mbegu citibataraga guthondekwo mbere ya

kuhandwo. Cimeraga thutha wa 3weeks na utaganu ni 4m.

Niuhuthagirwo ta ngu, makara na ikingi cia gwake. Matunda nimakoragwo na vitamin C na vitamin A. uciaraga matunda thiini wa miaka 3-4. mbau citiriagwo ni muthua. Matunda maria momu nimo makoragwo mari mega. Mahuti na matunda nimahonagia kuharwo. Mahuti na makoni nimahuthagirwo guthondeka maguta ma ngothi naknina minyoo na irona cia nda. No uhande irio cia mahiu ohamwe na mbembe muhia na njugu. Mbera nocikure makiria na cihure mugunda.

### Maembe:

ndukuraga kundu kuri na muiyuro wa maai na wendaga tiiri uri na maai.

Mbegu citibataraga guthondekwo onagutuika gwatura mbegu niguteithagia kumera. Mbegu nocigwo gwa kahinda ka mweri handu hari na urugari mwega. No uciarithanie maembe.

Niuhuthagirwo hari ngu, matunda, irio cia mahiu, kunyihia ruhuho, kiiruru ohamwe na kugitira tiiri.

## Cluster ya Kirindini: niturakenera magetha maitu ma ndengu.

*Mwandiki Annet Kaari, ndungata ya cluster.*

Ithui, amemba a TIST thiini wa cluster ya Kirindini iria ikuragia ndengu nitwacemanirie mweri 26/2/2013 kuria tucemanagia. Ahariria a project ino, Jeniffer Kithure, nimokite mucemano. Nituri na gikeno tukimenyithania ati nitwahotire gukorwo na magetha meega kuma hari ikundi ithano cia Help to Help (H2H) iria ciari cia kwambiriria, nitwahotire gukorwo na 1,205kgs. O umwe witu ari na 25kgs cia N26. Iria cikuraga wega kundu kuumuu tondu nicikuraga na-ihenya.

Muhariria wa project ya ndengu, Jeniffer Kithure, na erutiri a cluster, Gilbert Kirimi Bundi, nimacokeirie arimi ngahto niundu wa wira mwega turutite thiini wa TIST na njira ya uma na utheri tutakuhuthira mbeca nyingi.

Maya nimo magetha ma ambiriria 5:

Edith G. Kamundi - 280kgs

Gilbert Kirimi - 180kgs

Bernard Gitonga - 260kgs

Carey Micheni - 280kgs

James Micheni - 205kgs

Kimera giki kiroka gia kuhanda, mawega ma kuhanda ndengu nimegutherema thiini wa cluster iitu tondu ambiriria nimekuheana mbegu kuri arimi angi. Nginyagia hau, arimi 15 nimahetwo mbegu uma kuri ambiriria. Makiria, nitwaiguithaniirie guteithia cluster ya Karama na 5kgs cia mbegu makiambiriria kuhanda migundaini yao niguu mone kana no mateithike na mutaratara uyu. Nitugwikira inya cluster ingi ciambiririe urimi uyu wa kuhanda irio ciramarehera mbeca. Niundu wa ugoro makiria, wee na arugamiriri a cluster nomaranirie na Jeniffer Kithure kuhitukira 0726319539.



## Miti miega ya TIST: Miti ya ki-nduire.

### Muiri

Muti uyu wa ki-nduire wonekaga muno mutitu. Mbebgugu nicionekaga mutitu mahinda mariua. Ungania mbegu iria ciri cia gi-tiiri kuma matunda-ini kana unganie thi. Ruta ngothi na kurinda maai-ini mathaa 24, thambia na wanike waya-ini kwa mathaa matakirite 4.

Handa mbegu ici citikaraga muno citathukite. Cige na mahuti maigu riria uracikuu. Cihande tuta-ini utagwikira maratathi-ini na nicikumera thutha wa 6-8 weeks.

Niuingataga tutambi ta gathua kuhitukira munungo wagu. Mahua nimakoragwo na irua riiganu ria kuhungwo ni njuki, niukoragwo ngu njega muno.

**Dawa:** maai maguo nimahuthagirwo guthondeka muthiori. Mahuti maguo nimahonagia homa na kuhotithia mundu kuria. Ongerera maai makoni-ini na makaonia nda ohamwe na guthondeka ng'ombe. Nimwega na kugitira tiiri na miti ino ikuragio mitaro-ini ikanyihia ruhuho. Mahuti ma muti uyu nimanoragia tiiri.

### Mukurwe.

Miti ino ikuraga kuria kwaraganu na mititu-ini.

Mbegu cingikorwo cithondeketwo kana citari thondeke no cihandwo. Mbegu njigu niciagiriirwo ni kumithio mbere ya cihanditwo. Ungienda kuiga mbegu ici noucirinde maai-ini mararu na ureke cihore. No urage ngothi ya guru niguo umiteithiririe kumera. Mbegu ici nicimeraga na gicunji kia 70-80% thutha wa thiku 10. mbegu ciagiriirwo ni gutuo kuma miti-ini. Mbegu nocigwo gwa kahinda ka mwaka umwe na uhake muhu.

**Mahuthiro:** nnjuki nicirutaga uuki muti-ini uyu, mbau, ngu dawa(niutumagirwo kuhonia nda na malaria),

kugitira tiiri(miri yaguo nimirumu), kiiruru, kunoria tiiri na nouhandwo mihaka-ini na kuhotithia kwiruithia marigu.

### Mutamaiyu:

Muti uyu wonekaga kuria kuri namaai maingi na njuui-inina migunda-ini migunyu. Niwiritragia riuu. Mbegu njigu ninjega na kuhanda na noucirinde maai-ini kwa mathaa 48 mbere ya kuhanda.

Mbegu nicithondekagwo mbere ya kuhandwo niguo cihote kumera wga. Ciige handu hatari na ugunyu kwa miaka iigana o una.

**Mahuthiro:** kindu kiria kia bata makiria muti uyu urutaga ni maguta irio cia mahiu. Niurutaga maguta ma ngari, mbau na ngu. Mikinyi ya magego na ciuma. Niwiritragia riuu na kwa uguo gukorwo uri mwega na gucokereria mitiu thiini wa africa. Niithakaragia mugunda..

### Mukoe:

Muti uyu ukuraga kundu kianda-ini na mititu ya maai, muno ukuraga kundu kuri na ugunyu na ringi maai-ini na njuui-ini.

Mbegu nicibataraga guthondekwo mbere ya cihanditwo na nicimeraga wega na gicunji kia 80-90% gwa kahinda ka matuku 20-50. kuhanda nyunguini nikuo kwegu makiria. Mbegu nicithukaga na-ihanya kwa uguo no ciunganio citanaikara. Nouinainie muti niguo uguithie mbegu na ucihande o rio.

**Mahuthiro:** irio(matunda), uuki na mbau hamwe na ngu ona kiiruru na dawa(matunda nimahthagirwo kunyihia kuharwo) makoni nimari thumu na nomorage mundu, caria utaarani uria ukuuhuthira.



## Utheru: guthambia moko.

Guthambia moko na thabuni ni umwe wa maundu maria mahuthu ma kugitira mirimu ta kuharwo na pneumonia iria irehaga ikuu nyingi cia ciana Kenya.

Moko mahuthikaga gutambia mirimu kuma mundu kuri uria ungi kuhitukira kuhutania kana njira ingi. Andu nimatheremagia bacteria na kuhutania moko, njuiri, maniuru na uthiu. Moko maria mahutanitie na nyamu kana giko kia nyamu hamwe na irio ciri na giko nimatheremagia mirimu, viruses na tutambi. Guthambia moko na thabuni nigutumaga utheremu uyu uthire.

Guthambia moko na maai matheri gutinginina utheremu uyu biu ta riria wathambia na thabuni. Uthambia mwege wa moko na thabuni uhuthagira 8-15 seconds na thutha kuniarithia biu.

Ikuro cia bata ugithambia moo na thabuni

### **maya nimo mahinda maria ma bata wagiriirwo niguthambia moko.**

1. Thutha wa kuria irio.
2. Thutha wa kunyita kundu kwa muingi.
3. Thutha wa kunyita ciana.
4. Thutha na mbere ya kuhariria irio na muno nyama.
5. Thutha wa kuhuthira kioro.
6. Riria moko mari na giko
7. Thutha wa kunyita nyamu.
8. Riria wee kana mundu uri hakuhi nawe ari muruaru.

### **Kumenyithania guthambia moko na thabuni.**

Guthambia moko na thabuni nikwa bata muno na makiria kuria andu macemanitie(cukuru, ofisi, kanitha, micemanio), kuria andu aruaru mari(thibitari, nursing home), kuria irio cirathonderwo na makiria kuria kuri na ciana nini.

Njira ya naihenya ya githambia moko thutha wa kuhuthira kioro.

Njira iria huthu ni gukorwo na kibuyu kri na maai hakihi na kioro na uige thabuni hau.

No ona kuri ouguo, njira ino ti nginyaniru tinu andu nomarinyita kibuyu njira iria ingitambia erms. Njira ingi na njega noithindekwo na njira ino:

1. Thondeka rubau rwege na uhuririre kamucumari.
2. Enja irima ria uitira maai.
3. Thondeka mukebe munene na uiyurie maai.
4. Etha mukebe ungi munini na uuture irima.
5. Tura karima kanini na-thi na na wikire kamuti.
6. Rikia mukebe munini hari uyu munene na uiyurie maai.
7. Cuuria mukebe munini rubau-ini ruria niguo maai mabiririe guitika.
8. Thambia moko maku na thabuni.

Weega wa njira ino ni ati unyitaga o mukebe uria munini o rimwe niguo wikire maai.





# Website ya Thimu niiraruta wiira: Marua kuuma kuri.

*William Mwito.*

*Kuri ndungata cia TIST na arimi*

matuku maya, niukoragwo uri uhuthu muno hari nii gucokia ciuria na gutungatira ikundi nini weega riria twacemania.

Ciirui iria tuokagia na uhuthu ni t:

ni miti iigana o murimi ari nayo? Kiuria giki kiuragio muno makiria riria mundu atari na iratathi ria rekodi.

Turi twamukira marihi? Angikorwo niguo, ori? Angikorwo tiguu, twagiriirwo nigwika atia niguo twamukire? Niturahota kwira ikunji na njira huthu kana mari na miti thi ya 500 kana matiikirite kiroro Greenhouse Gas Contract, niguo mahote gukinya makinya maria magiriire ma kwamukira marihi.

Na makiria, ni uhuthu kuona maundu maria marathii na-mbere hari o cluster na ukaraniria nao.

Ta mutari wa miti na ndungata ya cluster, websiter ya thimu niya bata muno tondu niuhuthu kuona mohoro ma miti, micemano ya cluster, uhoro wa Group of Clusters(GOCs) na icigo, namba cia thimu cia amemba a TIST, indo cia guthomithania mitarataru ya uruti wa wira, muthenya wa miti guthuthurio, map cia migunda riria uratara miti riria utaramenya wega.

Nigwenda kuhinyiriria o mundu ambiririe kuhuthira website ino na hio niyo njira ya kuhuthira:

1. Ingira [www.tist.org/mobile](http://www.tist.org/mobile)
2. Angikorwo uri na email ya TIST, ingira nayo na password.
3. Angikorwo nduri na email ya TIST, nongire ta

Guest. Ikira riitwa riaku, na kuria urutaga wira ucoke uhihinye log in. kuria urutaga wira nogukorwo kuri riitwa ria gikundi.

4. Niugutwarwo page ingi. Hau iguru, niukwona “Cluster”, “Groups”, “Groves” na “Log Out”
5. Angikorwo urenda kwona cluster, hihinya “Cluster”. Niugutwarwo page iria ironania project cia TIST thi yothe. Hihinya kuria urenda(ta Meru). Kuma haha, niugutwarwo page ingi iria iri na cluster ciothe thiini wa Meru(kana kuria wathuura) na muigana wa ikundi na miti iria mihande hamwe na mithenya ya micemano na ithurano.
6. Hihinya cluster yaku(ta, Ciakanyiga). Page ingi niikuhinguka na wone ikundi nini iria ir thiini wa cluster ino na maritwa, namba ya TIST, muigana wa miti na muthenya wa muico wa gutarwo.
7. Hihinya gikundi giaku(ta, TARADA). Niugutwarwo page ingi. Na niukwona horo wigii gikundi giki, ta marihah na kana gikundi nigikinyaniirie maundu maria mendekanaga niguo kiingire thoko ya carbon.

Niwegana Ngai amurathime,

William Mwito, Maua GOC Cluster Servant.



# Niatia tungika niguu tugiteri guthukio kwa maai?

Mwandiki Joseph Gituma

Guthukio kwa maai, ona riria tutangiona, nokurage miti na mimera ohamwe na nyamu. Maai mathuku mangihuthika na kuruga kana kunyua, gwithamba nomarehe mirimu ya nda, ngothi na kuharwo.

## Tungiigitira kumana na uu atia?

1. Ndugate mahuti kuria maai maumaga, hinyiriria aria angi matigaikie giko maai-ini.
2. Handa miti njuui-ini na iria-ini. Miri ya miti niikoragwo iri miega na gutheria maai na ikagiririria tiiri kuingira maii-ini.
3. Ndukahande irio hkuhi na ruui, iria kana ithima niguu fertilizer ndikaingire maai-ini.
4. Hinyiriria andu matigaake hakuhi na ruui.

5. Tigiriria ithima niciarorwo wega.
6. Irigira kuria maai maumaga niguu mahiu matigathukie.
7. Ndukareke andu methambire ruui.
8. Tigirira ciio cia irima iri 50meters kuma na kuria ihumo cia maai iri. Na utigirire kuri na mitaro miega ya maai.
9. Thinga miatuka yothe ya ciuro na uthambie weega.
10. Angikorwo nduri na uma ati maai nimatheru, therukia niguu uraga germs.

# Cluster ya TIST ya Mporoko: kunyitanira niguu kwambiriria nursery ya miti.

Mwandiki: Joseph Gituma.

Nitwitikitie unyitaniri na urumwe. Ithui, amemba a cluster ya Mporoko, nitukoretwo tukiruta wira hamwe niguu guteithania thiini wa TIST. Gwa kahinda gaaka, niturenda kwambiriria nursery ya miti niundu wa kimera giukite gia kuhanda miti. Nitutigagiria ati nursery ciitu iri na mutukanio wa miti ya kinduire na yaguuka. Uu niututeithagia gukorwo na miti ngurani.

Nitukenete ni kunyintanira na ruhonge rwa ma I rwa BWRUA. Ruhonge ruru nirututeithitie na indo cia mugunda ta iciko, wheelbarrow, matangi ma maai na ndoo ciaguitiriria maai.

Mwena-ini wiitu, nitumarutagira wiira thiini wa nursery. Nitwirutagira kuhanda miti iria imwe iri ya ki-nduire kuria kumaga. Niturona turi na uigiririki wa hamwe wa kugitira itomboya cia Mporoko.

Amemba aitu nimamukagire mbegu na mimera cia kuhanda migunda-ini yao kuria tumimenyagirira ta miti ya TIST.

Umuthi, kuhitukire unyitaniri wiitu, itomboya cia Mporoko nicingereire maai na njuui cikambiriria gutherera kuma ho na nyamu kuma Meru National Park cikona maai ma kunyua..

niturakenera TIST. Ni kuhitukira TIST tuthomete makiria uhora wigii miti ya ki-nduire, mitaratara miega ya nursery, kugitira kuria kwaraga na ugaruruku wa riera na mangi maingi. Na undu ungi wa bata, niturakenera uria turerutira kwagirithia maria maturigicirie thiinii wa thi na kuhurana na ugaruruku wa riera na utemi wa miti.

# Mazingira Bora



# TIST

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

**Kiswahili Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**Wakulima wa Tist kutoka Kiang'ondo Cluster katika mkutano wa Cluster mwezi uliopita.**

## ***Ndani:***

**Miti mizuri katika TIST: Miti ya matunda. Ukurasa 2**

**Cluster ya Kirindini: Tunajivunia kugawana vuno letu zuri la ndengu. Ukurasa 2**

**Miti mizuri katika TIST: Miti ya kiasili. Ukurasa 3**

**Usafi : Kuosha mikono. Ukurasa 4**

**Mwito Tovuti ya TIST katika simu yafanya kazi sasa. Ukurasa 5**

**Tunaweza tanyeje kuzuia uchafuzi wa maji? Ukurasa 6**

**Cluster ya TIST Ya Mporoko: Twafanya kazi pamoja ili kuanzisha kitalu cha miti cha cluster. Ukurasa 6**



## Miti mizuri katika TIST: Miti ya matunda.

Katika TIST, tunapanda miti ya muda mrefu. Faida zinazokuja na haya kama matunda na karanga, zinaweza kuwa na thamana, sana tukipanga kuuza matunda na vitu vingine pamoja. Ilio hapa chini ni miti ambayo inaweza kuwa yenye faida kubwa.

**Avocado** (*Persea americana*)

**Ikolojia:** hupandwa maeneo yote yenye unyevu

**Matibabu kabla ya kupanda:** Lowesha mbegu kwa maji baridi kwa masaa ishirini na nne, halafu panda mifukoni moja kwa moja. Tumia mbegu ukishaitoa kwa tunda kwani mbegu hazikai muda mrefu. Miche inaweza kua kutokana na matawi pia. Kuota ni baada ya wiki tatu kwenda nne na nafasi kutoka mti mmjio hadi mwingine iwe meta sita kupanda. Miti hii sana sana upandwa karibu na nyumba.

**Matumizi:** Kuni, makaa, chakula, kivuli, vipodozi, mafuta. Tunda ili ni lishe bora, lina mafuta, protini na vitamini. Gome la mti, majani na mbegu sumu kwa wanyama wanaokula majani. Miche inaweza kupandwa pamoja na mahagwe ikiwa midogo. Mti huu ni njia nzuri ya kupata pesa.

**Guava** (*Psidium guajava*, Kikuyu: Mubera)

**Ikolojia:** Inaweza kuhimili ukame lakini haiwezani na maji yasiyoisha.

**Mbegu:** Haihitaji kutayarishwa. Kuota: Wiki tatu. Nafasi kati ya miti: meta nne

**Matumizi:** Kuni, makaa, magogo, chakula, matunda ya

kula yaliyo na Vitamini C na Vitamini A. Huzaa baada ya miaka tatu kufika nne. Mbao hailiwi na mchwa. Matunda yake yaliyokauka na muafaka hupendekezwa kwa ugonjwa wa kuhara damu, ilhali majani na matundwa hutumika kuponya ugonjwa wa kuhara. Mafuta yake huwa na sifa za kupambana na moto inavyofaa. Majani na gome lake yaweza kutengeza mafuta ya kuponya shida za ngozi, vidonda na vidonda vya tumbo. Majani bado hutumika kwa kasoro katika utumbo, baridi na shinikizo la damu ndani ya mwili, kiwewe, uchungu, maumivu ya kichwa na maumivu ya viungo na misuli. Juisi hutumiwa kusaidia maumivu ya maini, kisonono, na kuhara. Kuchanganya mimea: hufanya vizuri ikichangaywa na mimea ya kuwalisha mifugo mfano mahindi, mtama na kunde. Mti huu unaweza kujaza eneo kwa maeneo mengine.

**Mango** (*Magnifera indica*)

**Ikolojia:** Hauwezani na mafuriko na unahitaji mchanga unaolowa vizuri. Unafanya vizuri kwa maeneo makavu.

**Mbegu:** Hazihitaji utabibu kabla ya kuoteshwa, ata kama kuzitoboa kunaweza kusaidia katika kuota. Mbegu hizi zinaweza kukaa kwa muda wa mwezi mmoja katikajoto la kawaida, mbegu moja kwa moja kutoka kwa matunda huwa nzuri zaidi kupanda. Matawi pia yanaweza kutumika kuotesha.

**Matumizi:** Kuni, matunda, lishe ya wanyama, lishe ya nyuki, kupunguza upepo, kufunikia ardhi, kivuli, kuhifadhi mchanga, gundi.

## Cluster ya Kirindini: tunajivunia kugawana vuno letu zuri la ndengu.

*Umeletewa na Annet Kaari, mtumisi wa cluster*

Sisi wana TIST wa mradi wa upanzi wa ndengu katika cluster ya Kirindini tulikutana tarehe ishirini na sita mwezi wa pili mwaka 2013 katika mahali pa mikutano yetu ya cluster. Mratibu wa mradi wa ndengu katika TIST, Jeniffer Kithure, pia alihudhuria mkutano. Tunafuraha kutangaza kuwa tulipata zao zuri la vuno la hali ya juu na zuri. Kutoka kwa waanzaji watano wa huu mradi wa Saidiwa usaidie (H2H), tuliweza kupata vuno la kilo elfu moja mia mbili na tano. Kila mmojawetu alikuwa amepewa kila ishirini na tano za mbegu ya aina ya N26, ambayo inakua vizuri sanasana maeneo kavu kwa sababu ya kukomaa mapema.

Mratibu wa ndengu, Jeniffer Kithure, bingwa wa cluster, Gilbert Kirimi Bundi, walitupongeza kwa kazi nzuri tuliyofanya katika kufikia lengo letu na kufuatilia maadili ya TIST ya usahihi, ukweli, uwazi na utumizi wa gharama ndogo.

Hapa ni mavuno kutoka kwa waanzilishi watano:

Edith G. Kamundi – kilo 280

Gilbert Kirimi- kilo 180

Bernard Gitonga – kilo 260

Carey Micheni - kilo 280

James Micheni – kilo 205

Katika misimu ijayo ya upandaji, faida za ukuzi wa ndengu zitakua na kutambaa katika cluster yetu kwani waanzilishi wamepeana mbegu kwa wengine watakaofaidika. Kufikia hapa, watu kumi na tano wamepata mbegu kutokana nasi. Kuongeza, tuliitikiana kusaidia cluster ya Karama na kilo tano za mbegu wanapojaribu kupanda mmea huu katika shamba lao, ili wengine katika TIST waweze kuona kama ndengu ni yenye faida katika eneo lao. Tungetaka kuwahimiza cluster zingine kuingia katika mradi huu ili kupanda kwa ajili ya chakula na uuzaji. Kwa maelezo zaidi, wewe na wawakilishi wa cluster yako mnaweza kuongea na Jeniffer Kithure, 0726319539.





## Miti mizuri katika TIST: Miti ya kiasili.

a. **Prunus africana** (Kikyuyu: Muiri, Kimeru: Mweria)

Mti huu wa kiasili hupatikana sana misituni. Mbegu hupatikana msituni, wakati wa msimu kavu. Kusanya matunda ya kahawia yaliyomuafaka kutoka kwa taji la mti au chini. Toa maji kwa kulowa majini masaa ishirini na nne, halafu osha juu ya waya wenye matundu. Eneza kwa safu lembamba mahali penye hewa na kivuli ili yakauke- lakini kwa muda wa masaa manne pekee.

Mbegu haikai sana kwa hivyo tumia ukishamaliza. Funika mbegu na majani yenye unyevu ili kupunguza maji yanayopotea wakati wa kuhamisha na kuhifadhi. Otesha kitaluni au mfukoni moja kwa moja. Mbegu huota baada ya wiki sita hadi nane.

**Matumizi:** Unaweza kufukuza wadudu kama chawa, viwavi (wanaoshambulia mimea) kwa kutumia mnuko wake. Maua yake yana nta ya kuvutia na poleni ambavyo ni chakula cha nyuki. Huwa na kuni bora. Dawa: dondoo la majimaji kutokana na gome hutumika kutibu Kansa ya kibofu. Majani hutumiwa kuvutwa na mwenye homa ama mlevi kuboresha hamu ya kula. Maji huongezwa kwa gome lililobondwa na majimaji haya mekundu yanatumika kama tiba la maumivu ya tumbo. Maji maji kutokana na gome yanaweza kutumiwa kwa mifugo. Kuzuia mmomonyoko wa udongo: miti inaweza kupandwa kwa mitaro na matuta kuleta kivuli na kupunguza upepo. Kuboresha mchanga: majani yanaweza kutumiwa kufunika ardhi na kama mbolea ya kijani. Kurembesha; Huwa mti wa kivuli kinachovutia bustanini.

b. **Peacock Flower** (*Albizia gummifera*, Kikuyu: Mukurwe)

Mti huu hupatikana sana misitu ya mvua iliyo tambarare na iliyo kilimani na mazingira ya misitu. Unaweza kuotesha mbegu iliyotibiwa au iliyoloweshwa. Mbegu zinazotoka kwa matunda moja kwa moja hazihitaji kutibiwa. Mbegu zilizowekwa kwa muda huloweshwa kwa maji moto na kuachwa kuwa baridi. Gome la mbegu laweza kuvunjwa kidogo ili kuharakisha kuota. Huota vizuri kwani siku ya kumi mbegu huwa imeota asilimia sabini hadi themanini. Mbegu zapaswa kukusanywa kutoka kwa mti ili kupunguza mashambulizi ya wadudu. Mbegu yaweza kuwekwa kwa mwaka mmoja u zaidi ukihifadhi pakavu na pasipo na wadudu kwa kuongeza majivu.

**Matumizi:** ya mbegu hutumika palipo na maumivu ya tumbo na gome hutumika kwa ugonjwa wa malaria, Kudhibiti mmomonyoko wa udongo ( mizizi hushikilia mchanga na kuzuia mmomonyoko wa

udongo katika korongo), kivuli, kuboresha mchanga, hujulikana kama mti wenye matawi ya kufunika ardhi kwani matawi mengi huwa msimu wa kuangusha majani. Kurembesha (hupandwa mijini kwa sababu za kuvutia watu, kuonyesha mipaka, majani huharakisha kuiva kwa ndizi.

c. **Olea africana** (African wild olive, Kikyuyu: Mutamaiyu, Kimeru: Muthata)

Mti huu hupatikana maeneo mengi, sana sana karibu na maji, mito na ata maporini. Ni sugu kwa baridi na kwa ukavu.

Mbegu kutoka kwa matunda hutumika kuotesha. Mbegu nzee yaweza kuloweshwa kwa maji baridi kwa masaa arobaini na nane.

Mbegu sanasana hutibiwa kwa kuvunja na kifaa au kwa kuachilia jiwe juu ya mbegu. Hii ni kwa sababu kutoa ngozi ya ndani ya mbegu husaidia kuota haraka. Mbegu huwekwa mahali pakavu na penye joto la kawaida kwa miaka michache.

**Matumizi:** Chakula: Bidhaa kuu ya mzeituni ni mafuta na matunda yanayoliwa. Lishe: mimea hii huliwa na mifugo. Hutumika pia kama kuni, mbao, makaa, miswaki ya meno na kurembesha. Kuimarisha: kuwa sugu kwa ukavu inapendekeza kuwa mti huu yaweza kutumika kuimarisha maeneo Africa yenye ukame. Kurembesha: mzeituni huweza kurembesha ardhi/mazingira.

d. **Waterberry** (*Syzygium guineense*, Kikyuyu: Mukoe, Kimeru: Muriru)

Mti huu sana sana hupatikana misitu iliyo kwa tambarare na iliyo milimani. Hukua sana mahali penye unyevu, mara nyingine ndani ya maji na hupatikana kando ya mito

Mbegu hazihitaji kutibiwa, kwani huota haraka na vizuri. Huota kwa asilimia themanini kufika tisini kwa siku za kwanza ishirini hadi hamsini. Kuotesha mifukoni hupendekezwa. Matunda huharibika kwa yanafaa kuokotwa mara moja yakishaanguka. Yanaweza pia kwa kutikisa matawi. Ukishakusanya, matunda yanafaa kuotesha mara moja kwani yanaweza kupoteza uwezo wake wa kuota yakikauka; kama ili haliwezekani, matunda yanaweza kuwekwa kwa siku chache kwa machujo ya mbao na ndani ya mikebe kwa chumba chenye kuingiza hewa tosha.

**Matumizi:** Chakula (Matunda), lishe ya nyuki, mbao, kuni/makaa, kivuli, dawa (tunda utumika kutibu ugonjwa wa kuhara damu, maji ya gome nayo hutumika kuzuia ugonjwa wa kuhara). Kumbuka gome ili lenye sumu limeripotiwa kuuu watu, kwa hivyo tafuta ujumbe tosha kwa watu wenye uzoefu wa kutumia bidhaa za huu mti.



## Usafi : Kuosha mikono.

Kuosha mikono kwa sabuni ni njia moja iliyo katika njia bora na zenye gharama nafuu zaidi katika kuzuia magonjwa ya kuhara na nimonia, ambazo pamoja husababisha vifo vya watoto wengi katika Kenya. Mikono mara nyingi hubeba vijidudu kutoka kwa mtu mmoja hadi kwa mwingine, kupitia kuguzana au kupitia kuguza mahali. Watu wanaweza kutambaza bacteria kupitia kuguza mikono, nywele, pua na nyuso za wengine. Mikono ambayo imeguza mavi ya mtu au mnyama, maji ya mwili kama makamasi na vyakula ama maji yaliyochafuka hubeba bacteria, virusi na vijidudu vinavyobeba magonjwa. Kuosha mikono kwa sabuni husaidia kupitia kuhinikiza uambukizaji wa ugonjwa.

Kuosha mikono kwa maji pekee husaidia kidogo kuliko kuosha kwa sabuni kwa upande wa kutoa vidudu. Uoshaji mikono ulio bora ni kwa sabuni na kwa muda wa sekunde nane kufika kumi na tano, kukifuatiliwa na kusuuza na maji yanayomwagika.

### **Wakati muhimu sana wa kuosha mikono kwa sabuni**

Zifuatazo ni saa muhimu za kuosha mikono yako:

1. Kabla na baada ya kula vyakula na vitafunio
2. Kabla ya kuwatunza watoto wadogo
3. Baada ya kuguza maeneo ya umma.
4. Kabla na baada ya kutayarisha vyakula, sanasana nyama, kuku au vyakula vya kutoka baharini
5. Baada ya kutumia choo
6. Wakati mikono ni chafu
7. Baada ya kuguza wanyama
8. Wakati wewe au mtu aliye karibu nawe ni mgonjwa

### **Utambuzi wa uoshaji mikono kwa sabuni**

Uoshaji mikono unawezekana kuwa muhimu zaidi wakati watu wanakutana (shuleni, maofisini, makanisani, mikutanoni), ambapo wagonjwa wapo (hospitalini, maskani ya ulezi), mahala chakula kinatayarishiwa na kugawanwa na manyumbani, sanasana walipo watoto wadogo na watu wazima wagonjwa.

### **Kituo cha kuosha mikono baada ya kwenda choo kilicho rahisi kutengeneza**

Kituo rahisi zaidi ni kuwa ni kuwa na mkebe uliojaa maji nje ya choo. Sabuni yapaswa kuwepo.

Hata hivyo, njia hii si nzuri sana kwani watu watahitaji kushika kibuyu kabla na baada ya kuosha mikono jambo ambalo bado litasambaza vidudu. Njia badala ya kuosha mikono ni kufanya kituo kama ifuatavyo:

1. Tengeza sura ya mbao iliyo na msumari katikati wa kushikilia pegi.
2. Tengeza shimo la kuchukua maji machafu kwa kuchimba shimo likizunguka sura na kulijaza mawe. Hili litaruhusu maji kuingia mchangani.
3. Chukua mkebe mkubwa uliofunguka juu (pipa au kibuyu kilichokatwa) na ukijaze maji.
4. Tafuta mkebe mdogo zaidi uliofunguka juu, kama chupa ya maji iliyokatwa.
5. Toboa shimo upande wa chini wa mkebe huu na huongeze mkono wa kuushika.
6. Ingiza mkebe mdogo kwa ule mkubwa ili kuujaza maji.
7. Tundika mkebe mdogo kwa pegi ili maji yaanze kutoka kidogo kidogo kupitia shimo kama kwa tapu ya maji.
8. Osha mikono yako kwa sabuni.

Ubora wa njia hii ni kuwa unaguza mkebe mdogo mara moja pekee kuujaza maji.



# Mwito Tovuti ya TIST katika simu yafanya kazi sasa.

barua kutoka kwa William .

*Kwa watumishi na wakulima wapendwa wenzangu,*  
Siku hizi imekuwa rahisi sana kwangu kujibu maswali ili kutumikia vikundi vidogo vizuri, kila ninapokutana nao.

Maswali tunayoweza kujibu kwa urahisi sasa ni pamoja na:

Ni miti mingapi aliyo nayo kila mwanakikundi? Hili husaidia sanasana katika kesi ambapo wamepoteza karatasi yenye muhtasari wa uhesabu miti.

Tumewahi kulipwa? Kama ndio, lini? Kama sio, tunahitaji kufanyeje kuweza kupata malipo? Tunaweza kujua kwa urahisi kama vikundi vidogo vina miti isiyofika mia tano au kama hawajatia saina kadarasi ya GhG, ili waweze kuchukua hatua inayohitajika ili kuweza kulipwa.

Kuongeza, ni rahisi kusoma yanayoendelea katika kila cluster na kugawana habari nao.

Kama mhesabu miti na mtumishi wa cluster, tovuti ya simu ya TIST ni muhimu kwa kuwa ni rahisi kuangalia habari pamoja na habari kuhusu mashamba, tarehe za mikutano ya cluster, habari kuhusu vikundi vya cluster (GOCs) na maeneo, anwani na namba za simu za wanaTIST, vifaa vya mafunzo, taratibu za kawaida za ufanyakazi (SOPs), tarehe ya kuangalia kazi na ramani zinazoonyesha mashamba yaliyopo karibu wakati wa uhesabu miti—sanasana saidifu unapokuwa katika cluster usiyojua vizuri.

Ningewahimiza kila mmoja kuanza kutumia kifaa hiki muhimu na saidifu. Hapa ni jinsi:

1. Enda [www.tist.org/mobile](http://www.tist.org/mobile)
2. Kama una anwani ya TIST, ingia nayo na nenosiri.

3. Kama hauna anwani ya barua pepe ya TIST, waweza kuingia kama mgeni. Ingiza jina lako na kampuni yako na uguze “log in” kampuni yaweza kuwa jina la kikundi chako.
4. Utaelekezwa ukurasa unaofuata. Juu , utapata “Cluster”, “Groups”, “Groves” na “Log out”
5. Kama unataka kuangalia cluster, guza “ Cluster”. Utaelekezwa ukurasa unaonyesha maeneo yenye mradi wa TIST dunia mzima. Chagua na uguze mahali unapotaka kuangalia (kwa mfano, meru). Kutoka hapa, utaenda ukurasa unaofuata ambapo kuna mpangilio wa cluster zilizopo meru ( ama mahali pengine ulipochagua) pamoja na nambari ya vikundi na miti pamoja na tarehe za mikutano ijayo na uchaguzi wa mwisho.
6. Guza cluster yako (kwa mfano, Ciakanyinga). Ukurasa mpya utafunguka na utapata vikundi vidogo vimeandikwa kwa majina, nambari ya TIST, nambari ya miti na tarehe za mwisho za uhesabu miti.
7. Guza kikundi chako (kwa mfano, TRADA). Hili litakupeleka ukurasa mpya. Utapata maelezo kuhusu kikundi chako, pamoja na kama mna ustahiki wa kulipwa na kama kikundi chako kimefikia mahitaji yote ya kuhusika katika soko la hewa.

Asante na Mungu akubariki,  
William Mwito, Mtumishi wa cluster katika GOC ya Maua



## Tunaweza tanyeje kuzuia uchafuzi wa maji?

*Umeletewa na Joseph Gituma*

Uchafuzi wa maji, hata tusipouona, waweza kupa sumu na kuuu mimea na wanyama, pamoja na watu. Maji yaliyochafuka yakitumika kupika, kuosha au kunywa husababisha minyoo ya matumbo, magonjwa ya ngozi, kipindupindu na kuharisha.

Twaweza kuzuia uchafuzi wa maji kwa njia gani.

### Twaweza kufanya nini kuhusu uchafuzi?

1. Usirushe taka au kumwaga maji machafu majini. Himiza wengine kuweka taka mbali na maji pia.
2. Panda miti kando ya mito na maziwa. Mizizi ya miti ni mizuri sana katika kutoa taka na kuzuia udongo kuingia majini kupitia mmomonyoko.
3. Epuka upanzi wa mimea karibu sana na mito, maziwa ama visima kuzuia mbolea za viwandani kuingia majini
4. Himiza watu kujenga mbali na kando za mito.
5. Hakikisha kuwa visima na visima virefu vinasimamiwa vizuri.
6. Jenga uzio kuzunguka maji yanapotoka ili kuzuia wanyama kuchafua maji.
7. Usiwaruhusu watu kuosha karibu na pampu.
8. Hakikisha vyoo vyaa shimo vipo mita hamsini mbali na maji. Hakikisha kuwa kuna mitaro ya maji tosha ya kuondoa maji hadi shimoni, shimo ambalo limejazwa mawe na ambapo maji yataingia na kukauka.
9. Rekebisha nyua zilizopo kifunikoni haraka iwezekanavyo zipojitokeza na uoshe mahala hapa kila baada ya muda.
10. Kama hauna hakika na usafi wa maji, yachemshe kabla ya kuyanyua kuuu vijidudu ambavyo vyaweza kukufanya mgonjwa. Kushemsha hakuwezi kutoa uchafu wote na kwaweza kuacha kemikali kama dawa za wadudu na mbolea za viwandani ambazo zaweza kukufanya mgonjwa lakini kutapunguza uwezekano wa kupata magonjwa kama kipindupindu na wadudu kama minyoo.

## Cluster ya TIST Ya Mporoko: Twafanya kazi pamoja ili kuanzisha kitalu cha miti cha cluster.

*Umeletewa na Joseph Gituma*

Tunaamini umoja na ushikamano. Sisi wanacluster ya Mporoko tumekuwa tukifanya kazi pamoja kusaidiana katika TIST. Hivi karibuni tumekuwa tukifanya kazi kuanzisha kitalu cha miti cha cluster katika msimu wa upanzi ujao. Sisi huhakikisha kitalu chetu kina mchanganyiko wa aina kadha za miti pamoja na ya kiasili, ya kigeni na ya matunda. Hili linasaidia kuyafikia mahitaji ya wanacluster yetu.

Tunafurahia kushirikiana na chama cha Water Resource Users Association, BWRUA. Chama hiki kimetusaidia na vifaa kama reki, toroli, matenki ya maji, mikebe ya maji na mifuko ya kupandia.

Upande wetu, tunavipa vitalu utunzaji na usimamizi. Pia tunajitolea kupanda miti mingine ya kiasili kando ya mito. Tunahisi kuwa tuna wajibu wa pamoja wa kuhifadhi kinamasi au bwawa la Mporoko.

Wanacluster yetu hupata gao zuri la micdhe ya kupanda katika mashamba yetu binafsi ambapo tunaitunza kama miti ya TIST.

Leo kupitia juhudi zetu za pamoja, bwawa la Mporoko sasa limeongeza maji ili jamii zilizo upande wa chini na wanyama pori katika hifaidhi la taifa la Meru wanafikiwa na maji pia.

Tuna shukrani kwa TIST. Ni kupitia TIST tumeyasoma mengi kuhusu miti ya kiasili, njia bora za kutayarisha vitalu, ulinzi wa maeneo yaliyo karibu na mito, athari za mabadiliko ya tabia nchi na mengi mengine. Muhimu zaidi, sasa tunathamini mazingira yetu amoja na kuwa wanadunia wazuri wanaojiunga na kupigana na kubadilika kwa tabianchi na ukataji wa miti.



# Mazingira Bora



# TIST

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

**Kikamba Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



Tist farmers from Kiang'ondo Cluster during their Cluster meeting last month.

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## Miti miseo ya TIST : miti ya matunda.

Nthini wa TIST tuvandaa miti ya ivinda iasa, Mavaita angi kuma miti ino nita Matunda, mbindi ila nitonya kwithiwa syi sya vaita munene. Munamuno yilatwakwatana vamwe kumanthia ndunyu matunda aya. Vaa ve miti imwe ila itonya kwithiwa yina vaita munene.

**Mavokato/ikolovia** (avocado perseae americana) Muti uyu umeaa kula kwina kiw'u

Mbindi yayo iitawa kwa kuindwa kiw'uni vandu wa masaa 24, vanda indi nthini wa mukeve. Vanda ngii nzau nundu imee na mituki. Kyamea nokisikanw'e. Kumea kukuaa syumwa 3 kana 4 na syaile uvandwa utaaniu wa matambya thathatu (6m). Kaingi ikolovia ivandawa ithyululukite musyi.

Nitumiawa ta ngu, makaa, liu, muunyi, mauta na kwanakavya. Yitunda yiunou mwingi wendekete ni mwii ona kutwika matu, makole/makavo, na ngii syinthiwa syi nthuku wa indo syaya. Miti ino yiminini noivandaniw'e na mboso, na muti uyu withiawa wi wa ueti mwingi.

**Kivela** (Guava, Psidium Guajava, Kikuyu: Mubera) Nimuti wumiiasya sua no ndumiiasya vandu kiw'u kitwiikene.

Mbindi syaw'o iyendaa kuiitwa itanavandwa na umeaa itina wa sumwa itatu na syendaa utaaniu wa matambya ana (4m).

Nitumiawa ta ngu, makaa, milingoti, liu na matunda maw'o methiawa na Vitamin C na A. Muti uyu usyaa itina wa myaka itatu kana ina. Muti wayo nduisawa nimuthwa, Matunda waw'o maniikwa mooma nimatumiawa ta ndawa ya kuiita munyili, namo matu na matunda nimatumiawa kuiita kwituuu. Mauta maw'o nimatumiawa kusiiu uwau ula utonya kwisila itauni, matu na makavo/makonde maw'o nimasuvasya mauta makusuvia kikonde kumana na itau, iea na inguu. Matu ingi nimatumikaa kuiita itau syanda kana ikua na kwambatwa ni nthakame, kwalw'a ni mutwe, woo na kwiw'a mundu atemwianie. Kiw'u kyamo nikitumiawa kuiita uwau wa itema (hepatitis), Kisonono na kwituuu. Nimuti wikaa nesa wavandaniw'a na mbemba, muvya kana nthooko. Ivela inonya saangi kwenda vandu kiasi kya kususya kisio kiiu.

**Iembe** (Mango, Magnifera indica)

Iembe iyumiiasya kiw'u kingi syendaa muthanga wa kuny'aa na mituki.

Mbindi syaw'o iyendaa kuindwa mbee wa kuvandwa onakutwika kutila vaaya muthya nikutetheeasya kumea kwa mituki, mbindi noyiwe vandu va mwai muima onakau imeaa nesa yinzau, na noisinganw'e.

Niitumiawa kwa ngu, matunda, liu wa indo, liu wa nzuki, kusiiu kiseve, munyi, ngamu na kusuvia muthanga.

## Ngwatanio ya Kirindini (Cluster): Twina utanu kumumanyithya undu tunakethie ngetha nzeo ya Ndengu (ndakithi)

na Annet Kaari, muthukumi wa ngwatanio

Ithyi, ene ma Tist nthini wa ngwatanio ya Kirindini project ya Ndengu nitwakomanie matuku 26/02/2013 vala tumbaniaa. Tist Green Gram Organizer, Jeniffer Kithure ai wumbanoni usu. Twina utanu kuweta kana nitunakethie nesa ngetha nou na usyao mwingi. Kuma atano ala matethiw'e matethye (helped to help. H2H) makwambiia nitunavikiie uketha kilo 1,205kgs. Kila umwe wa aa atano niwakwatie kilo 25 sya ndengu muthemba N26, ula wikaa nesa kundu kumu na usyaa tene.

Mukwatanithya wa ndengu Jeniffer Kithure ula nimusindi kwa ngwatanio ino, Gilbert Kirimi Bundi niwatungie ngatho kwa wia museo ula ukunitwe kuvikiia ngolu ya Tist na uw'o, wiananu, utheu na utumiku withi wa mbesa kuvikia ukwati uyu munene. Vaa ve undu kila umwe wakwatie itina wa kuvanda ndengu ithi:-

- Edith G. Kamundi - 280kgs
- Gilbert Kirimi - 180kgs
- Bernard Gitonga - 260kgs
- Carey Micheni - 280kgs
- James Micheni - 205kgs

Nthini wa mbua yukite , moseo ma kuvanda ndengu nime kwiana na kunyaiika nthini wa ngwatanio ino yitu nundu ala mambiie yu nimeunenge angi mbeu. Kwa yu andu 15 kati witu nimakwatite mbeu ino. Ingi nitwetikilanile kutetheesya ngwatanio ya Karama na kilo itano 5kgs matate uvanda miundani yoo. Nikana angi nthini wa ngwatanio ingi mone kana ndengu no syike nesa isioni syoo. Nituendee na uthuthya angi makwatane naitu na kuvanda ndengu kwa useo wa liu na kuthoosya. Kwa uvoo mbeange nomukunie Jeniffer Kithure kwa 0726 319539.



## Miti miseo ya TIST: Miti ya kiene.

**a. *Prunus Africana*** (Kikuyu: Muiiri, Kimeru: Mweria)  
Muti uyu kaingi wonee mitituni yoka na ngii syaw’o syonekaa mitituni ivani ya sua. Kolany’a ngii ila syina langi wa muthanga mukwatu kuma ungu wa muti. Inda vandu va masaa 42, thambya noyanika kisungini kya waya muunyini vandu va masa ana. Itina wavau vanda kivuioni na nikumea itina wa sumwa 6 - 8.

Muti uyu nutumikaa kusiiia syindu ila syanangaa liu ta iinyu na syingolondo na muuke waw’o. Malaa nimanengae nzuki liu, Ngu syaw’o ninzeo muno, kiw’u kyaw’o kithiawa muiito wa postate cancer, Matu maw’o nimanyungiawa kunenga mundu wendi wa kuya. Kiw’u kyawo nikitumiawa ta ndawa ya ivu na indo. Nisuviaa muthanga yavandwa iatianie nthini wa mitau. Matu nomatumiwe ta vuu na niyanakavasya muunda na noitumiwe ta miinyi wa muunda.

**b. Peacock Flower** (*Albizia gummifera*, kikuyu mukurwe)

Muti uyu kaingi withiawa ivauukoni na kula kwi mititu ya mbua na vakuvi na mititu.

Ngii syaw’o noiindwe kana ikalea kuindwa mbee wa kuvandwa munamuno ila syauma ukethwa iyenda kuindwa. Ngii ila siitwe syendaa kuindwa kiw’uni kimuutia nakiyekwa kivoe. Noutile muthya wa mbindi ithi kuitetheesya kumea na mituki. Ngii ithi imeaa nesa na ikuaa ivinda ya mithenya ikumi. Ngii ithi nisyendaa kukethwa syiomutini kusiiia kwanangwa nitusamu ta ngulu. Ngii/mbindi ithi nitonya kwiwa vandu va ivinda ya mwaka umwe kethiwa nisyongeletwe muu kuisiia kulika ni ngulu na syimbalutya.

Malaa nimatumiawa ta liu wa nzuki, niwunawa ngu, ukatuwa mbwau, ukaiita ithuma, ukaumwa ngamu kana nguluu vamwe nakwithiwa ngiisyaw’o syakimwa/syathiwa nitumiawa ta muiito wa ivu na makonde na muiito wa ndetema. Ingi nisuviaa kukuwa kwa muthanga nundu mii yayo nilumasya muthanga, nitumiawa kwa kuete muunyi, kuseuvya nzeve ya muthanga ila yitawa “Nitrogen”, Nunoasya muthanga nundu niwitaa matu waw’o kaingi, nitumiawa kwanakavya ona kundu kwingi nuvanda nthini wa mataoni, nuvandawa mivakani naingi matumaw’o nimatumiawa kunda maiu nundu nimakalaataa kwiw’a kwamo.

**c. Mukuyu** (*olea africana*, African wild olivu, Kikuyu: Mutamaiyu, Kimeru: Muthata)

Muti uyu numeaa kundu kwi kivathukany’o ta vakuvi na kiw’u, nguumoni sya mbusi, kundu kutekuthungu. Niwumiiasya sua na mbaa. Ngii nzau nitumiawa kuvandwa naethiwa ningii nguu nisii ndawa kiw’uni kithithu vandu va masaa ta 48. Ingi ngii isu nitonya kwatuwa na kw’oko kana ivia yikavingilitw’a iulu nikana syatuke ila itetheesya kumea. Ngii sya muti uyu nusiwi vandu va myaka kauta.

**Utumiku:** Ni liu - niinenganae mauta ala matumiawa ta liu, niliwa wa indo nitumiawa ta ngu, kwatua mbwau, makaa, muswaki na nitumiawa kwanakavya. Nundu wakwithiwa wumiiasya sua niwithiawa wimuseo wa kuvandwa kundu kula kumu na kuseuvya mititu ya kundu kwingi kwa Africa. Miti ino niyitiawa itonya kwanakavya withyululuko.

**d. Waterberry** (*Syzygium guineense*, kikuyu: mukoe, Kimeru: Muriru)

Muti uyu kaingi numeaa kula kwi mbua ya weu na mbua ya iima. Kaingi imeaa kula kwi kiw’u na kuthithu kwina kimeu kaingi nguumoni sya tulusi na syandani.

Ngii syaw’o iyendaa kuiitwa mbee wa kuvandwa na nimeaa nesa itekwaa na kilio kya 80-90% nthini wa mithenya kati wa 20 na 50. Kuvanda imwe mikeveni mbee wa kuvuia nikwithiawa kwaile. Matunda maw’o moaa na mituki na nimendaa ukolanw’a mavaluka oou kuma mutini. Ingi nouthingithye muti nikana mavalukange ukolany’e, na itunda yii yivandawa yumite mutini nikana yiikasye vinya wa kumea (yiyaille kwanikwa yikany’aa) Matunda aya nomaiwe kikoni kya musumeno kosiiia kwasya kiw’u vandu va mithenya minini.

**Utumiku:** Nitumiawa ta liu (matunda), liu wa nzuki, kwatua mbwau, ngu, muunyi, ndawa (matunda nimaiitaa munyili nayo ikonde yaw’o niyiiiitaa wituuo). Lilikana kana ikonde yaw’o nisumu na niyuuaa andu kwoou mundu niwendaa kuelew’a mbee wa kuutumia.



## Utheu na Kuthesya: Kuthamba Moko.

Kuthamba moko na savuni ni nzia imwe itethiawa na ngalama ya kusiiia uwau wa kwituuu na kyambo ila ni imwe kati wa mowau ala moaa syana thini wa nthi ya Kenya.

Moko kaingi nimo tusamu kana germs ila ietae uwau syisilaa kuma munduni umwe kuthi ula ungi kana kuma vandu mundu weekwatila. Andu ni unyaiikya bacteria kwa kukwata kw'oko kwa mundu ungi kana swii, iny'uu kana uthyu. Moko ala makwata mai ma mundu kana nyamu, kiw'u kuma mwiini ta kimia ni uthokoany'a liu kana kiw'u kila kitonya uwasya andu angi. Kuthamba moko na savuni nikusuviaa kunyaaika kwa bacteria kana tusamu tula tuetae uwau munduni.

Kuthamba moko vate savuni kunyumasya bacteria kana virus syothe mokoni, indi wathamba na savuni vandu va sekondi ta 15 na kwithambukya nikuvetaa tusamu tuu.

### Ivinda yavata ya kuthamba moko na savuni.

1. Mbee na itina wa kuya liu kana matunda
2. Mbee wa kukwata mwana
3. Itina wa kwikwatila vandu vatumiawa ni andu aingi
4. mbee na itina wa kusevya liu munamuno nyama, nguku kana makuyu
5. Itina wa kutumia kyoo
6. Yila moko mena kiko
7. Itina wa ukwata nyamu
8. Yila we kana umwe wenyu ni muwau.

### Kumanya na kumanyithany'a iulu wa kuthamba moko na savuni.

Kuthamba moko kaingi nikwaile vala andu aingi makomaniaa ta sukulu, kanisa, mbumbano, Vala andu awau kana matonya ukwatwa ni uwau kwa mituki mai ta masivitali vala liu ukuuwa na kuawa na misiyini munamuno vala ve syana nini na andu aima mii yo itena vinya wa kukita mowau.

Vandu vasevitwe va kuthambia moko itina wa utumia kyoo kwa ngalama ninini

Nzia ila yi laisi vyu nikwosa katoma kwikia kiw'u na kwia nza wa kyoo vamwe na savuni. Onakau nzia ino ti nzeo nundu mundu nonginya akwate katoma kaa mbee wa kuthamba na itina undu ula utonya utuma germs iendee na kunyaiika. Kindu kya uthamba moko nikitonya usevya uyu

1. Sevya vulemu ya uvwau yina musumaa kati ta kikuli.
2. Sevya iima ya ulika kiw'u kula kyathamba moko na yiima yiu uyususya mavia nikana kiw'u kilike muthangani
3. Mantha itoma yime ikunue kana utile katoma na uyususya kiw'u.
4. Mantha suva munini uu na utila
5. Sevya iima inini yila itomani vaaya ungu na uyukia kwoko
6. Inda ula suva yila itomani yikiw'u wusue
7. Isilya ula suva kila kikulini withie kiw'u kyambiia uma ta muvelekini
8. Thamba moko na savuni

Useo umwe wa nzia ino ni kana ukwataa kasuva kaa katue oimwe yila ukwikia kiw'u.





# Nzia ya TIST kutumia simu sya moko kuvika website nikuthukuma: Valua kwa othe.

na William Mwito

*Kwa Aimi na athukumi ithyothe ma Tist,*

Mithenya ino niutwikite undu wa laisi kwakwa kusungia makulyo kuma ikundini nini nesa yila twakomana.

Makulyo amwe ala tutonya usungia kwa mituki nita:-

Nimiti yiana kila mumemba winayo? Undu uu niwavata muno nundu ethiwa nimaitye ithangu yoo ya kuvitukithwa (Quantification Summary Sheet).

Yo nitwithiwa twaiviwe? naethiwa ni twaiviwe twaiviwe indii? naethiwa tuyaaivwa tutonya kwika ata tuivwe? nitwithiwa tutonya utavya tukundi tunini ethiwa mena miti minini kwi 500 na mayaaikia saii/kyaa wiw'ano wa Greenhouse Gas , nikana mose itambya ya kwisa kuivwa.

Ingi ni laisi kumanya kila kiendee nthini wa ngwatanio (cluster) kwisila uneenany'ani.

Ta muvitukithya (Quantifier ) na muthukumi wa ngwatanio,Website ya Tist kwisila simu sya moko niyavata na nitetheeasya kutunenge uvoo muvaka wa yila mbumbano sya ngwatanio syeethiwe, miti, uvoo iulu wa ikundi sya ngwatanio (GOCs) na isio, namba sya simu na ene ma Tist, syindu sya umanyiw'a nasyo, na mawalany'o ma kuatiia (Stands Operating Procedures SOPs), matuku ma kuthianwa na mavu sionany'a undu miti ivanditwe na ila ithengeanie kaingi ethiwa wi nthini wa ngwatanio utamisi nesa. Nindonya uthuthya kila umwe kwambiia utumia sia ino nundu niyavata na nitetheeasya na ninzeo.

## Vaa ve undu utonya umivikia

1. Enda kwa [www.tist.org](http://www.tist.org) uitumia simu ya kw'oko
2. Ethiwa wina Email address ya Tist tumia yo na password yayo

3. Ethiwa ndwina email address ya Tist log in ta guest. Ikia isyitwa yaku na ngwatanio na uivinyia log in. ngwatanio noyithiwe ni isyitwa ya kikundi, kakundi kana ngwatanio(cluster) yaku.
4. Nikuutavya undu uuthi ithangu (page)y ila iatiie vaaya iulu nukwitia "Cluster" "groups", "Groves" na "Log out"
5. Ethiwa wienda ona ngwatanio yenyu (cluster) vinyia "Cluster", nuuvika ithangu yiatie yila yina project sya TIST nthi yothe. Vinyia vala ukwenda kwangelekany'o ta Meru, Kuma vaa nuuthi ithangu yiatie vala ukwithia ngwatanio syothe syi kisioni kya Meru kana vala withiwa wasakua, kila vamwe vena ikundi, miti na wumbano woo ula ukite ni wa indii na usakuani woo ula meekie itina meekie indii.
6. Vinyia ngwatanio(cluster) yenyu ngelekany'o Ciakanyinga lthangu yeu yina masyitwa ma tukundi tula twi ungu wa ngwatanio ino tuatanie kwianana na masyitwa matwo , namba ya Tist, namba ya miti na muthenya wa muthya kuvitukithw'a.
7. Vinyia kikundi kyaku ngelekany'o TARADA ino yitwaa ithanguni yingi vala ukwithia uvoo iulu wa kikundi kyaku ta iulu wa ndivi na kana kikundi kyenyu nikivikiie kila kyendekaa kulika sokoni wa nzeve itavisaa (carbon market).

Ni muvea and Ngai amuathime

William Mwito, Maua GOC Cluster Servant.



## **Nata tutonya kwika kusiia kuthokoanw'a kwa kiw'u?**

*na Joseph Gituma*

Kuthokonw'a kwa kiw'u ona yila tutene kiko nokwithiwe kwina sumu utonya kuaa mimea, indo, nyamu kana andu. Kiw'u kithokoany'e kinatumiwa kuua, kuthambya kana kunywa ni uete uwau munduni ta minyoo ya ivu, uwau wa kikonde, kwituuu na kutavika. Tutonya ata kusiia kuthokoanwa kwa kiw'u?

### **Nata tutonya kwika iulu wa kuthokoana kwa kiw'u?**

1. Ndukekye takataka kana kwita kiw'u kikiko wumoni wa kiw'u. Thuthya angi mekye kiko vaasa na kiw'u.
2. Vanda miti nguumoni sya mbusi na mawithyululukoni ma maia. Mii ya miti nimiseo nundu ni sungaa kiko na kusiia muthanga kukuwa na kulika kiw'uni na kukithokoany'a.
3. Eka kuima nguumoni sya mbusi, maia, ndia, ithima, nthongo, silanga kusiia mbolea ya kuua kuthokoany'a kiw'u.

4. Thuthya andu kwaka vaasa na mbusi
5. Ikiithya lthima na ndovoi nisyangamiwa undu vaile
6. iia vala kiw'u kii usuvie indo kuthukya kiw'u
7. Nduketikilye andu kuthambia vakuvi na katuma ka kiw'u
8. Ikiithya syoo sya maima syi vaasa ta matambya 50 kuma vala ve kiw'u. ikiithya nzia sya kiw'u kuthi ninzeoi ikese uthokoanya kiw'u na kyoo.
9. Ethiwa nguniko ya kiw'u yina mwalika ikiithya ni wawaka na kuwikia livea na kwikalya kisio kiu kikitheu.
10. Ethiwa ndwina muikiio na kiw'u kila uutumia kitheukye mbee nikana wuae tumitutu tula tutonya kuete uwau. Onakau kutheukya kuitonya kumya kiko kyothe no itie ndawa imwe ta ndawa ilaivuwawa mimeani, mbolea ya vataliza ila itonya uete uwau onavala niikuola uwau wa kwituuu na kutavika vamwe na minyoo.

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## **Ngwatanio ya Mporoko ila yi nthini wa TIST kuthukuma vamwe kuseuvya kivuio kya ngwatanio.**

*na Joseph Gituma*

Nituikiiaa uumwe na kukwatana. Ithyi ene ma Mporoko cluster nitwithiitwe tuithukuma vamwe na kutethania nthini wa Tist. Umunthi twi thukuma twina kieleelo kya useuvya kivuio kya ngwatanio yitu kwondu wa mbua syukite. Nitukuikiithya kana kivuio kitu kina mivea/mithema mingi ya miti kuma miti ya kiene, ya kuka na yamatunda. kii kitetheesya ene ngwatanio kuvanda muti ula mundu ukwenda.

Twina utanu kwithiwa tukwatanite na ngwatanio imwe ikwitwa "Water Resource Users Association," (BWRUA). Ngwatanio ino nitutethete kwa miio ta tumii, isiko/mavosolo, leki, matangi ma kiw'u, mikeve ya ungithya na mathangu ma uvanda miti.

Ngaliko yitu nitunenganite wia witu, kusuvia na kuungamia kivuio kii. Ingi nitwiyumitye kuvanda miti ya kiene nguumoni sya mbusi. Ni tukwiw'a

twina muuio wa kwinyumya kusuvia ndia ya Mporoko. nitukwataa kilio kinene kya miti ino kuma kivuioni na kuvanda miundani kwitu vala tumisuvia ta miti ya TIST.

Umuthi kwisila vinyani witu ithyothe, ndia ya Mporoko niyongelete kiw'u na ukethia ala me itheo kuuya usini nimeukwata kiw'u vamwe na nyamu sya kitheka kila syi mutituni wa Meru National Park. Twina muvea kwa TIST. Ni kwisila kwa Tist vala tumanyite muno iulu wa miti ya kiene, mawalany'o maseo ma uimi na kuseuvya ivuio, kusuvia mbumo sya mbusi na nguumo sya mbusi, Undu uvinduku wa nzeve tutonya kuuseuvya na maundu angi maingi. Kya vata nitumanyite niki twaile ithiwa musitalini wa mbee kwailya mawithyululuo na kwithiwa twi ene nthi aseu mekukitana na mauvinduku ma nzeve kwa kuvanda miti kula yatemiwe.

# Mazingira Bora



# TIST

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

**Kipsigis Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**Tist farmers from Kiang'ondo Cluster during their Cluster meeting last month.**

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## Ketik che koror chebo TIST: Ketik chebo logoek.

En TIST, kemime ketik agobo betushek chebwonon. Manufaa alak chebo ketichuton ko , logoek kwai ak nuts chetinye ,kobo maana saidi ,sanasana yon kogituyeye asi kecheng' ole kioldoen logoechuton ak tuguk alak ko kibageng'e. Ichuchu ko alak en ketik che kimuche kealden.

**Avocado** (*Persea americana*)

**Ole kimuche keminen:** Kimine en ole miten ,lakini alak konomege ak ole momiten ropta newo

**Ole kinyoito kotomo kemin:** Inuren bek en saaishek 24,min koba pots yon karicheru en bek.Boishen seeds che tago fresh angamun mogonoroksek. Keswek kora kimuche gegravten.

Asikomong' en ng'weny kotore weekishek 3-4 ago yoche kigoche ketik lochindo nebo 6m. Ketichuton kemine en ole negit ak korigchok.

**boishenywai:** Kwenik, makaa, omitwogik, urwet , mwanik.

Logoyandani kotinye manufaa, tinye fat , protein ak vitamins. Balalyat , sogek ak keswek kwai ko sumu en tyong'ik che yachen. Keswek chuton kimuche keminda ng'endek yon tagomeng'echen. Ketiton komuche koig negonu robinik .

**Guava** (*Psidium guajava*, Kikuyu: Mubera)

**Olekiminen:** imuche konamge ak ole momiten robta, lakini momoche ole chang bek.

**Keswek :** Momoche kinya yon tomogemin. Rutu yon kagotar weekishek somok. Lochindo:4m.

**Boishenywai:** Kw, Kwenik, makaa, omitwogik, urwet .

Tinye vitamin C ak vitamin A. Siche logoek en kenyishek 3-4. Bogoinik kwai komonome toik. Logoek che ruryoyit ago kogiyamsi konyolu keyochi dysentery, logoyandani ak sokekwaik boishen kinyoe diarrhea. Mwanim chebo ketiton komonome maat. Sogek anan nan kobalalyat kechoben mwanik chekiilen 'ge, ak kinyaen ringworm , moonik , ak ulcers. Sogek kora keboishen kinya mionwogik ab moet, cold, ak high blood pressure, trauma, ngwoninwek , metit , ak rheumatism. Juice keboishen kinya hepatitis, gonorrhoea, ak diarrhea.

Ole kimindo minutik alak :Etu komye yon kagiminda minutik che fodder cheu bandek , mosonik ak cowpeas. Guava komuche kotar imbaret en korotinwek alak.

**Mango** (*Mangifera indica*)

**Ecology:** moimche konamge ak ole miten floods ago moche ng'ung'unyek che well-drained . Imuche konamge ak ole momiten robta.

**Keswek :** momogchinge kanyaet yon tomo kemin ketiton, angandan yon kaginiben ketit kotoreti kosib korut en ngwony. Kimuche kekonor keswek ogot agoi arawet en room temperature , keswek che lelach kogororon. Imuche kora koboishen grafts.

**Boishetnyai:** kwenik, mwanik ,logoyat , fodder, ole menyegemik , windbreaks, mulch, urwet , ribet ab ng'ung'unyek, gum.

## Kirindini Cluster: Kiboiboi kepchei borotenyon nebo Grams che nyolilen.

by Annet Kaari, Cluster Servant.

Echek membaek chebo TIST en Kirindini Cluster Green Gram project kokigituye en torigit 26/2/2013 en tuyetnyon nebo cluster. Organizer nenyon nebo TIST Green Gram, Jeniffer Kithure, kogimiten en tuyonoton. Kiboiboi kemwa kele kiginyoru rurutik che chang' agobo high-quality en grams che nyolilen. Kobunu oret 'ab Mut chekikoret asi kotoret (five Helped to help)(H2H), kokigimuch keges kiloishek 1,205. Agetugul en echek koginyor kiloishek 25 chebo keswek 'ab N26, che rutu en chogchinot ogot en ole yamat angamun en maturity nesibkonyoru.

Organizer nebo Gram che nyolilen , Jeniffer Kithure, ak champion nebo cluster, Gilbert Kirimi Bundi, kogimwoweche kong'oi en kasit ne kigiyai kotkoit kenyorun goalishekchok kora kokisubi oratinwek 'ab TIST Values of Accuracy, mwaet 'ab imanit, ak Budget ne miten ng'wony. Ichochu ko alak en rurutik che kiginyoru kobunu pioneers muut :

Edith G. Kamundi - 280kgs

Gilbert Kirimi- 180kgs

Bernard Gitonga -260kgs

Carey Micheni - 280kgs

James Micheni -205kgs

En orowek che isubu chebo minset , ketese ta kenyoru borotet newon saidi en grams che nyolilen en cluster nenyonet pioneers kigochin keswek beneficiaries chebo groupishek alak . Angoi inguni kogokitinye beneficiaries 15 che kogonyor keswek kobun echek. Kora kokigiyani ketoret Cluster nebo Karama ak kiloishek 5 chebo keswechuton asi koygil 'ge komin keswekchuton en imbarenikchwak , asi membaek alak chemiten TIST koger manufaa chebo grams che nyolilen. Kimwochini membaek alak chebo TIST clusters kochut kasiniton bo minet 'ab grams che nyolilen kobunchi omitwogik anan ko kochengen rabinik. Asi inyoru toretet neyamat , inget inye ak cluster representatives onyoro Jeniffer Kithure en 0726319539.





## Ketik che koron chepo TIST: Ketik ‘ap lokoek.

**a. *Prunus africana*** (Kikyuyu: Muiri, Kimeru: Mweria, kikale:)

Ketiton kenyorunen osnet. Keswek kesiche en osnosyek, en kemeut. Icherun chetuen ana ko tolelyonen en lokoek kwak. Isten makanyat ‘apa brak ipoisyen bek, (inde logoyat bek en saishok 24). Iluchin asista en ole saa’t en saaiyek 4.

Poishen keswek che takokororon .kinoinoe keswek ak sokek ‘ap ketik asi meto bek chekometin ngungunyek .Minchin keswek choton oritit tap betit. Tore betusiek 6-8 asi korut.

**Boishonik :** Isto tyongik che mengech kou: aphids, nematodes (che nome minutik ) en nguundo netinye. Tindo mauek taptet nekararan neilipu sekimik asikotoret en pollination. Icheru kwenik che kororon . Kerichek : Bek chekinemu en ketit noton kotoreti en kanyaet ‘ap prostrate cancer.sokoek kwai kotoreti en kanyaet ‘ap fever ak kotes maket ‘ap omitwokik en porto. Bek chechwaket kora kotoreti en kanyaet ‘ap moet ne lale ;Kimuche kebaen tug’a makandek chepo ketik choton. Toreti ng’ungunyek komala bek: Tese bonbonindo nepo ng’ung’unyek:Kimuche kepoishen sokek koter bek chemiten ngungunyek orit anan ko mbolea safi. Ketoton kochope urwet nekararan en compound.

**b. Peacock Taptet** (*Albizia gummifera*, Kikuyu: Mukurwe)

Kinyorunen ketit osnosyek chepo tulonok anan ko osnosyek chepo tirikwek. Kimuche kenyor kora en toponwokik ‘ap tosnosyek.

Keswek che ka kinde kerichek anan kochetomo kimuche kemin. Keswek che tako fresh komomoche kerichek .Keswek che kimoche kekonor kindo bek che burkei akitya kekonor en ole kaitit. Rutunet ‘ap keswek ko kararn , 70-80%, en betushek 10.Yomekei kicher keswek en ketit kotoma korotchi tyongik che mengech keswek choton.Kimuche kekonor keswek akoi kotar kenyit ag’eng’e, en ole mamiten bek ak ole momi tyongik che mengech.

**Ole kiboishoito:**, Kwendet, bokoyot, temenet, Kerichek (imuch konya malaria ak moet ne lole.)

Ripet ‘ap ngungunyek (tikitik kwai kotoretti ngungunyek koma la bek), uronok, sokek chepo ketoton kotere bek chemiten ngungunyek komamanda, anan koip koristo, toreti en chopt ‘ap kiwoto ,sokeke kwai koboosteni ruret ‘ap ndizinik.

**c. *Olea africana*** (African wild olive, Kikyuyu: Mutamaiyu, Kimeru: Muthata)

Ketit niton kenyoruen tapanwokik ‘ap oinoshek, anan ko kiwanchetoshek . Imuche koresisten kemeut anan ko koitityet.

Keswek che fresh che keboishen en minet. Keswek che yo’syotin kimuche kinde bek en saaishek 48.

Kinyoe keswek keoishen vice ne kim anan keboishen koik kechilen keswek.kimuche ke konor keswek choton en ole yamat , en kenyeshek che machang’

**Boishet nenywan:** Omitwokik:kiboishen en mwanik chepo omitwokik .Omitwokik chepo tuga anan ko neko. Kora keboishen ko: Kwendet, bokoyot, makaa, chepsitwet kolokutik ‘ap porta. Kitit niton kora kokorore emet.

**d. Waterberry** (*Syzygium guineense*, Kikyuyu: Mukoe, Kimeru: Muriru)

Kinyorunen osnosyek ‘ap ropta en tulonok. Rutu en ole miten bek anan ko olta tugul ole twon, kimuche kenyor en bek orit .

Keswek kwai komomache kinde kerichek yon tomo kemin. Imuchen imin directly kopa betit .Lokoek chechwaket kosib koyochekitun, basi koyomeke kisib kekonor komayachekitun .Imuche l cheru lokoek en ketit iboishen ketit anan itumtum teminik kap ketit.Lokoek kwai koyoche kekol kotomo koyachekitun keswek chemiten oriti ‘ap lokek choton; Angot ko moimukokse, imuche ikonor lokoek en ole twan anan ko en saw-dust che twonen en mbiret ne yatat barak.

**Ole kiboishoito:** Omitwakik(lokoek), Bokoinik, Kwenik, urwet, Ko kerickek(sana sana en miondo ‘ap diaoreah).lbwat ile temet nepo ketoton kotindo sumu akomuche koip me’et,Yomeke kekur chito neingen akopo ketitnoton kotoret en ole kiboishoito ketit niton .



## Tililinda ak Sanitation: Kounet ‘ab eunek.

Kounet ‘ab eunek keboishen subunit ko agenge en oratinwek che nyumnyumen che kimuche keisto en miandab diarrheal ak pneumonia, che alak en mionwogik che kigore meoshek ‘ab logok en Kenya. Eunek ko ole bune pathogens koibe mionwogik koba borwekchok , kongeten chito age agoi age, yon kagigat ‘ge anan kenam inat. Bik komuche koib bacteria agoi chito age yo kotuyo eunek, sumek, serunek ak togochik. Eunek che kagotiny tuguk ‘ab tyong’ik anan ko chebo chito , bek chebo borwek aka k chemiten serunek, ak omitwogik che contaminated anan ko bek komuche koibot bacteria, viruses ak parasites koit borwek ‘ab bik . kounet ‘ab eut kobore tyong’ichuton.

Kounet ‘ab yet ak bek icheget komoyome kobar tyong’ichuton agoi ketesta subunit . Kounet ne kararan nebo eut kotore saaishek 8 - 15 seconds, agityo kerinsen ak bek icheget.

### **Saishek che mogchinge kounet ‘ab eut.**

Ichochu ko saaishek che mogchinge kounet ‘ab eut:

1. Kotomo keomishe ak yon kageomishe.
2. Kotomo kebai lagwet.
3. Yon kaginam inatushek.
4. Yon kimoche kechob omitwogik ak yo kagochobok sansana banyek ak ingogenik ak chebo oinoshek.
5. Yon kageboishen toilet.
6. Yon muren eunek.
7. Yon kogitiny tyong’ik
8. Yon imyoni anan komyoni chi age.

### **Konet ‘ab bik agobo kounet ‘ab eunek.**

Kounet ‘ab eut kobo maana sanasan en ole chang bik congregated (sugulishek , offices,

kansoshek,tuyoshek), ole mitenbik chmyondos kou(sibitalishek , nursing homes), ole kichoben omitwogik en korigchok, sanasan ole miten logok ak bik che yechen.

### **Kit negimuche keboishen kiunen eut yon kagebunu toilet.**

Facility initon ne mingin ko itinye jerry can ne kaginyit bek water agityo kinde pi en latrines.sapunit kora konyolu kebishen.

Lakini ,oranitn komakararan angamun tinye bik jerry can yon iune eunek agityo kosibtot germsKit age ne kimuche keboishen kiunen eunek kechobe kou ni:

1. Chob frame nebo bogoinik netinye kipchumariat en kwenet nekingobunen.
2. Chob ole pune bek yon kagiundo en ng’weny ole negit ak frame inoton ak kinyit ak koiwe. inoniton kotoreti bek koba ng’weny.
3. Cheng’ container newo (jerry can ne kakiti koyatag) agityo inyit ak bek.
4. Cheng’container age neming’, neu chuboit ne tilat.
5. Chob konda ne kiten en chupoiniton ak inkoig handle.
6. Irogten chuponoton koram bek chemi en newo.
7. Agityo ingopu chupoit ne ming’in en kipchumaryandanikan, itendenunen bek konyigan.
8. lunen anyun eut bechuton ak iboishen sapunit.

Uzuri nebo oraniton ko, kitinye chupoit ne mingin mara ang’enge kityo asikobwa bek.



# TIST Mobile Website koyoe kasit inguni.

Baruet nebu William Mwito.

*Dear Servants TIST ak temik chebo TIST,*

En betushe chu kimiten , kogoik raisi en ane owl tebutik chebo groupishek che meng'echen yon kagituye ak ichek.

Alak en tebutik kimuche kewolun inguni komye:

Ata ketik che tinye membayat ag'etugul? Inoniton kobo maana sanasana yon kameto chi summary sheet nebo Quantification nenyinet.

Kigelibanech anan tomo? Ago ki ou? Angot kotom ,ko ne nekimuche keyai asi kelibanech ? nyumnyum en chek keger groupishek che meng'echen yon tuten ketik komoite ketik 500 anan kotomo kesigenak en Greenhouse Gas Contract, asi koib kasarta koger ole kimuche kelibanda.

Saidi sana,nyumnyum kenai kit netese ta en Cluster agetugul ak kinet membaek alak chemiten groupisheka alak.

Ko Quantifier ak Cluster Servant, mobile website nebo TIST kobo maana angamun kimuche kinyor ng'alak che terterchin kou ng'alek chetinye ge ak grove, betushek che miten tuyoshek, ng'alek che nomege ak Groups chebo Clusters (GOCs) ak komoswek , addresses ak phone numbers chebo membaek 'ab TIST, Materials chebo Training, Standard Operating Procedures (SOPs), betushek chebo audit, ak mapishek che iboru groves che negitchin yon tese ta quantification—especially kobo maana yon imiten Clusters che mateng'en saidi.

Osome chi tugul koboishen oraniton kararan. Oraniton negimuche kisub:

1. Inyorunen [www.tist.org/mobile](http://www.tist.org/mobile)
2. Angot itinye email address nebo TIST, ichuten email address initon ak iboishen password neng'ung'et.

3. Angot kometinye email address nebo TIST, imuche ichut website initon ko tondet . Inyit kainetng'ung ak organization neng'ung'et ak kityo ichil log in. Organization komuche ko groupit ne imiten.

4. En yoton koborun ole miten pagit ne isubu . En barak inyoru “Cluster”, “Groups”, “Groves” ak “Log out”

5. Angot imoche inyoru ng'alek che tinyege ak Cluster, ichile “ Cluster”. You Koborun pagit netinye project chebo TIST en ng'wony komugul . Cheng' ole onomege agityo ichil kochut yoton(kou, Meru). Kong'eten yuton , koborun pagit ne isubu koboru Clusters chemiten en Meru (anan ko komosto age tugul nekecheng'e) inyoru tuguk cheu ketik chemeiten ak groupishek ak betushek chebo tuyoshek che isubu ak lewenishet ne kogobata.

6. Chut cluster neng'unget (kou , Ciakanyinga). Koyotogsek pagit age ne imbya siratin groupishek che miten en cluster inoto ,TIST number, nambarit nebo ketik ak betut negibo quantification.

7. Chil asi kochut groupit neng'ung'et . (kou, TARADA). Inoniton kosibten iwe pagit ag'e . Inyoru ng'alek chetinye ge ak groupit niton en yuton,kou angot kogikelibanak ak eligibility ak angot kokigoitchi groupit mogutik chebo carbon market.

Kongoi ak ing'oberurok Jehova,  
William Mwito, Maua GOC Cluster Servant.



# Ne nekimuche keyai asi keter pollution nebo bek?

by Joseph Gituma

Wechet nebo bek ogot yon mogiger, komuche kotes sumu agityo kobar tyong'ik ab bek, konamg'e ak bik. Yon kogiboishen bek che yachen kekwenye , kounet ak yon kagiye komuche kore mionwogik en bik mionwogik cheu intestinal worms, miondab magatet , cholera ak diarrhea.

Kimuche keterter ano wechet nebo bek

## Ne nekimuche keyai agobo pollution (wechet 'ab emet)?

1. Mat kewirte saratik koba bek yon kageboishen . ak iyom imwochi bik alak koistoen ge kondeet 'ab saratik en bek.
2. Ongemin ketik en oinoshek ak lakes. Tigitik 'ab ketik kogororon en kotililet 'ab bek, isto murindo en bek tere ng'ung'unyek komochut bek kobune ore 'ab erosion.
3. Ongeyom komatkeminse en ole negit ak oinoshek , lakes anan ko wells asi koter komochut mbolea bek.
4. Ongigil bik kotegso en ole lo en oinoshek.

5. Ker ile ribotin komye kering'oik 'chebo bek.
6. Ng'otchin komoswek tugul chemiten bek , asi mowech tuga.
7. Matgechomchi bik komwetis en ole negit ak oinoshek ak pumpishek.
8. Ker ile toiletishek kokagibal agoi meterishek 50 en lochindab ole miten oinoshek. Ker ile miten ole bune bek en ole miten soak pit , kering'et ne koginde koik ole imuche kobun bek .
9. Chob konyik chemiten en cover slab yon kotog agityo imal komye.
10. Angot itinye wasiwasi agobo tililindab bek, iyo korong' asi iyee noton kobore microbes che imuch kore mionwogik. Kayoet nebo bek komoisto tyong'ik tugul, ago imuche kobagagta chemicals, cheu pesticides anan ko fertilizers che ireu mionwogik kora, lakini kotere mionwogik cheu cholera ak parasites cheu worms.

# Mporoko TIST Cluster: Working Together To Establish a Cluster Tree Nursery.

by Joseph Gituma

Kiyoni tugul tiyet 'ab ge ak yaet 'ab kasit en kibagenge . eched membaek chebo Mporoko Cluster, kokogeyai kasit en kibageng'e ketes TIST nenyonet . En inguni , koyome ketch Nursery nebo ketik en Cluster che tun keboishen en arowek chebwonon. Kiyome oret age tugul keger kele koging'olng'ol ketik en nursery kotestage ketik che indigenous, exotic ak chebo logoek. Inoniton kotoreti kenyorun mogutik chebo membaek tugul chemiten groupit. Kiboiboi angamun kigenamge ak local Water Resource Users Association, BWRUA. Association initon kogikotoretech ak tuguk cheu spades, wheelbarrow, rakes, tankishek chebo bek , cans chebo bek ak polytubes.

En komostonyon , kegonu labour, ribet ek management nebo nursery chebo ketik . Kora kegonuge kemin alak en ketik che indigenous en

komoswek che riparian. Kigeger kele kitinye maget ak kerib tugulswamp nebo Mporoko. Membaekchok koginyor keswek chemine en imbarenikchwak che kiriben ketik chebo TIST.

Raini , konamge ak kogiletnyon bog e , swamp nebo Mporoko kogokotes sak bek agoi inguni downstream communities tyongik 'ab timin chemi Meru National Park konyoru bek che chang'.

Kimwochini kong'oi TIST. Angamun en TIST kogikinetge ng'alek chenomege ak ketik chebo indigenous, practices che kororon chebo chobet 'ab nursery, ribet 'ab riparian areas, wolutik chebo climate change. Ne wo saidi kokiginetge amune sikoyoche kiyoe kasishek che teche emetnyon ak keigu global citizens che myachen che yome koter climate change ak tilet 'ab ketik.