March 2017 Newsletter *Not for sale*

Mazingira Bora

TIST

The International Small Group & Tree Planting Program

w w w . t i s t . o r g

English Version

An Environmental, Sustainable Development and Community Forestry Program.

Thuura Cluster meeting held on 21st February 2017

Inside:

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TIST - Taylors Partnership: New TIST Farmers are Embracing Best Practices.

When Mutuma Mwongeria and his wife joined TIST, they say they didn't expect to gain much out of tree planting activity. To them, tree planting is an 'old practice' that has been passed over the generations. Mutuma points out, " I was skeptical about joining. But my wife and me decided to give it a try. I started attending TIST Cluster meetings. My interest grew as I received more training. I came to realize trees have immense benefits if one organizes himself better." He adds, "today, me and my family decided to plant avocado trees. We have so far planted over 240 avocadoes trees in our farm."

Mutuma belongs to Kinguru TIST Small Group under Kithurine Cluster. This is one of the Clusters in Imenti Tea Factory catchment areas. Taylors Tea of Harrogate has partnered with TIST to promote tree planting and sustainable development in their core key tea zones. Other tea areas under this effort include Kionyo in Meru, Makomboki and Ngeru both in Muranga County.

Mutuma family now believes with additional high value trees, they will generate more income for the family. "Today, there is value addition of farm produce. We hope that our avocados will find a better market after we have done value addition. We plan to produce avocado juice."

In TIST, farmers are organized in Small Groups. Each Small Group has 6-12 members. Mutuma says there is benefit in being a group. Members are able to share ideas, help each other and encourage one another. In the Cluster meetings that are held monthly and attended by representatives of Small Groups within a Cluster (30-50 Small Groups in a Cluster) more trainings are offered. Tree incentives are also paid at the Cluster meetings. Planning for success and setting collective goals for the Small Groups and Clusters also happen at the Cluster meetings.

Mutuma Mwongeria squatting next to his 6-month-old avocado tree. He has intercropped his avocado trees with maize crop and nappies grass.

Time to prepare your shamba for Conservation Farming (CF).

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

Preparing the land:

- Prepare the land at least 1 month before the rains by clearing your plot of weeds and bushes, but do not plough.

- Prepare your holes oblong (rectangle) shape. They should each be 15 cm wide, 35 cm long and 15 cm deep. Space holes at least 75 cm apart.

- Take some manure or compost manure and good topsoil and mix it together. Fill the hole with the mixture up to 5 cm below the surface.

Planting:

- When you plant maize seeds (1 -2 days before rains start), plant 4 seeds in the soil across the hole.

- If you are planting sorghum, plant 5-6 seeds at each end of the planting hole after a good shower of rain.

- Cover the seeds with 2.5 cm of the rich soil and manure mixture. After this the soil in the hole should be about 2.5 cm below the surface of the field.

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

Weeding:

- Weed around the holes regularly.

- Do not weed the entire plot completely. Outside the holes, plants can cover the soil, keeping it cooler and keep it from eroding in rain and wind. Just weed in and near the holes, using a panga to clear weeds between the lines or spaces from one hole to the other. Weed frequently to keep weeds from going to seed and spreading in the holes.

- Leave the weed residue in the plot to rot. This will help add soil fertility.

Post-harvest practices:

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

- Do not graze cattle in the plot. Please remember, we will be glad to celebrate your successful harvest and learn from best practices in your area through this newsletter, as well as during your cluster meeting. Start working now!

Preparing Compost Manure - a natural fertilizer.

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

Preparation of compost:

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

Use the stick as a thermometer – when the compost is ready it should be hot and you may even see steam coming from the stick after you have removed it.

Use of compost:

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

TIST Farmers Combat Global Warming and Climate Change.

TIST farmers have responded to a global call to combat global warming and climate change. Many farmers have sought understanding through TIST seminars/trainings and at cluster meetings to learn and understand more about global warming, its effect on the climate, and mitigation approaches. We see many impacts of climate change today. Just to illustrate a few instances of impacts, the El Nino floods of 1998 that ravaged most of the country and the long drought that followed, and the strong hurricane of 2004 were likely intensified by global warming. Other notable illustrations are the gradual wearing off of the glaciers at the peak of Mt. Kenya, unpredictable weather patterns that have resulted in crop failures in many areas, drying of water springs and water catchments areas, among many others.

This month's newsletter will share training notes from seminars so that we all can understand global warming and climate change better. We will begin by defining each term and explaining it further and then learn how your trees play a significant role in mitigating the effects of global warming.

What is Global Warming?

Global warming refers to an average increase in the Earth's temperature, which in turn causes changes in climate. A warmer Earth may lead to changes in rainfall patterns, stronger storms, a rise in sea level, crop failures, and a wide range of impacts on plants, wildlife, and humans. When

scientists talk about the issue of climate change, their concern is about global warming caused by human activities and the extremes of climate and weather variability this brings about.

Is the Earth getting warmer?
Yes! The Earth has warmed by about 1°C over the past 100 years. Many of the world's leading climate scientists think that activities people do are making the Earth warmer, such as burning of fossil fuels including coal, petrol, and natural gas, and cutting forest and managing land poorly.

What is the Greenhouse Effect?
The greenhouse effect is the rise in temperature that the Earth experiences because certain gases in the atmosphere, called greenhouse gases, like carbon dioxide, nitrous oxide, sulphur dioxide, and methane trap energy from the sun. Major sources of carbon are deforestation, gases emitted from industries, gases emitted from motor vehicles, gases emitted from the burn of wood fuel or charcoal and burning of forests.

What are the dangers of Global Warming?

- Severe water stress in the arid and semiarid land areas would result in more areas becoming desert.

- Increased spread of diseases like malaria. As areas become warmer, they become suitable breeding grounds for mosquitoes, and increasing risks of malaria infection. Many families and health institutions can be impacted, average life spans decline, and infant mortality rates rise.

- Decreased agricultural production in many tropical and subtropical countries, especially countries in East Africa. Due to decreased rainfall and increased breeding of pests due to increased warming, the production of food crops may decrease and this results in poverty and hunger among many families and communities.

- Higher worldwide food prices. As more farmers get less yields and food supplies become scarce, the prices increase because the demand is high and supply is low.

- Major changes in the productivity and composition of critical ecological systems particularly forests. Water catchment areas in the mountains and forests continue to dry up. This will affect the ability to irrigate crops and will reduce stream flows necessary to keep dams and reservoirs replenished. This will reduce generation of hydroelectric power. Our industries, hospitals and other institutions that heavily rely on electricity will be severely affected. The supply of piped water to urban areas as well as rural homes will also be affected.

- Tens of millions of people at risk from flooding and landslides, driven by projected increases in rainfall intensity and in coastal areas, rising sea levels.

How can I prevent Global Warming?
Plant and care for trees!
As mentioned above, carbon dioxide is one of the gases that cause global warming. Trees absorb carbon dioxide from the air during photosynthesis and store it in the wood, roots and soil as cellulose carbon. However, when trees are cut and burned, they release the carbon they had stored back to the air.

Did you know each tree could create a microclimate?
Trees and their cover cool the surface of the earth. Feel the comfort of the shade of a tree. Notice that the soil below is moister than where the sun bakes it with no shade. When the ground stays cooler, the ground holds more moisture longer. This means that trees on your land will help improve the amount of water in your soil, and help retain it for a longer time. This will help your crops and also even help the water users in your area.

What are carbon credits?
To make a TIST carbon credit requires 3 things:
1) A real and additional reduction in the carbon dioxide (CO2) being emitted to the air;
2) A promise to keep the carbon out of the air for many years;

3) Verification by an independent third party that certifies that the actions have taken place according to all the rules.

Trees absorb carbon dioxide from the air during photosynthesis and store it in the wood, roots and soil. The amount of carbon taken from the air and stored can be measured and calculated, and then, when verified as accurate, this absorption of carbon dioxide can be sold on the world market as carbon credits. Buyers can purchase these credits to offset their carbon dioxide emissions.

TIST is able to sell the carbon absorbed in trees just like producers sell sugar and milk. With carbon, however, you don't ship the tree to the market. Instead, the value is from the carbon taken out of the air, kept in the tree on your farm or forest, measured and reported. The trading of carbon credits can be done in New York, Chicago, London, and other cities globally, or it can be arranged between people or companies directly. We have to meet the market rules and requirements. We cannot clear forest or cut trees to plant trees since this is bad for the environment. We have to commit to keep trees in a grove growing for the long-term, 30 years or more. We have to report data accurately. Once trees are planted, some measurements and calculations are made to measure the amount of carbon TIST farmers trees have absorbed. Note again, trees are never actually taken to the markets. They remain in the shambas and the longer they stay alive, the longer the period of receiving payments. So, the farmer keeps the trees, the fodder, the firewood, and the fruits and the nuts. The money that TIST makes selling carbon offsets creates a new source of income and is then shared with TIST Small Groups and used to support the costs of TIST, including training, quantification, and management.

Do all trees absorb the same amount of carbon?

No, trees with wider circumference (more biomass) store more carbon than trees that are thin. Taller trees also absorb more carbon than short trees. Therefore, trees that are thick will bring more income from carbon credits. This means trees planted with good spacing have a chance of growing big and tall and earn more carbon income. They do not compete for soil nutrients and water as much as trees that are closely spaced.

Therefore, in order to receive good payments out of our trees, it is important to plant them in good enough spacing that will allow them to grow healthy, tall and big. Thinning some of the trees to harvest firewood and keep the other trees growing well is usually the best way to manage your trees.

Where/who are the buyers of carbon credits?

Currently, carbon credits are sold on voluntary markets and in compliance markets. They may be certified in different ways, just as there are different brands and certifications for other products you buy and sell (like coffee, and organic coffee under different labels). TIST could market its carbon credits on the compliance or the voluntary market because they are of high quality.

There are many different standards in these markets with different and ever-changing rules about tree planting, monitoring, and reporting that we must meet to sell carbon offsets. We use the highest quality standards for the Validation and Verification — the Verified Carbon Standard (VCS) and the Climate, Community, and Biodiversity Alliance Standards (CCBA).

TIST has two basic types of buyers:

The first is made up of people willing to give money to encourage people to plant trees. Examples include paying for tree planting projects to make a wedding or a conference carbon neutral. The second type is made up of companies in the US, Europe, Canada and other industrial countries that are making voluntary commitments to reduce their GhG emissions either because they are good stewards of the environment or they are preparing for future regulatory requirements.

TIST is very happy to have good quality carbon credits, and to be able to supply many different customers.

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Kimeru Version

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Mucemanio jwa Thuura Cluster mweri 21/02/2017

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TIST – Kugwatanira na Taylor
Arimi Ba TIST Kwamukira Njira Injega cia Urimi.

Riria Mutuma Mwongeria na mwekuru wawe batonyere mubangone jwa TIST, bateterete kwona mpongeri inyingi kuumania na waandi bwa miti. Kiri bo, waandi bwa miti ni njira ya "gintwire"iria inenkaniritue kuuma kiri nthuki imwe mwanka kiri ingi. Mutuma norotaga ati naari na nkanja ciawe iguru ria gutonya mubangone juju. "Indi mwekuru wakwa na uni turabanga gutonya mubangone juju tugeria. Ndambiririe gwitaga micemanione ya Cluster ya TIST. Kwenda kumenya gwakwa kureta na mbeere ouria ndentire na mbeere kuthomithua. Ndireja kumenya mawega jamaingi kethira muntu akaibangania bubwega" Ageta na mbeere kwongera "Narua, uni na nja yakwa twabangire kwaanda miti ya mibokando. Nitwaandite nkuruki ya miti Magana jairi na mirongo ina(240) ya mibokando muundene jwetu"

Mutuma ni Mumemba wa Gikuundi kiniini gia TIST gitagwa Kinguru rungu rwa Cluster ya Kithirune. Iji ni Cluster imwe ya ngwatiro ya Kithii kia Majani kia Imenti. Taylors Tea of Harrogate nigwatanirite na TIST gukiiria waandi bwa miti na witi na mbeere butigutwika kiri naria kwaandi majani. Nteere ingi iria iri rungu rwa utethio bubu nia amwe na Kionyo ndeene ya Meru, Makomboki na Ngeru cionthe iri Kaunti ya Murang'a.

Nja ya Mutuma nandi nitikitie ati na mpongeri ya miti iri na utethio bwa iguru, bakareta mbeca mpongeri nja yao. "Narua kuri na mpongeri kuma kiri urimi bwetu. Turi na wirigiro ati mabokando jetu jakona thoko injega nyuma ya gwikira mpongeri kiri mabokando jaja. Tubangite kithithia juice ya mabokando"

Kiri Tist, arimi babanganitue kiri tukuundi tuniini. Oo gikundi kiniini kiri na amemba bantantu mwanka ikumi na bairi (6-12 members). Mutuma ariuga ati kuri na mawega ja kwithirwa uri gikundine. Amemba ni beranaga mathuganio jao na gwitetheria obangwa na gwikanira moyo. Kiri micemanio ya Cluster, iria ithithagua o mweri omweri na itagwa ni atongeria ba ikuundi biniini biria biri kiri Cluster, (kuri ikundi gatigati ka mirongo ithatu (30- 50) na mirongo itano okiri Cluster) uritani nkuruki nibwejanagwa. Marii ja miti nijanenkanagirwa kiri micemanio iji. Kubangania kenda mantu jakara bwega na kuthithia mioroto ya kuthingatwa ni ikundi biniini na cluster , jathithagirua micemanione ya Cluster.

Mutuma Mwongeria aringira mbica akui na muti jwa mubokando jwawe jwa mieri itatantu (6months) Andanaritie miti yawe ya mibokando amwe na mpepe na thaara.

Ni igita ria kuthuranira munda jwaku niuntu bwa urimi bubwega.

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

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

Kuthuranira muunda

Thuranira munda jwaku no mweri jumwe kabele ka mbura.

- Rita maria na ithaka muundene jwaku. Ukarima.

- Thuranira marinya jaku. Nijabati kwithirwa jari na warie bwa sentimeta ikumi na ithano, uraja bwa sentimeta mirongo ithatu na ithano na kwinama sentimeta ikumi na ithano. Taarania marinya jaku na sentimeta mirongo mugwanja na ithano kana nkuruki.

- Jukia mboleo inkai na muthetu jumwega jwa iguru na uunganie. Ujuria kirinya na muunganio juju mwanka gikinye sentimeta ithano nthiguru ya nthiguru itirimi.

Kuanda

- Waanda mbeu cia mpempe (ntuku imwe gwita ijiri mbele ya mbura kwambiria), anda mpindi inya kiri muthetu kugitania kirinya.

- Kethira ni ugimbi ukuanda, anda mpindi ithano gwita ithanthatu o muthiene jwa o kirinya gia kuanda nyuma ya mbura injega mma yaura.

- Kunikira mbeu na sentimeta 2.5 cia muunganio juria jwa muthetu jumunoru na mboleo. Nyuma ya kwongera muunganio juju kirinya kibai kwithirwa kiri senimeta 2.5 nthiguru ya naria nthiguru itirimi.

- Kanya karia gagutigwa kirinyene iguru nigatethagia ruuji gukinyira imera riria mbura iijaga.

- Gutina aja ya gutumira fertilizer cia kuguura kiri muunda jwaurimi jumwega. Imera biaku bikathithia bwega kinya warega gutumira fertilizer, wekira mboleo ing'ani.

Gukuurira iria

- Kuurira iria akui na irinya o igita o igita.

- Ugakurira munda junthe iria rionthe. Oome ya marinya, imera nobikunikire muthetu, bikajuika jurina gapio na bigatuma jutakamatwe ni mbura kana ruugo. Kuurira iria aki marinyene na akui na marinya. Tuumira kibanga gukurira iria gati gati kalaini kana itigatinekuuma kirinya gwita kingi. Kurira iria o igita o igita nikenda maria jatiraciare mbeu na jatamba marinyene.

- Tiga matigari jam aria muundene kenda joorera ku. Bubu bugatethia kuongera unoru bwa muthetu. aria ubati kuthithia warikia guketha

- Ukaithia matigari ja muunda. Jatige nthiguru nikenda jomba gutuma muthetu junora nkuruki. Matigari ja imera no jatumirwe kinya kuthithia mboleo.

- Ukarithia ndithia muundene. Itu rikana, tukagwirua mono gukeneera iketha riaku ririnene na kuthoma kuumania na miitire imiega buru ntuurene yaku gukurukira gazeti iji amwe na igitene ria mucemanio jwaku jwa cluster.

Ambiria kurita ngugi thaa iji!

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

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

Kuthithia mboleo:

1) Taara antu aria ukeenja kirinya giaku kia warie bwa mita inya na uraja bwa mita inya.
2) Theria antu au.
3) Inja kirinya kirina warie bwa mita ithatu gwita inya na mita imwe na nusu kwinama.
4) Uthurania matigari ja imera biaku jaria urinajo na ugitange tue tunini. (mung'uanano mathangu na mati ja mpempe, miere na ming'au).
5) Ikira matigari jaja kirinyene mwanka gitigare nusu mita.
6) Ongeera lita ithano cia muju.
7) Riu wongere centimita mirongo ithatu (kana o iria ikwoneka) cia mburi kana nguku).
8) Ongera matigari ja imera nusu mita.
9) Ikira lita ingi ithano cia muju.
10) Ongera matigari ja imera kairi mwanka kirinya kiende kuujura.
11) Muthia, ikira muthetu mwanka kirinya kiujure.
12) Ukiujuria kirinya na muthetu, tonyithia muti jumuraja gatigati ga kirinya mwanka jukinye nthiguru buru.
13) Tigana na kirinya giki ntuku mirongo kenda (mieri ithatu).
14). Igitene riri tumira ruuji rwaku rwa ruko gwikira boleo. Mung'uanano, warikia kuthambia nyomba kana nguo ciaku, ituura ruuji ruru ugutumagira kirinyene. Kethira urina ndithia ituura maumago jacio iguru ria kirinya.
15) Untu bubu nibwongagira nitrogen kiri mboleo yaku.
16) Geria wikagire kirinya kiu ruuji na njira iji ntuku cionthe kana oriria ruuji rurio.
17) Ntuku mirongo kenda ciathira, mboleo ikethira iri tayari.

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

Utumiri bwa mboleo:

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

Arimi ba TIST nibakurua na Kwongeraka kwa murutira jwa nthi na kugaruka kwa rera.

Arimi ba TIST nibaigitue na bacokia kiriro kia nthiguru gia kurua na murutira jwa nthi na kugaruka kwa rera. Arimi babaingi nibacuite kuelewa gukurukira semina na moritani ja TIST nan dene ya micemanio ya cluster nikenda bathoma na belewa kwegie murutira juju, jaria jwijanagia najo, na jaria tuumba kuthithia nikenda tujwebera. Nitwonaga mantu jamaingi jaria jaumanitie na kugaruka kwa rera narua. Kwonania ming'uanano imikai, ngai ya Elnino ya mwaka jwa 1998 iria yathukiria akui nthiguru yonthe na mpara iria yathingatire, na kiurutani kia mwaka jwa 2004 kiria kiongerere murutira juju nainya. Ming'uanano ingi iria ubati kumenya ni kunyia kwa nkamia iria iri mulima Kenya kuria kwonekete, rera itikuumba kubangirwa iria itumite imera bithuuka ndene ya ntuura inyingi, kunyara kwa ithima nan aria kugwatagia ruuji, amwe na mantu jangi jamaingi.

Gatheti ya mweri juju nikugaana moritani kuumania na semina nikenda tuumba kwelewa murutira jwa nthiguru na kugaruka kwa rera bwega nkuruki. Tukaambiria na kumenya o riitwa ririuga atia na kueleza nkuruki na riu tuthome uria miti yaku iritaga ngugi ikwoneka kiri kunyiyia magitari jaria jaumanagia na kurutira kwa nthiguru.

Kurutira kwa nthiguru nimbi?

Kututira kwa nthiguru ni kwongereka kwa mwanki ndene ya nthiguru, kuria kuretaga kugaruka kwa rera. Nthiguru irina murutira nkuruki no irete kugaruka kwa mbura, biurutani birina inya nkuruki, kwongereka kwa ruuji iriene, kuthuka kwa imera,

na magitaria jamaingi kiri imera, nyomoo cia kithaka na kinya kiri antu. Riria athomi barairia kugaruka kwa rera, wasiwasi yao ni mono kwegie kurutira kwa nthi kuria kuumanagia na mantu jaria jathithagua ni antu na kugaruka gukunene kwa rera kuria kuumanagia na bubu.

Ka Nthiguru igwita na mbele kurutira nkuruki?

Ii! Nthiguru niongerekete kimwanki nauu 1°C ndene ya miaka igana iu ikurukite. Babaingi ba Athomi ba science baria batongeretie ndene ya nthiguru nibathuganagia ati mantu jaria antu bathithagia nijatethagia kurutiria nthiguru, ja kuithia into ja makara ja maguta, beteroli, ngasi na kugiita miitu na kumenyeera muunda bubuthuku.

Greenhouse effect nimbi?

Iji ni kwongereka kwa mwanki juria nthiguru igagua niuntu ruugo rumwe, ruria rwitagwa ruugo rwa greenhouse, ja carbon dioxide, nitrous oxide, sulphur dioxide, na methane nirugwatagia mwanki jumwe kuumania na riua. Biumo biria binene bia carboni ni ugiti miitu, ruugo ruria rurekagua kuuma viwandene, ruugo kuumania na ngari, ruugo kuumania na kuithua gwa nkuu kana makara na kuumania na kuithia miitu.

Kurutira kwa nthi kuretaga magitari jariku?

- Kwaga ruuji ndene ya ntuura injumu (ndwanda) kuria kuumba gutuma ntuura inyingi nkuruki ikaa rwanda.

- Kwongereka kwa gutamba kwa mirimo ja rwagi. O uria ntuura cirutagira, nou ciejaga injega cia guciarana kwa rwagi na kwongerwa kwa kuumbika gwa kuajua ni rwagi. Nja na cibitari inyingi no citongwe ni jaja, miaka ya gutuura ninyiaga na gukua kwa aana babanini gukongereka.

- Kunyia kwa maketha kuumania na kulima ndene ya nthiguru iria ciri guntu kurina riua riringi, mono nthiguru iria ciri East Africa. Niuntu bwa kunyia kwa ngai na kwongereka kwa tunyomoo turia tuthukagia imera niuntu bwa kurutira, maketha kuumania na imera bia irio no janyie na bubu bukareta ukia na mpara ndene ya nja na ntuura inyingi.

- Irio kwongerra goro ndene ya nthiguru yonthe. O uria armi babaingi baguketha maketha jamanini na irio bekanyia, nou ngarama ya irio ikongereka na irio ndene ya thoko bikaa bibikai.

- Nikugijaga kugaruka gukunene kiri maketha na gukarania kwa imera na nyomoo mono ndene ya miitu. Naria kugwatagia ruuji ndene ya irima na miitu nigwitaga na mbele kunyara. Bubu bukareta thina ya kurima na ruuji na bukanyia ruuji ndene ya miuro ruria rwendekanaga nikenda naria gwaki gwa kugwatia ruuji kuumba kung'ania ruuji. Untu bubu bukanyia kuthithua kwa sitima. Kambuni, cibitari iria citumagira stima na wingi ikagitarua. Ruuji rwa paipu rwa tauni na rwa risabu kinyaru rukagitara.

- Antu makumi ja mamilioni bakarugurirwa thina cia kuigara kwa ruuji na kugua kwa nthi, kuria gucukumagwa ni kwongereka kwa mbura na nterene cia iria, kwongereka kwa ruuji iriene.

Natia mpumba kueberia kurutira kwa nthi? Anda na umenyeere miti!

Ja ou tuugite au iguru, ruugo rwa carbon dioxide ni rumwe rwa iria iretaga kurutira kwa nthi. Miti nijukagia carbon dioxide kuuma ruugone riria ikuthithia iria na ikamiika ndene ya rubau, miri na muthetune ja kaboni ya cellulose. Indi-ri, riria miti yagitwa na yaithua, kaboni iu ireki nirekagua ruugone kairi.

Nwiji o muti nojuthithie rera ya antu au gukuiritie?

Miti na kithiiki kiayo niioragia nthi. Nwiji kuganirwa kuria kuri kithiikine kia muti. Ona ati muthetu juria juri rungu jurina ruuji nkuruki ya juria juri aria kurina riua na gutina kithiiki. Riria nthi ikaraga na gapio, nthiguru niikaga ruuji igita riraja nkuruki. Guku nita kuugamiti iria iri muundene jwaku nitethagia kwongera ruuji ruria ruri muthetune jwaku, na igatethia kuruika ku igita riraja nkuruki. Bubu bugatethia imera biaku na kinya butethie baria batumagira ruuji ndene ya ntuura yaku.

Krediti cia kaboni nibicio?

Kenda uthithia krediti ya kaboni ya TIST nigwitagia into bithatu:

1) Gutaurwa kwa mma na kwongerekete gwa carbon dioxide iria igutonyithua ruugone;
2) Ahadi ya gwika kaboni iu kuraja na ruugo ndene ya igita ria miaka imingi;
3) Gutegerwa ngugi na gukurukithiua ni kiama gitina uthoni na TIST kiria kibati kwona ati mantu nijathithikite kuringana na mawatho jonthe.

Miti nijukagia ruugo rwa kaboni riria ikuthithia irio na kumiika ndene ya rubau, miiri na muthetune. Kaboni iria ijukagua kuuma ruugone na gwikwa noithimwe na igatarwa, na riu, yarikia gukurukithua ati ni yam ma, kujukua guku kwa ruugo rwa kaboni no kwendue ndene ya thoko ya nthiguru yonthe ja krediti cia kaboni.Aguri nobagure krediti iji nikenda bathiria ruugo rwa kaboni ruria bagutonyithia ruugone.

Tist niumbaga kwendia kaboni iria iri kiri miti iji o uria antu bendagia sukari na iria. Indi-ri kiri kaboni, utikagia muti thokone.Antu au, uguri ni kuumania na kaboni iria irititwe ruugone, na yekwa mitine ndene ya munda kana mwitu jwaku, ithimwi na ripoti yaikua. Kwendia na kugurwa kwa krediti iji nikuthithikaga, New York, Chicago, London na tauni ingi ndene ya nthiguru kana gukabangwa gatigati ka antu kana kambuni. No mwanka tukinyire mawatho na jaria jakwendeka ndeme ya thoko.tutiumba kugiita mwitu junthe kana tugiita miti tuanda ingi nontu bobu butibui kiri mazingira.no mwanka tuciitie gwika miti ndene ya miunda moyo ndene ya igita riraja, miaka mirongo ithatu kana nkuruki. No mwanka tuuge mantu jongwa jaria jario. Riria miti yaandwa, ithimi na mathabu jamwe nijathithagua kuthima ni kaboni ing'ana miti ya arimi ba TIST ijukitie. Rikana kairi, miti itikagua thokone. Ikaraga miundene na ouria ikaraga igita ririraja iri moyo, nou igita ria kuriwa riongerekaga. Kwou, murimi neekaga muti, irio bia nithia, nkuu na matunda na nkandi. Mbeca iria TIST ithithagia kuumania na kwendia kaboni ni kiumo gikieru kia mbeca na riu ikagaanwa na ikundi bibinini bia TIST na igatumirwa kutirima ngarama cia TIST, iria ciri amwe na moritani, utari miti na urungamiri.

Miti yonthe nijukagia ruugo rung'anene?

Aari, miti iria iri imiarie nkuruki niikaga kaboni inyingi nkuruki ya miti imiceke. Miti imiraja kinyayo nijukagia kaboni inyingi kiri miti imikui. Kwou, miti iria imati niretaga mbeca inyingi kuuma kiri krediti cia kaboni. Guku ni kuuga miti iandi itarenie bwega irina kanya ga kunenea na kurea na kwona mbeca inyingi nkuruki kuumania na kaboni. Iticindanagira irio na ruuji ja miti iria iandi ikuianiritie.

Kwou, nikenda twona mbeca injega kuumania miti yetu, burina bata kumianda itarenie bwega nikenda yumba gukura irina thiria, ia imiraja na imiarie. Gutaura miti imwe nikenda twona nku riu tugeeke iu ingi igikuraga bwega jaria maingi niyo njira iria njega buru ya kumenyeera miti yaku.

Ninaa/Ni bau baguraga krediti cia kaboni?

Nandi, kaboni yendagua thoko cia kwiritira nandene ya thoko cia lazima. Thoko iji citikurukanagia umwe, ojauria kurina mianya na gukurukua kwa into bingi biria uguraga na kwendia. TIST noyendie krediti cia kaboni kiri thoko imwe ya iji nontu krediti iji ni injega mono.

Kurina ithimi mwanya ndene ya thoko iji birina mawatho mwanya na jakaraga jakigarukaga kwegie uandi miti, kumenyeera na kureta ripoti jaria tubati kuujuria nikenda tuumba kwendia ruugo rwa kaboni ruria twitite. Nitutumagira ithimi biria biega buru kiri gutegerwa ngugi na gukurukithua — the Verified Carbon Standard (VCS) na Climate, Community, and Biodiversity Alliance Standards (CCBA).

TIST irina mithemba iiri ya aguri:

Muthemba jwa mbele ni jwa antu baria bakwenda kunenkanira mbeca nikenda bekira antu motisha ya kuanda miti. Ming'uananona ni amwe na kuririra miradi ya uandi miti nikenda batuma muranu kana mucemanio jutikongere kaboni ruugone. Muthemba jwa iiri jurina kambuni ndene ya US, Europe, Canada na nthiguru ingi iria ciri mbele mantune ja ibanda baria bakwiritira bongwa kunyiyia kuongerwa kwa ruugo ruruthuku (ruugo ruria ruretaga murutira) nontu bari akaria babega ba mazingira kana niuntu nibakwithuranira niuntu bwa gutirimana na mahitaji manna jaria jakwendeka. TIST nigwiritue mono kwithirua irina krediti cia kaboni cia iguru, na kuumba kuenderia aguri babaingi mwanya.

March 2017 Newsletter *Not for sale*

Mazingira Bora

TIST
The International Small Group & Tree Planting Program
w w w . t i s t . o r g

Kikuyu Version

An Environmental, Sustainable Development and Community Forestry Program.

Mucemanio wa Thuura Cluster uria wekirow mweri 21/02/2017

Inside:

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TIST - Taylors Kunyitanira: Arimi eru a TIST kuhibiria urimi mwega.

Riria Mutuma Mwongeria and mutumia wake maingirire TIST, marauga matieciragia ati nimaguteithika kumananiga na uhandi wa miti. Hari o kuhanda miti ni 'maundu ma tene' maria makoretwo magitiganirwo kuma miaka na miaka. Mutuma akiuga ati 'ndari na thini kuingira TIST. No mutumia wakwa na nii tugiciria tugerie. Ngiambiriria guthii micemanio ya TIST Clusta. Wendo wakwa ugikura na ngigia na ngithomithio. Ngimenya ati miti ina umithio mundu angicokaniriria wega". Akiongerera, "umuthi, nii na mucii wakwa tugiciria kuhanda miti ya avocado. Nituhandite makiria ma miti ya avocado 240 mugunda-ini witu".

Mutuma ni wa gikundi kia Kingoru TIST Small Group kiria gikoragwo gikundi-ini kia Kithurine Cluster. Ino ni imwe ya Clusta cia Imenti Tea Factory Catchment areas. Taylors Tea ya Harrogate ni manyitaniire na TIST gukuria uhandi wa miti na ukuria wa Core Key Tea zones. Miena ingi ya macani iria irerutaniria ni ta Kionyo iria iri Meru, Makomboki na Ngeru iria cirri Muranga County.

Mutuma na mucii wake riu nimetikitie na wongerereku wa mawega ma miti, ni irongerea fainda kuri family. "Umuthi, kuri na wongerereku wa indo cia migunda. Ni turakena nigukorwo matunda ya avocado ni makugia na thoko njega magia na umithio. Ni turabanga guthondeka juice ya avocado."

Thiini wa TIST, arimi methondekete tukundi tunini. Gakundi kamwe kari na amemba 6-12. Mutuma arauga ati kuri na umithio hari gikundi. Amemba nimarahota kugayana mechiria, guteithania na kumaniriria hari mundu na uria ungi. Mucemanio-ini wa Clasta wa o mweri na uria wari na arugamiriri a ikundi nini kuma clasta (30-50 Small Groups in a Clusta) ni guthomithanagio. Uingi wa miti niurihagwo mucemanio-ini wa Clusta. Kubanga kwa uthii wa nambere na mibango ya guthii na mbere ibangagwo michemanio-ini ino ya Small Group and Clusters.

Mutuma Mwongeria acunjumite miti-ini yake ya mieri itandatu ya avocado. Ahandite itukanite na mbembe na nyeki.

Mahinda ma kuhariria mugunda waku niundu wa Kilimo Hai (CF).

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

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

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

Kuhariria mugunda waku.

Hariria mugunda waku mweri umwe mbere ya mbura yurite.

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

Kuhanda

- riria wahanda mbembe(matuku 1-2 mbere ya mbura yurite), handa mbegu 4 irimaini.
- Wahanda muhia, handa 5-6 irima-ini thutha wa mbura kuura.
- Humbira mbegu na tiiri muigana wa 2.5cm.
- Haria irima ritaiyurite hateithagiriria kuiga maai.

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

Kurimira

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

Maundu ma thutha wa kugetha.

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

Ambiriria wira riu.

Kuhariria thumu wa mborera – bataraitha ya kimerera.

Thumu wa mborera ni bataraitha ya kimerera iria iteithagia mimera gukura wega. Bataraitha ino ni njega gukira ya nduka tondu I ya kimerera, ndiri thogora, ndithukagia mimera hamwe na maria maturigiciirie ta uria bataraitha imwe cia nduka ciikaga. Kuri njira ngurani uria ungihota gwithondekera thumu waku wa mborera. Hari njira imwe iria tuguthomithia iria ikoretwo igitumirwo ni andu aiangi. Niwega urie arimi aria angi muri mucemanio wa cluster ni njira iria matumagira.

Kuhariria guthondeka thumu:

1. Chagura handu haria ikwenja irima riaku ria mita inya kwa inya.
2. Theria handu hau.
3. Harirriria kana uchimbe irima ria warie wa mita ithatu nginya inya na iriku wa mita imwe na nuthu.
4. Cokeria hamwe maragara maku moth eta mahuti, mabebe, maboco kana muhia na umatinangie tuchunji tunini.
5. Ikia maragara macio irima-ini riaku kwa uriku wa nuthu mita.
6. Ongerera lita ithano cia muhu.
7. Thutha ucio, ongerera thumu wa ng'ombe kana mburi kana nguku kana nguruwe kwa uriku ta fiti imwe.
8. Ongerara maragara mangi inguru ta nuthu mita
9. Ongerera lita ithano cia muhu.
10. Ongerera maragara maku nginya irima riaku rikirie kuiyura.
11. Wa muthia, humbura na tiiri nginya iria riiyure.
12. Hindi iria urahumbira na tiri, handa kamuti nginya kahutie irimariaku gitina.
13. Eterera gwa kahinda ka thiku 90 kana mieri itatu.
14. Gwa kahida gaaka korwo ugitiriria thumu waku maai maku ma giiko. Ungikorwo ni ukuhota ona mathugumo ma mahiu maku uitiririe.
15. Mathugumo ni mateithagia kuongera nitrogen.
16. Geria guitagiriria maai na muthugomo kwa mahinda makuhi.
17. Thutha wa thiku mirongo kenda, thumu waku ugakorwo uri muhiu.

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

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

Arimi a TIST kuhurana na ugaruruku wa riera.

Amemba a TIST nimakoretwo makihurana na ugaruruku wa riera uria ukoretwo kuo thi yothe na arimi aingi nimoritie mataaririo wega thiini wa semina na micemanio niguo mataukwo wega uhoro uyu wigii ugaruruku uyu wa riera, maundu maria ungirehe na uria mangihota kuhurana naguo.

Nitwonaga maundu maria ugaruruku wa riera urehete umuthi. Na kuheana mamwe ma maundu maria marehetwo niguo, mbura iria yari nene muno ya Elnino ya mwaka wa 1998 iria yathukirie bururi na gukigia na ng'aragu nene muno hamwe na muiyuro wa maai iriaini wa mwaka wa 2004 muno ciarehetwo ni ugaruruku uyu wa riera. Maundu mangi ni ta guthira kwa barafu iria ikoragwo kirima-ini kia Mt. Kenya na imera citarathimika na cigatwarana wega iria citumite magetha mathuke na manyihe, kuhua kwa njuui na ihumo cia maai na mangi maingi.

Mweri uyu ngathiti niikwonania maundu maria maririirio thiini wa semina maria mangitutethia gutaukwo wega ugaruruku wa riera nikii. Tukwambiriria na kumenya wega ciugo icio naningi tuthii na mbere na guthoma uria miti yaku inyitaga itemi kunyihia ugwati uria umanaga na ugaruruku wa riera.

Ugaruruku wa riera ni kii?

Ugaruruku wa riera ni kwongerereka kwa urugari uria uri thi uria ucokaga ugatuma riera ricenjie. Thi riria yagia na urugari muingi niitumaga

imera cia mbura cicenjie na gukagia na ihuhakanio nene na maai ma iria makambatira, mimera igathuka na miti ikaninwo ohamwe na nyamu cia githaka. Riria ataalamu makwaria maundu megii ugaruruku wa riera, nimaroraga muno global warming iria irahagwo ni maundu mariu mundu ekaga na mogwati maria marehagwo ni maundu maya.

Thi niirahuha makiria?

Ii! Thii niyongereire urugari na muigana wa 1°C kwa makiria ma miaka 100. Aingi a ataalamu a uhoro wa riera monaga ati andu nio matumite thi yongerereke urugari na njira ya gutema miti na gucina indo cia tiiri, coal petrol na riera itheru na kwaga gutungata migunda yao.

Maundu maria marehagwo ni Greenhouse.

Maundu maria marehagwo ni greenhouse nit a kwongerereka kwa urugari wa thi nitondu riera guku iguru riria ritagwo greenhouse ta carbon dioxide, nitrous oxide, sulphur dioxide na methane nicihotaga kunyita hinya wa riua. Carbon nyingi yumanaga na gutema miti, ndogo ya iganda, ndogo ya ngari na ndogo ya makara na miti.

Mogwati ma Global Warming ni mariku?

- Kwaga kwa maai na kuuma kwa migunda.

- Gutherema kwa mirimu ta malaria. Kugia na urugari muingi na kuhotithia rwagi guciarana na kwongerera ugwati wa malaria. Micii miingi na mathibitari nomakorwo ni ugwati uyu na mituurire ya andu ikanyiha na ikuu cikongerereka.

- Kunyiha kwa magetha ma urimi na makiria mabururi-ini maria mari East Africa. Na niundu wa kunyiha kwa mbura na kwongerereka kwa guciarana kwa tutambi niundu wa ungi wa urugari, magetha nimanyihaga na uthoni ugathii nambere na kuongerereka miciini iitu.

- Kwongerereka kwa mathogora ma irio nitondu arimi aingi nimanyihitie magetha na irio cikanyiha, mathogora nimathiaga iguru nitondu andu nimarabatara irio na ni nini.

- Mogaruruku manene ma magetha na riera na muno mititu. Ihumo cia maai cikahua. Maundu maya nimagutuma uhei wa maai wa irio unyihe. Maundu maya ningi nimakunyihia uthondeki wa thitima ya maai. Iganda ciitu, mathibitari na kundu kungi kuria gutumagirwo thitima nigukuhutio na njira nene ma. Utambia wa maai mataown-ini na miciini nigukuhutio ona kuo.

- Mamilioni ma andu mari ugwati-ini wa muiyuro wa maai uria urehagwo ni mbura nene na maai ma iria kwambatira.

Niatia tungigitira Global Warming?
Handa na utungate miti!

Ta urui twona haha iguru, carbon dioxide ni imwe ya riera riria rirehaga global warming. Miti niigucagia carbon dioxide kuma riera-ini riria ireka photosynthesis na ikamiiga thiini wayo mutiini na miriirni hamwe na tiiri ta cellulose carbon. Na ningi, riria miti yatemwo na yacinwo niirekagiriria carbon iria ikoretwo iigite rieraini.

Niui ati o muti nouthondeke riera riaguo?

Miti na mahuti maguo niuhumbagira tgi. Niitumaga kugie na riera riega na kiiruru gikaagira. Niukuona ati tiiri uria uri miti-ini iria iri na kiiruru niukoragwo uri mugunyu gukira uria uri riua-ini. Riria thi yaikara iri hehu, tiiri niuhotaga gkuiga ugunyu gwa kahinda karaihu. Uu nikuga ati miti iria iri mugunda-ini gwaku niiteithagia tiiri kugia na maai na igateithia kuiga maai macio gwa kahinda karaihu. Njira ino niiguteithiriria mimera yaku hamwe na aria mahuthagira maai.

Carbo Credits ni kii?

Niguo uthondeke carbon credits cia TIST urabatara indo 3;

1) Kwongerereka kwa kunyiha kwa carbon riera-ini

2) Kwiranira kunina carbon riera-ini gwa kahinda karaihu.
3) Kuhitukio ni honge ciirugamiriire ati makinya nimoetwo kuringana na watho.

Miti niigucagia carbon dioxide kuuma riera-ini riria ireka photosynthesis na ikamiiga thiini wayo , miri-ini ohamwe na tiiri-ini. Muigana wa carbon uria woyagwo kuuma riera-ini na ukaigwo nouthimike na uthuthurio na uhitukio na njira nginyaniru na kugucio kuu kwa carbon rieraini nokwendio kuri thoko ya carbon credits. Aguri nomagure carbon credits ici niguo kunyihia carbon dioxide.

TIST iri na uhoti wa kwendia carbon iriaigucitio miti-ini ota uria arimi mendagia igwa kana iria. No riria urendia carbon ndurabatara kuneana muti. No urabatara kugucia carbon dioxide kuma riera-ini mugunda-ini waku kana mutitu-ini na utarirwo. Wendi wa carbon nouhanikire New York, Chicago kana London ona kana micii mingi bururi-ini wothe, kana uiguithanirio ni andu kiumbe na makambuni imwe kwa imwe. Nonginya tukinyirie ikiro na mawatho ma thoko. Tutingitema mititu kana miti iria iri migunda-ini gwitu tondu undu uyu niuthukagia maria maturigiciirie. Nonginya twitikire kuiga miti iri muoyo gwa kahinda ka miaka 30 na makiria. Nonginya tuheane uhoro mukinyaniru. Riria miti yahandwo, ithimi na uteri nicihuthikaga guthima muigana wa carbon iria igucitio ni miti ya arimi a TIST. Ririkana o ringi, miti nditwaragwo thoko. likaraga migunda-ini na o uria iraikara kuo noguo marihi maguthii nambere na kuingiha. Kwa uguo murimi athiaga nambere na kuiga miti iri muoyo na ikamuhe irio cia mahiu ohamwe na ngu na matunda. Mbeca iria TIST ithondekaga kumana na wendia wa carbon cithondekaga kihumo kia marihi maria magayanagwo ni arimi a TIST na igatumika gutheremia TIST, hamwe na githomo, uteri wa miti na utungati wa TIST

Miti yothe igucagi carbon iiganaine ?

Aca, miti iria ikoragwo na utungu munene niihotaga kuiga carbon nyingi gukira iria miceke. Miti miraihu noayo niigugagia carbon nyingi gukira iria mikuhi. Kwa uguo, miti mitungu niirehage marihi maingi kumana na carbon credits. Uu nikuga ati miti iria ihanditwo na utaganu mwega iri na mweke wa gukura iri minene na irehe marihi maingi. Ndigayanaga unoru wa tiiri na maai ta miti iria ikuhaniriirie.

Kwa uguo, niguo kwamukira marihi maingi kumana na miti, ni hari na bata kuhanda miti na utaganu muiganu uria ukumiteithia gukura iri mitungu na miraihu. Kuhurura miti niguo wone ngu na niguo ikure wega ni njira njega ya gutungata miti.

Aguri a carbon credits mari ku na ni ariku?

Gwa kahinda gaka carbon credits yendagio na njira ya kwirutira kuhitukira gukinyiria mawatho ma thoko. Mawatho maya nomakorwo mari ngurani ota uria gukoragwo na mithemba ngurani ya indo thoko-ini ingi iria wendagia na ukagura(ta kahuwa). TIST noyendie carbon credits kuhitukira mawatho maya kana kuhitukira thoko ya kwiyendera tondu ikoragwo iri na ukinyaniru mwega.

Kuri na ikiro ngurani cia thoko na mawatho ngurani maria macenjagia ma uhandi wa miti, urori na uramati na nomuhaka tukinyanirie maundu maya niguo tuhote kwendia carbon. Tuhuthagira uthuthuria uria niwa kirathi kia iguru muno –Verified Carbon Standard (VCS) na Climate, Community and Biodiversity Alliance Standards (CCBA).

TIST ikoragwo na aguri mithemba iiri.

Wa mbere ni andu aria merutiire kuheana mbeca ciao niguo kuhinyiriria andu kuhanda mit. Muhiano nit a kuriha mitaratara ya uhandi wa miti niguo gutua uhiki na micemanio iri na riera itheru. Wa keeri ni kambuni thiini wa US, Europe, Canada na mabururi maria mangi makoragwo na iganda maria marihaga na kwiyendera uhnyihia wa carbon nitondu nomakorwo mari na wendi mwega kana makihariria niundu wa ,awatho maria mangiuka thutha-ini.

TIST niikenetio nigukorwo na carbon credits ya kirathi kia iguru na ikahota kuhe aguri aao.

March 2017 Newsletter *Not for sale*

Mazingira Bora

TIST

The International Small Group & Tree Planting Program

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Kiswahili Version

An Environmental, Sustainable Development and Community Forestry Program.

Thuura Cluster kwa mkutano wao tarehe 21/02/2017

Ndani ya gazeti:

Published by TIST-Kenya. Web: www.tist.org Email: martinweru@tist.org Tel: 0722 - 846 501

Ushirikiano kati ya TIST na Taylors: Wakulima wapya wa TIST wanazikubali njia bora.

Wakati Mutuma Mwogeria na bibi yake walijiunga na TIST, walisema kwamba hawakutarajia kupata kiasi kutokana na shughuli za kupanda miti. Kwao, upandaji miti ni mazoezi ya umri ambayo yamekuwa yakipitishwa kwa vizazi. Mutuma anaonyesha kwamba alikuwa na tashwishwi alipotaka kujiunga na TIST lakini yeye na bibi yake wakaonelea ni vyema kujaribu. Anasema kwamba alipoanza kuhudhuria mikutano ya TIST Cluster, hamu yake iliweza kuongezeka alipopata mafunzo na akakuja kugundua ya kwamba miti ina faida tele wakati mtu anapojiandaa na kujipanga vyema. Anaongezea kwa kusema, "leo, mimi pamoja na familia yangu tuliamua kuipanda miparachichi. Kwa sasa, tumeweza kuipanda miti mia mbili na arobani katika shamba letu."

Mutuma ni wa Kikundi kidogo cha TIST cha Kinguru ambacho kiko chini ya Cluster ya Kithurine. Cluster hii ni mojawapo ya Clusters za TIST ndani ya maeneo ya Imenti yaliyo na vyanzo vya viwanda vya chai. Taylors Tea of Harrogate imeshirikiana na TIST ili kukuza upandaji miti na maendeleo endelevu katika maeneo ambayo ni misingi muhimu ya chai. Maeneo mengine ya chai yaliyo chini ya juhudi hizi ni pamoja na Kionyo katika Meru, Makomboki na Ngeru yaliyo katika kaunti ya Muranga.

Familia ya Mutuma inaamini wakiwa na miti ya ziada ya thamani ya juu, watakuwa na uwezo wa kuzalisha mapato zaidi kwa ajili ya familia yao. "Leo, kuna mipango ya kuongeza thamani ya mazao ya kilimo. Ni matumaini yetu kwamba maparachichi yetu yatapata soko bora baada yetu sisi kuongeza thamani. Pia, tuna mpango wa kuzalisha juisi ya parachichi."

Katika TIST, wakulima hupangwa katika vikundi vidogo ambavyo vina wanachama kutoka sita hadi kumi na wawili (6-12). Mutuma anasema kwamba kuna faida kuwa ndani ya kikundi. Wanachama wanaweza kubadilishana mawazo, kusaidiana na kutiana moyo. Katika mikutano ya Cluster ambayo hufanyika kila mwezi na kuhudhuriwa na wawakilishi wa vikundi vidogo ndani ya Cluster (kila Cluster ikiwa na Vikundi vidogo thelathini hadi hamsini (30-50), mafunzo zaidi hutolewa. Motisha kutokana na mti pia hulipwa katika mikutano ya Cluster. Mipango kwa ajili ya mafanikio na kuweka malengo ya pamoja kwa ajili ya vikundi na Clusters pia hutokea katika mikutano hiyo ya Cluster.

Mutuma Mwongeria akichuchumaa karibu na mti wake wa mparachichi mwenye umri wa miezi sita. Ana mseto wa mmea wa mahindi pamoja na nyasi aina ya "Nappie" aliyoipanda na miparachichi yake.

Ni wakati wa kutayarisha shamba lako la Kilimo hai.

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

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

Kutayarisha shamba.

Tayarisha shamba lako angalau mwezi mmoja kabla ya mvua.

- Ondoa magugu na vichaka kutoka shamba lako. Usilime.
- Tayarisha mashimo yako ya umbo la mstatili. Yapaswa kuwa na upana wa sentimeta kumi na tano, urefu wa sentimeta thelathini na tano na kina cha sentimeta kumi na tano. Nafasi kutoka shimo hadi lingine iwe sentimeta sabini na tano.

- Chukua mbolea na udongo wa juu na uchanganyishe. Jaza shimo kwa huu mchanganyiko hadi sentimeta tano chini ya ardhi ya kawaida.

Kupanda.

- Unapopanda mbegu ya mahindi (Siku moja au mbili kabla ya mvua), panda mbegu nne kuvuka shimo.

- Kama unapanda wimbi, panda mbegu tano au sita katika kila mwisho wa shimo la kupanda baada ya mvua tosha.

- Funika mbegu kwakutumia mchanganyiko wa udongo na mbolea. Baada ya haya udongo katika shimo uwe sentimeta mbili na nusu chini ya ardhi ya kawaida.

- Nafasi iliyopo juu ya shimo itasaidia maji kufikia mimea mvua ijapo.

- Hauhitaji kutumia mbolea za viwandani katika shamba lako la kilimo hai. Mimea yako itafanya vizuri hata bila ya mbolea za viwandani.

Kuondoa magugu.

- Ondoa magugu kuzunguka mashimo mara kwa mara.

- Usipalilie shamba lote. Nje ya mashimo, mimea yaweza kufunika udongo, huku ikiuweka baridi na kuuzuia kumomonyeshwa na mvua au upepo. Tumia panga kutoa magugu katikati ya mistari au katika nafasi iliyopo kati ya mashimo. Palilia mara kwa mara kuzuia magugu kuzaa na kuenea mashimoni.

- Yawache mabaki ya magugu shambani ili yaoze. Haya yatasaidia kuongeza rutuba ya udongo.

Unayofaa kufanya baada ya kuvuna.

- Usiyachome mabaki ya shamba lako. Yawache udongoni ili yaongeze rutuba ya udongo. Mabaki ya mimea yaweza pia kutumiwa kutengeneza mbolea.

- Usiwalishe ng'ombe shambani lako. Tafadhali kumbuka, tutafurahi kusherehekea vuno lako kubwa na kuijua mienendo bora katika eneo lako kupitia jarida hili pamoja na katika mkutano wako wa cluster.

Anza kufanya kazi sasa!

Kutengeneza mbolea kutokana na mimea – mbolea ya kiasili.

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

Preparation of compost:

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

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

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

Wakulima katika TIST wapambana na ongezeko la joto ulimwenguni na mabadiliko ya tabia nchi.

Wakulima katika TIST wameitikia mwito wa ulimwengu wa kupambana na ongezeko la joto na mabadiliko ya tabia nchi. Wakulima wengi wametafuta kuelewa kupitia semina/mafunzo ya TIST na katika mikutano ya cluster ili kusoma na kuelewa mengi zaidi kuhusu kuongezeka kwa joto, athari zake kwa tabianchi na mbinu za kukabiliana nalo. Tunaona athari za mabadiliko ya tabianchi leo. Ili kuonyesha matukio kadhaa ya athari hizi, mafuriko ya Elnino ya mwaka 1998 yaliyovuruga karibu nchi yote na ukame mrefu uliofuatilia, na upepo mkali wa mwaka 2004 sana sana uliongezewa na ongezeko la joto duniani. Viashiria vingine mashuhuri ni kupunguzika kwa barafu katika kilele cha mlima Kenya, hali ya anga isiyo na utaratibu na ambayo imesababisha kuharibika kwa mazao katika maeneo mengi, kukauka kwa chemichemi na vyanzo vya maji, pamoja na mengine mengi.

Jarida la mwezi huu linaangazia mafunzo kutoka semina ili sote tuelewe ongezeko la joto duniani na mabadiliko ya tabianchi. Tutaanza kwa kuelezea kila neon na kulieleza zaidi na pia tujue jinsi miti yako ina jukumu kubwa katika kukabiliana na athari za ongezeko la joto duniani.

Ongezeko la joto duniani ni nini?
Ongezeko la joto duniani ni ongezeko wastani la joto duniani, ambalo huleta mabadiliko katika tabianchi. Dunia yenye joto zaidi yaweza kusababisha mabadiliko katika mvua, dhoruba kali

zaidi, kuongezeka kwa maji baharini, kuharibika kwa mimea, na athari kadhaa kwa mimea, wanyama pori na wanadamu. Wanasayansi wanapoongea kuhusu suara la mabadiliko ya tabianchi na katika hali ya anga, wasi wasi yao huelekezwa kwa ongezeko la joto linalotokana na kazi za binadamu na utofauti katika tabianchi na hali ya anga unaoletwa na jambo hili.

Je, joto katika dunia linaongezeka?
Ndio! Dunia imeongezeka joto zaidi ya digrii moja katika miaka mia moja iliyopita. Wengi wa wanasayansi wanaoongoza katika dunia hufikiri kuwa shughuli za binadamu hufanyanya dunia kuongezeka joto, kama kuchoma makaa yam awe, petrol na gesi ya kiasilia na kukata misitu na usimamizi mbaya wa ardhi.

Greenhouse Effect ni nini?
Athari hii ni kuongezeka kwa joto duniani kutakotokana na uwepo wa gesi Fulani katika hewa, zinazoitwa gesi chafu, kama, carbon dioxide, nitrous oxide, sulphur dioxide, na methane ambazo hutega nishati kutokana na jua.Vyanzo vikuu vya kaboni ni ukataji wa misitu, gesi kutokana na viwanda, gesi kutokana na magari, gesi kutokana na kuchoma miti au makaa na kuchoma misitu.

Hatari za ongezeko la joto duniani ni zipi?

- Uhaba wa maji mkali katika maeneo kame au yanayopakana na maeneo kame waweza kusababisha maeneo zaidi kuwa na jangwa.

- Ongezeko la kuenea kwa magonjwa kama malaria. Jinsi maeneo yanavokuwa yenye joto zaidi, yanakuwa mwafaka zaidi kama maeneo ya kuzalisha ya mbu, na kuongeza uwezekano wa kupata malaria. Familia na hospitali nyingi zaweza kuathirika, wastani ya miaka ya kuishi kupungua, na ongezeko la vifo vya watoto wadogo.

- Kupunguka kwa uzalishaji katika nchi za kitropiki na kisub-tropiki, hasa nchi katika Afrika Mashariki. Kwa sababu ya mvua iliyopunguka na ongezeko la uzalishaji wa wadudu kwa sababu ya joto, uzalishaji wa chakula waweza kupungua na ili husababisha umaskini na njaa katika familia na jamii nyingi.

- Gharama zilizoongezeka za chakula katika ulimwengu mzima. Jinsi wakulima wengi watakavyopata mazao chache na chakula kuwa adimu, ndivyo bei ya chakula itakavyoongezeka kwa sababu mahitaji ni mengi na usambazaji ni kidogo.

- Mabadiliko makubwa katika uzalishaji na muundo wa mifumo muhimu ya mazingira hasa misitu. Maeneo ya vyanzo vya maji katika milima na misitu huendelea kukauka. Hili litaathiri uwezo wa kumwagilia mazao maji na kupunguza maji katika mikondo ya maji yanayohitajika kujaza mabwawa na hifadhi za maji. Hili litapunguza kutengenezwa kwa umeme. Viwanda, mahospitali na taasisi zinginezo zetu ambazo kwa kiwango kikubwa hutegemea umeme zitaathirika sana. Usambazaji wa maji ya paipu katika maeneo ya mijini nay ale ya vijijini pia utaathirika.

- Makumi ya mamilioni ya watu watawekwa katika hatari ya mafuriko na maporomoko ya ardhi, yanayoletwa na makadirio ya ongezeko la uzito wa mvua na katika maeneo ya bahari, ongezeko la viwango vya maji.

Nawezaje kuzuia ongezeko la joto ulimwenguni?
Panda na uichunge miti!
Kama ilivyotajwa hapo juu, carbon dioxide ni moja ya gesi zinazoleta ongezeko la joto ulimwenguni. Miti hunyonya gesi hii kutoka kwa hewa inapotengeneza chakula na kuiweka katika mbao, mizizi na udongo kama kaboni selulosi. Hata hivyo, miti inapokatwa na kuchomwa, huachilia kaboni iliyokuwa imeweka.

Unajua kuwa ila mti waweza kutengeneza tabianchi ndogo mahali ulipo?
Miti na bima yake hupunguza joto lililo katika uso wa dunia. Hisi faraja ya kivuli cha mti. Tambua kwamba udongo ulio chini yake huwa na maji zaidi kulika ya udongo ulio palipo na jua pasipo na kivuli. Udongo unapokaa ukiwa baridi, huwa unaweka maji muda mrefu zaidi. Ili lamaanisha kuwa miti katika ardhi yako itasaidia kuongeza kiasi cha maji katika udongo wako na pia itasaidia kuweka maji udongoni kwa muda mrefu zaidi. Hili litasaidia mimea yako

na pia kusaidia watu wanaotumia maji katika eneo lako.

Kadi za kaboni ni nini?

Ili kutengeneza kadi ya kaboni wahitaji vitu vitatu:

1) Punguzo la kweli na la kuongeza la kaboni dioksidi iliyo katika hewa;
2) Ahadi ya kuweka kaboni hiyo mbali na hewa kwa muda mrefu;
3) Ukaguzi unaofanywa na chama tofauti kinachothibitisha kwamba shughuli zimefanyika kulingana na mujibu wa sheria.

Miti hunyonya kaboni dioksidi kutoka kwa hewa wakati inapotengeneza chakula na kuiweka katika mbao, mizizi na udongo. Kiasi cha kaboni kilichochukuliwa kutoka kwa hewa hupimwa na kuhesabiwa, halafu, kinapothibitishwa kuwa sahihi, kaboni hii iliyonyonywa yaweza kuuzwa katika soko la ulimwengu kama kadi za kaboni. Wanunuzi waweza kununua kadi hizi kukabiliana na kaboni wanayoachilia kwa hewa.

TIST huweza kuuza kaboni iliyonyonywa na miti kama wazalishaji wanavyouza sukari na maziwa. Hata hivyo, katika kaboni, hauhitaji kutuma mti sokoni. Badalake, thamani ya kaboni iliyotolewa katika hewa na kuwekwa katika miti iliyo shambani au katika msitu wako, hupimwa na kuripotiwa. Biashara ya kadi za kaboni zaweza kufanyika New York, Chicago, London na mijiji mingineyo ulimwenguni, ama pia kupangwa kati ya watu au kampuni mbili moja kwa moja. Lazima tutimize sheria na mahitaji ya soko. Hatuwezi kukata msitu wote au kukata miti ili kupanda miti kwani hili ni baya kwa mazingira. Lazima tujitoe kuweka miti hii katika shamba kwa muda mrefu, thelathini au zaidi. Lazima turipoti data sahihi. Miti inapopandwa, vipimo na hesabu hufanyika ili kupima kiasi cha kaboni iliyonyonywa na miti ya mkulima katika TIST. Kumbuka tena, miti haipelekwi sokoni. Hukaa shambani na jinsi inavyokaa hai, ndivyo malipo yanavyoongezeka. Kwa hivyo, mkulima hukaa na miti, lishe ya mifugo, kuni, matunda na pia karanga. Pesa zinazotengenezwa na TIST katika kuuza kadi za kaboni hujenga chanzo kipya cha mapato na hugawanywa kati ya vikundi vidogo katika TIST na hutumika kusaidia kukidhi gharama za TIST, ambazo ni pamoja na mafunzo, uhesabu miti na usimamizi.

Je, Miti yote hunyonya kiasi saw ach kaboni?

La, miti iliyo na mzingo mpana huweka kaboni zaidi ya miti iliyo myembamba. Miti mirefu pia hunyonya kaboni zaidi ya miti mifupi. Hivyo basi, miti iliyo mipana huleta mapato zaidi kutokana na kadi za kaboni. Haishindani kupata virutubisho katika udongo na maji kama miti iliyokaribiana.

Hivyo basi, ili kupata mapato mazuri kutokana na miti yetu, ni muhimu kuipanda kwa nafasi tosha itakayoiruhusu kukua kiafya, kwa urefu na upana. Kupunguza miti ili kupata kuni na kuiacha miti mingine ikue vizuri huwa njia nzuri zaidi ya kusimamia miti yako.

Ni wapi/nani hununua kadi za kaboni?

Hivi sasa, kadi za kaboni huuzwa katika masoko ya hiari na katika masoko ya kuhitimu mahitaji. Zaweza kuthibitishwa kwa njia tofauti, kama kulivyo na bidhaa mbalimbali na kuthibitishwa kwa bidhaa zingine unazonunua na kuuza (kama kahawa, kahawa aina mbalimbali). TIST yaweza kuuza kadi zake za kaboni katika masoko ya hiari au katika masoko ya kuhitimu mahitaj kwa sababu kadi zake ni za hali ya juui.

Kuna viwango mbali mbali katika masoko haya vilivyo na sheria mbali mbali na zinazobadilika kila baada ya muda zinazohusu upandaji wa miti, ufuatiliaji, na kuripoti ambazo tunahitajika kuhitimu ili kuuza kadi hizi za kaboni. Tunatumia viwango vya hali ya juu zaidi katika ukaguzi na kuthibitishwa — the Verified Carbon Standard (VCS) na the Climate, Community, and Biodiversity Alliance Standards (CCBA).

TIST ina wanunuzi wa aina mbili msingi:

Aina ya kwanza ni ya watu wanaojitolea kupeana pesa ili kuwapa watu motisha ya kupanda miti. Kwa mfano kulipia miradi ya upandaji wa miti kufanya harusi au semina kuwa kuwa isiyoongeza kaboni katika hewa. Aina ya pili ni ya makampuni yaliyo Amerika, Uropa, Canada na katika nchi zingine zilizokua viwanda zinazojitolea kupunguza gesi chafu zinazotoa kwa sababu mawakala wema wa mazingira au wanajitayarisha kuhitimu mahitaji Fulani ya baadaye.

TIST ina furaha sana kuwa na kadi za kaboni za hali ya juu, na kuweza kusambaza kwa wateja mbalimbali.

March 2017 Newsletter *Not for sale*

Mazingira Bora

TIST
The International Small Group & Tree Planting Program
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Kikamba Version

An Environmental, Sustainable Development and Community Forestry Program.

Ngwatanio ya Thuura yi wumbanoni wa matuku 21/02/2017

Inside:

Published by TIST-Kenya. Web: www.tist.org Email: martinweru@tist.org Tel: 0722 - 846 501

TIST - Ngwatanio ya Taylors: Aimi eu nthini wa TIST kwitikilana na mawiko maseo.

Yila Mutuma Mwongeria na muka malikile nthini wa TIST, nimaisye mayeekwatasya kutetheka undu matethekete ni uvandi wa miti. Kwoo uvandi wa miti ni kithio kya tene kila kivititwe ni ivinda. Mutuma niwaisye kana "nineew'aa ndatwite kulika nthini wa TIST, indi kwoondu wa kithingiisyo kya kiveti kyakwa noona nitate, ninambiie unthi mbumbanoni sya ngwatanio sya TIST. Ninaendeeie na kwendeew'a oundu niendee na umanyiw'a. Ninoonie kana mundu eekia mivango miseo kwake vena vaita munene." Niwongeleele na kwasya

"Umunthi nyie na musyi wakwa nituamuite kuvanda miti ya ikolovea/ivakato. Kwayu nituvandite ikolovea mbee wa 240 muundani kwitu."

Mutuma ni memba wa kikundi kya Kinguru kila ki ungu wa ngwatanio ya Kithurine. Ino ni ngwatanio imwe kati wa ila syi kisioni kya Imenti kila kivandawa maiani. Taylors Tea of Harrogate ni yakwatanie na Tist kuthuthia uvandi wa miti na maendeeo makwikala nthini wa isio ila ivandawa maiani. Isio ila ingi syi ungu wa Taylors ni vamwe na Kionyo ila yi Meru, Makomboki na Ngeru ila syi Murang'a County.

Mutuma na musyi wake maikiia yu mena miti ya vaita mwingi na kwongela ukwati woo wa mbesa. Umunthi mena wongeleku nthini wa ngetha yoo. Twiikwata ikolovea/ivakato situ syambiia usyaa niukwata soko itina wa kusyongela vaita. Twina muvango wa kuseuvya kiw'u kya makolovea.

Aimi ma Tist nimevangite tukundini tunini. Kila kakundi kethiawa na amemba 6-12. Mutuma aisye vena vaita kwithiwa na ngwatanio ya kikundi. Memba nimatonya kumanyiania, kutethania na mawoni, ona kuthuthania umwe kwa ula ungi.

Nthini wa mbumbano ila syithiawa kila mwai sya ngwatanio na ivikawa ni amemba asakue ma tukundi vala ngwatanio yaile ithiwa na tukundi 30-50 momanyisyo mbeange nima manyianaw'a. Uthuthio wa uvandi wa miti ingi niuivawa nthini wa mbumbano ithi. Kwikia walanio wa kuvikia maendeeo, mivango ya vamwe na mawendi menyu ta kikundi na ngwatanio nimekikaa yila mwina mbumbano sya ngwatanio.

Mutuma Mwongeria asusumele utee wa kikolovea kina ukuu wa myai thathatu. Nuvandanisye miti ya ikolovea, mbemba na kitwothya.

Ni ivinda ya kuseuvya miunda kwa nima ya kusuvia (CF).

Tukundi tunini twa Tist tula twithiitwe tuitumia nzia ino ya nima ya kusuvia (CF) nimaendee na kukwata ngetha mbingi na nzeo kwi yila mana tumiaa nzia sya kitene sya nima ona yila mbua nini.

Maima nimatetheeasya kutumaninia kiw'u yila mbua yaua kwoou uyithia kivakuvi kwa mimema.

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

Kuseuvya muunda.

Seuvya muunda waku vainyiva mwai umwe mbee wa mbua kwambiia.

- Thesya kisio withie kiina yiia kana ikuthu. Ndukaime.

- Seuvya maima maku mema kona inya. Kila yimwe yaile ithiwa yina uthathau wa 15cm, uasa wa 35cm and uliku wa 15cm. Utaaniu wa maima waile ithiwa wi 75cm.

- Osa vuu na muthanga wa iulu uvulany'e na uyususya yiima yii ta 5cm na muvulany'o usu.

Kuvanda.

- Yila ukuvanda mbemba (mithenya ili ka umwe mbee wa mbua kwambiia) vanda matonya ana muthangani usu ikelene ma mbemba.

- Ethiwa wi vanda muvya vanda matonya 5-6 kithyululu mwisoni wa yiima itina wa mbua kua nesa.

- Vwika mbeu na muthanga muvulanye na vuu uliku wa 2.5cm itina wa uu yiima yitiwa yina mwanya wa 2.5cm.

- Mwanya uyu watiwa niw'o utetheeasya kiw'u kuvikia mbeu/ngii yila mbua yaua.

- Tilasima utumie mbolea ya kuua (fertilizer) yila ukwika uimi wa kusuvia muundani waku. mime yaku noikwika nesa watumia vuu wa yiima.

Kuimia.

- ima uthyululukite maima kaingi

- Ndukaime kisio kiu kyothe savali umwe vyu. Nza wa maima, mimea noivwike muthanga na kutetheesya kuuthithya na kusiiia kukuwa kwa muthanga ni nzeve kana mbua. Ima tu vakuvi na yiima na yimani. Tumia kilovoo/kivanga kwenga yiia yila yi mwanyani ula uaanitye maima. Ima kaingi kusiia yiia kuvikia mimea .

- Tia mavuti aya na yiia moee kisioni kiu, nundu moa meendeea na kuete unou wa muthanga.

Kuvutha Itina wa ngetha.

- Ndukavivye matialyo/mavuti muundani. Ekana namo nundu ni unou wa muthanga, kana ukue ukamainde yiimani useuvye vuu/mbolea.

- Iilikana ndukaingiie indo muundani wamina ngetha.

- Kwa ndaia lilikana kana tukatana naku weethiwa na ngetha nzeo itina wa kwimanyisya na kuatiia nzia nzeo sya uimi wa kusuvia kwisila ithanguni yii na mbumbanoni sya ngwatanio yaku sya kila mwai.

Ambiiia uthukuma oyu!

Kuseuvya vuu wa yiima - Vuu ute na kemikoo.

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

useuvya vuu wa yiima.

1) Kusakua kisio kya matambya 4 x 4m na kwisa yiima.
2) Enga kisio.
3) Inza yiima uthathau wa 3 - 4m na 1.5uliku.
4) Kolany'a matialyo ma mavemba, muvya, mavoso na uitilanga tulungu tuniini.
5) Ikia yiimani itumie uliku wa 0.5m.
6) Ikia muu wa lita itano.
7) Ongela kyaa kya indo ethiwa kivo kya uliku wa 30cm ethiwa vaii oundu kiana (uyu ni vuu wa nguluwe, ng'ombe, mbui kana nguku).
8) Ongela matu na makusa uliku ungi wa 0.5m.
9) Ikia muu ungi wa lita itano.
10) Ongela matu na makusa withie yiima notayausua.
11) Ususya yiima na muthanga.
12) Uyususya yiima ikia muti muasa kati withie utinite yiimani ungu.
13) Eka yiima yiu yiyiue vandu va myai itatu kana mithenya miongo kenda.
14) Ivindani yii yonthe osaa kiw'u kila kina kiko uketa vo ngelekany'o kila wavua nakyo kana kuthambya miio. Ethiwa wina maumao ma indo no wite vo.
15) Kii nikyongelaanzeve ya Nitrogen nthini wa vuu
16) Tata navinya ungithye yima yii kila muthenya kwa nzia ila utonya.
17) Itina wa mithenya miongo keenda vuu wiithiwa wi tayali.

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

Utumii wa Vuu wa yiima.

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

Aimi ma TIST kuola uvyuvu wa nthi na uvinduku wa nzeve.

Aimi ma TIST nimeetikie wito wa kumatha undu tukuola uvyuvu wa nthi na uvinduku wa nzeve. Aimi angi nimamathie unduu matonya kuelewa nzia ii kwisila kwa momanyisyo na semina sya TIST na ingi kwa mbumbano sya ngwatanio sya kila mwai nimaendeeie na kuelew'a undu wa uvyuvu wa nthi na uvinduku wa nzeve na niata matonya kwika kuola mothuku ala maetawe ni uvyuvu na uvinduku. Kwa ngelekany'o ta El-Nino ya 1998 ila yaetie wasyo munene na itina yaatiiwa ni yua inene nthini wa nthi yitu Kenya, Ingi kiseve kinenen kya hurricane mwakani wa 20003 ila tukwo nitasyaetiwe ni uvyuvu na uvinduku wa nzeve. Ngelekany'o ingi ni kuthela kwa ia kiimani kya Mt. Kenya, mbua kwithiwa iteumanyika yiua indii na kusesya ivinda yila yauaa na kwoou kundu kwingi ithima, nthongo kungala vamwe na mbusi na mikao ila itany'aa.

Ithangu ya mwai uyu ni kukwony'a momanyisyo amwe ma semina ala meutuma ueeangwa mbee undu wa uvyuvu wa nth na uvinduku wa nzeve mbeange. Mbee twianmbiia kwa kumanya kila ndeto na tuyona undu miti ithukumaa kuete ualyuku nthini wa uvyuvu wa nthi.

Uvyuvu wa nthi nikyau?

Uu ni wongeleku muutia kuma muthangani ula uetae uvinduku wa nzeve. Uvyuvu/muutia mwingi kuma nthi utumaa undu mbua yuaa isesya, kukethiwa na iuutani, kiw'u kya ukanga kwambata, mimea kulea usyaa, nyamu sya kithekani kukosa liu,

miti vamwe na andu.Yila asomi ma saensi mekwasya uvyuvu wa nthi niwongelekete nundu wa mawiko ma mundu na kuete mauvinduku manene ma nzeve na uvyuvu wa nthi.

Ikonyo inya sya nthi niendee na uvyuva?
Ii!, nthi yi\u tui niyongelete uvyuvu kwa ndikilii imwe 10C ivindani ya myaka iana (100years). Asomi aingi meisilya kana mawiko ma mundu ala uendee na kwika nimo matumaa muiitia wa nthi uendeea na kwongeleka amwe nita:- kuvivya syindu ila sumasya syuki ithuku muno ta mavia ma coal, mauta ma petrol na nzeve ila syi ungu wa muthanga vamwe na kutema miti na kulea usuvua itheka.

Nyumba ya Ngilini yithiawa na uthuku mwau?
Nyumba ino ya ngilini niyongelaa uvyuvu wa nthi nundu nzeve ila yumasya na kulekya nthini wa mawithyululuko nzeve nthuku ta Carbon Dioxide, Nitrous Dioxide, Sulphur Dioxide na Methane Trap kuma suani.

Nzeve ithi nthuku sumaa ona kambunini na industries syosawa ni miti na kwoou yila miti itevo iyiete uvyuvu kwa kwosa na kusiia vinya kuma suani. nzeve ithi nisumaa nthini wa mitokaa, ngu syavivya na mititu yakana.

Mothuku ma uvyuvu wa nthi mni mau?

- Kiw'u kwaa isioni ila sya weu na kutuma iso ingi itwika weu kana mangalata.

- Kwongeleka kwa mowau ta malaria. nundu undu kundu kwavyuva niw'o kwithiawa kwaseuvya isio nzeo sya umuu kusyaia na niw'o ukuaa tulinyu twa uwau wa malaria. Kwoou yila uu weeethiwa uwau wa malaria uiyaiika na kwongela ikw'u sya tuukenge na kutuma masivitali mausua.

- Kuoleka kwa ngetha ta undu kwithiitwe nthini wa nthi sya umiloni wa sua.Yila mbua yaua nini na tusamu tula twanangaa liu twongeleka nundu wa uvyuvu liu kuma miundani naw'o nunyivaa nundu wa ukosa mbua na kulika ni tusamu tuu nakii kiyiete wongeleku wa ukya misyini kuthi mbaini na nthi kwa vamwe.

- Nthooa wa maliu niwongelekaa nundu yila liu munini na ayi ini aingi na vai liu ungi nonginya vei wambate nikana uiwe nala mena mbesa sya kuuthooa.

- Ingi usyai na mititu iivinduka nundu ethiwa kuna kiw'u na liu nyamu nikuoleka kwa kukw'a na kukosa liu na mititu iyuma nundu miti ndikala vate kiw'u. kii nakyo ingi kiituma liu ulea ukethwa nesa nundu vai kiw'u kya kungithya miunda. Ingi sitima uioleka kwa ndustries, sivitali na kunduni kungi kwa vata kwa mundu. Ingi kiw'u kya miveleki kwa andu ma mataoni na kula kungi kiyioleka onakyo.

- Mamilioni ma andu nimekwithiwa na ivuso ithuku nundu wa muthanga kutuuka, nundu mbua yaua nakw'o kula kwi ukanga na maia kiw'u kiyongeleka na uyithia mawikalo nimeethiwa matevo.

Nata tutonya ysiia Uvyuvu wa Nthi?
Vanda an Kusuvia miti!
Oundu tuwetete vaa iulu nzeve itavisaa (Carbon dioxide) ni imwe ya nzeve ila ietae uvyuvu nthini wa nthi yonthe. Miti niyosaa nzeve ino kuma kwa mawithyululuko yila ikuseuvya liu na kwia nthini wa mithamba, mii, matu na muthanga. Onakau yila twatema miti na twavivya isyokaa ikaumya nzeve isu itavisaa na kumilekya ingi mawithyululukoni.

Ni wisi kana kila muti nuseuvasya kauvinduku ka nzeve?
Miti na matu mayo nimavwikaa muthaka wa nthi. Nutaniaa muunyi wa muti. Sisya ungu wa muti nukwona muthanga ula wivo ni mwiu na ti undu umwe na ula uathitwe ni sua. yila ungu wa muti vena muunyi nivathithu na vena kimeu kwa ivinda iasa kwi vala vaathitwe ni sua.kii kionany'a kana miti ila yi muundani kwaku nitetheeasya muthanga kwia kimeu na kiw'u kwa ivinda iasa kwi vala vate miti. Kiw'u kii kikatethya mimea yaku ni kikatumika maundu ni angi kisioni kyaku.

Carbon Credits nimyau?
Kuseuvya Carbon Credit sya TIST wienda syindu itatu

1. Nzeve itavisaa kwithiwa iyioleka na kwingeleka nzeveni (mawithyululukoni)
2. Kwiyiava kuola nzeve itavisaa kuma mawithyululukoni
3. Muthiani / muvitukithya kuikiithya kana mawiko othe mekitwe undu vaile.

Miti niyosaa nzve itavisaa kuma mawithyululukoni na kutumia kuseuvya liu wayo vala iwiaa ta ngu mithambani, miini na muthangani. Nzeve itavisaa ila yumitw'e mawithyululukoni ithimawa na undu muti utonya kwia yiana naindi niw'o yikawa isavu na kuvitukithw'a kana ni yawo na indi nzeve ino yumitw'e mawithyuulukoni na kwiwa mutini niyo itesawa sokoni ta Carbon Credits. Athooi ala mauaa mauaa ta nzia imwe ya kuola nzeve ino nthuku methiitwe mailekya mawithyululukoni.

TIST nitonya uta nzeve ino itavisaa oundu mundu utesaa sukali kana yiia. Onakau kuta nzeve ino mundu ndalisasya muti melini/isiwani. Indi vaita ni kuma nzeve ila muti uyu wuwity'e mawithyululukoni na kwithiwa muti wivo uendee na unyw'a nzeve itavisaa. Nzeve ino itavisaa itesawa sokoni sya New York, Chicago, London na misyi ingi minene nthi yothe nitesawa kwa mivango kati wa andu kana kambuni. Nonginya tuvikie miao ya soko nikana tute nthini wa isoko. Mwiao umwe nikana miti ndyaile utemwe ngulutu kana mititu kwengwa nundu uu ni uthuku kwa mawithyululuko. Nitwaile kwiyumya kuvanda miti yikale kwa ivinda iasa ta myaka miongo itatu. Na ingi nitwaile unengane uvoo waw'o. Miti yamina uvandwa masavu amwe nimaile kwikwa ta undu nzeve itavisaa ikwoswa ni miti ivanditwe ni aimi ma TIST. Manya ingi kana miti nditwaawa sokoni itiawa o muundani kwaku vala yaile ikala kwa ivinda iasa nikana ukaendeea ukwata ndivi na kuunenge liu wa indo, ngu, matunda na mbindi/ngii. Mbesa ila TIST ikwataa kuma kutani kwa nzeve itavisaa nikuaaniaw'a tukundi tunini twa TIST na ingi utumika kukwatiia ndivi sya kumanyisya, kuvitukithya na kuungamia.

Miti yoothe inyusaa nzeve itavisaa yianene?

Anye'ee, Miti ila mithathau noyo yiaa nzeve mbiki kwi miti mitheke. Miti miasa niyosaa nzeve mbingi kwi miti mikuvi. Kwoou uthathau wa muti nuetae mbesa mbingi nthini wa soko wa carbon credits. Kii nikwasya utaaniu wa miti niwaile nikana unenge miti nzeve na kwithiwa itonya uthathaa na kuasava nikana yithiwe na ueti museo. Ingi yimitaaniu nesa ndiithiwa iyuaania unou wa muthanga, kiw'u kana sua. Kwoou nikana ukwate ndivi nzeo kuma mitini manya kana utaaniu wa miti niwaile nikana yiane nesa yimithathau na miasa. Ingi kuola miti ni kuseo ni kutumaa ukwata ngu na kutuma miti ila yatiwa yiana nesa.

Niva kana ni aau mauaa nzeve itavisaa (Carbon Credits)?

Kwayu nzeve ino itesawa sokoni sya kwiyumy'a. Nitonya kwithiwa ivitukithitw'e kivathukany'o kwa ivinda na mivai kivathukany'o otondu soko syithiawa kivathukany'o sya kaawa na kaawa ka kwiseuvisya ungu wa masyitwa kivathukany'o. TIST nitonya uta carbon credits syayo nundu niiatiie mawalany'o na nisya kilasi kiyiulu. Ve kilasi kivathukany'o na miao iulu wa uvandi wa miti yikalaa isesya na kusyaiiw'a na livoti ila taile uvikia nikana tute nzeve yitu sokoni ithi yiya kilasi kya yiulu. Nitutumiaa nzia sya yiulu muno kuvitukithya, kukunikila, kuthiana n akwona nisyaile - verified carbo standard (VCS) kwa nzeve, mawithyululuko, mbai na uvathukanu wa syithio situ (Climate, Community na Biodiversity Alliance Standards).

TIST yithiawa na aui mithemba ili:

Mbee ni andu ma ngoo sya wendi museo ala mauaa kwa kwenda matuthuthye kuendeea na kuvanda miti . Ngelekany'o Kuiva andu mande miti kwa alusi kana conference ya kwikala tuolete nzeve itavisa.

Keli ni kambuni ila syi US, Europe, Canada na nthi ingi ila syina industries nimeyumasya kuola GhG ilasyumite nikwithiwa mena wendi museo kwa mawithyululuko kana meenda wambiia kuete walany'o wa kuola nzeve itavisaa.

TIST yina utanu kwithiwa nzeve yayo yi imwe ya kilasi kya iulu na itonya uteea athooi aingi kivathukany'o.

March 2017 Newsletter *Not for sale*

Mazingira Bora

TIST

The International Small Group & Tree Planting Program

w w w . t i s t . o r g

Kipsigis Version

An Environmental, Sustainable Development and Community Forestry Program.

Thuura Clusta ko kitinye tuiyet en 21 arawetab o'eng 2017

Inside:

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TIST kotinye koyometabgei ak Taylors: Temik che kochute TIST ko koboiboenchi akobo boisiet ne kararan.

Ye kikotoo Mutuma Mwangeria ak chebiosenyin koba TIST ko kimagotinge komongunet kole tot konyorunen kelchin minetab ketik. En kabwatenywan ko kitinye kabwatet kole kikobata niton en kasartanywan. "mwoe Mutuma kole kimagotinye niton en kabwatenyin tugul. Kobaten kikibwat kele nan keyomten. Kianam atestai en tuyosiekab kilasta konam kotesak naet ye kinonyoru konetisiet. Kiityon oguyo ole miten kelunoik che chang en ketik yon ketetage ko inyegen". Mwoe kole inendet ak osotiotenyin ko kiit kotil ngolion komin ketikab avogado ne en inguni kotinye ketik 240.

Mutam ko agenge en kurubit nebo Kinguru en kilasta nebo Kithurine. Niton ko agenge en kilastaisiek che miten en Imenti tea factory ole miten minetab chaik. En yoton kotinye Taylors Tea of Harrogate koyometabgei ak tist kotoret kogimitet minetab ketik ak korib bandab tai en komoswek chebo minikab ketik. Miten kora komoswek alak chenyoru kora toretet kou, Kionyo en Meru, Makomboki ak Ngeru miten tuwan en County nebo Muranga.

Kapchi nebo Mutuma en inguni kotinye komonut neo en ketik, nyoru melekwek che chutu en kapchi nenywan. Amun tinye ketik che chang kotinye komongunet konyor idonyo ne kararan ak kotoo konyor beekab logoechuton.

En TIST kotinye boroindo temik konam koyumgei asikonam kurubit nebo biik 6-12. Mwoe Mutuma kole kinyorunen borotet en kurubit amun miten chitugul ak kabwatenyin neimuchi kotoret ak kotech. En tuyosiek chebo kila arawa kotinye borotet en temik amun kinyorunen konetisiosiek en yoton, taketab melekwek chebo ketik, borotet ak ngolyon aketugul ne kararan kenyorunen yon kakiba tuyen nebo Kilasta.

Kochib Mutuma Mwongeria en kenutab avocado chebo orowek loo. En kwenusiek ko kimin bandek ak sarek koyomo.

Kasarta nepo, chopet 'tap imbaret kokany CF.

Groupishek chepo TIST che kikonetke akopo CF, kokobaoryan kole chang' ruutik kosir yon kakiminso keboishen oratinwek chepbo keny,sanasana yon wo robta.

Toreti kering'oik chhoton bek koma rwai en imbar, ak ko'kochi minutik bek che yomotin. Ng'alek chuton kotoretin inai kilimo hai komye ak ole kiboishoten.Ang' kot isib oratinwek che choton kochong'oite ruru.

Ole kitayorishondo imbarenik.

I'ngol imbaret arawet ageng'e kotomo kobwa robwek.

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

Minet.

- Yon imine keswek 'ab andek (betushek 1-2 kotomo konam robta),Min kewek 4 kong'et kering'et.
- Ang'ot imine , min 5-6 keswek en mwisho nebo keringoik yon kokorobon.
- Tuch keswek ak ng'ung'unyek ak mbolea 2.5 cm .Koboch yuton konyolunot koloindab ng'weny ko 2.5 cm kong'eten barak.
- Nafasi nemiten barak ko'kochin.
- Molazima iboishen mbolea chebo fertilizer en Conservation Farming plot. Keswek kuk korurtos ogot ang'o meboishen mbolea chebo fertilizes .

Istoet 'ab saratik en imbar.

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

Tuguk che kiyoe yon kakebutis.

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

Inam ing'unon!

Ketoo keturrek chebo minutik.

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

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

Tounet ketoo kechob keturek.

1. Lewen ole imuchi ichoben keturek (4m by 4m).
2. Itilil yoton.
3. Bal keringet netinye kokwoutik 3m - 4m - 1.5m kochut orit.
4. Iyum anyun ngetunanikab imbar tugul ak itonaton komengegitun ak itorchi keringet chon ko kou (sogegab ketik mobekkab bandek , ngendek) ak alakau.
5. Torchi keringt koit 0.5m.
6. Tesin beekab 5ls chebo orek.
7. Tesin sorowekab tuga,neng,lgogenik kot koit 30cm.
8. Tesin ngetunanaik kot koit 0.5m.
9. Tesin beek 5ls chebo orek.
10. Testai itesi ngetunanik got konyi keringet.
11. Tesin baragut ngungunyek.
12. Ye itestai icheng bitoiyot ne koi ak ilumchi kwenutab keringet kot kotiny kwony.
13. Igomuny keringet kotar betusiek 90(orowek somok).
14. En kasariton tugul itestai itumchi beek chon kiunen tuguk en kaa.Ingot itinye tuga imuchi iyum sogororek asi itesi keringet.
15. Niton kotesin nitrogen
16. Yai kouniton en betusiek tugul.
17. Ye kagobata orowek 3 ko koruriyo keturek.

Togunen burgeyet ne mi keringet.

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

Temikab TIST kotinye naet agobo burgeiyetab nguony ak waletab itondab emet.

Ngen che chang en temikab TIST agobo niton. Kigechil niton temik en konetisiosiek ak seminars ak en tuiyosiekab kilasta koguiyo agobo burgeiyetab emet, ak nee nebitu agobo niton ne oret negimuche keposen. Kitinye ak kenyoru koimutik en betusiek tugul. Koborunet netai ko kirobon robta El Nino en 1998 ne kibut emet ak let konyo kemeut, kibitz kora koristo neo missing en 2004 nito ko koborunetab waletab emet. Kibit en emet; kosib kochotio koikab beek en Mt. Kenya amun en burgeiyet ne kibitz en emet; kosib ko kobetio anan rorunetab amitwogik ene emet, kotenyo beek en kondametusiekab beek ak anagei chechang chegitok.

En arawani ketinye asi komuch koguiyo biik agobo burgeiyetab emet ak walletab emet komie. Kitinye ororunetab chuton tugul asi iguiye ile tos imuch kotoret.

Ne anyun burgeiyetab emet?

Burgeiyab emet kogochin nguwondet koet missing burgeiyet, niton kogochin emet konyor wallet. Ye eet mat en emet komuch kowal orowekab robta, koriswek che gimen, kotesak beek en nyanchosiek, lo mabit omitwogik, koseretio ketik, tiongik ak biik. Ye ngalal ngomotik agopo niton bo waletab emet kotinygei ak burgeiyetab emet; niton kotinyegei ak boisionikab biik missing ko agobo itondab emet ko bitumen niton.

Tos tesosei mat en emet?

Ee amun en kenyisiek 100 chegogopata kogitesak 1^0c. Tinye ngomotik kole eng bosionikab biik che yoe kogochin ngwoindut koet mat. Niton kounetab mwanik chegitom kepoishen, petro, koristo nemiten ak koluletab keti, ribetab emet ne mayamat.

Tos tinye koriswek alak?

Niton keguren kotab kurwek amun miten en nguony koriswek che terotin kou carbon dioxide nitrous oxide, sulphur dioxide, mitane trap energy koyob asista. Olepitunen korisi ya (carbon) kotiletab timwek, koristo ne yopu factorisiek karisiek, nesek ak beletab osnosiek.

Ne ngoiyondit ne konu burgeyetab emet?

- Konu kotesak ongatet en ye mamiten beek.
- Konu kotesak mionwek kuo eset.
- Amun igochin kalyangik che ibu eset kochanga, komuchi kebek biik che chang.
- Konu koet bananda en biik amun ye kaet mat, komuchi komabiit omitwogik missing ko korotinwek chemiten oretab asista.
- Konu kobit oliet ab omitwogik. Kwo barak missing amun rorunet.
- Ye tiny timwek ak osnosiek kobitu kobetio beek en tulonok, komagenyoru beek che kimuchi keboisien en imbarenik, kobetio omituokik, komagenyoru stimet ak beek en korik ak en townisiek.
- Biik che chang komosiche mengotosiek en maranetab neek.

Omuche oter burgeiyetab emeti?

Min ketik ak irib!

Kou en mwaetab koristo noton ya (Carbon) ko konu burgeiyetab emet. Ketik anyun koboishen koristo (carbon dioxide) en yaetab omitwogik, konori en temenik, tigitik ak ngunyek, yegitil ketik any ko kagichunda korisoton kwo soet, kotes burgeiyetab emet.

Tos imuch inai ile ketit kotinye waletab emet?

Ketit ak orwet gotuche emet. kaitit urwet kosir olemiten asista.ole kaitit kogochin yoto kokoitit en abogora niton koboru kole ye imin ketik konyoru ngungunyek chemiten imbarengung kotityet en kila ak kila ,agotrurutik tugul.

Mungaretab koristo konee?

Mungaret kotinye tuguk somok:

1. Komiten keretab bosetab koristo noto yaa (co_2) en koristo.

2. Kebos carbon en kenyisiek chechang.

3. Miten biik che tononchingei asi korib agoib kokwout kole kogisib mogutik tugul che tinye.

Ketik koboisien carbon ak kogonor en ketik, tigitik ak en ngungunyek. Kimuch kenai koristo ne yaa nemiten barak ak nekogiboisien ak keyai esabu. Ko bit anyun chemungarainik che ole ak kwoldoi. Itin anyun TIST koalda koristo ne kogiboisien en ketik kou temik che tinye sugaruk ak chego. Mogimuchi keib ketit kwo ndonyo kobaten kibimoni toltolindab ketit ak kiyokto. Mungarani kotesetai en New York , Chigaco, London ak emotinwek alak. Miten ngotutik che bo mungaret ak tononywan. Biik alak komuche kotil ketik en osnet asi kogol alak, maiyanat niton amun ketesi carbon kotes burgeiyet. Kimokinigei kemin ketik chebo kasarta ne goi choton ko kipkaa. Ye testai temik koribe ketik konyorunen kelunoik chetoretegei en kaa kou- rabisiek, kwenik ak logoek.

Tos ketik tugul koboisien koristo ne kergei?

Acha, ketik chetebesen ak chegoen kotinye koristo neo kosir ketik chemengechen. Ketik chetebesen kotinye raninik che chang amun konori koristo neo. Noton anyun ye kigole ketik kigochi kokwoutik che yome asi koet ak konyor beek. Rib ketingung ak kechororchi asi koegitun ak inyorunen kwenik ak omitwogikab tuga.

Ano/ng'o che ole koristo?

En nguni kochang olig ago miten boroindo en ole imoche. Amun tinye boroindo olik ak oldoik (kou kawek kotinye keruti).

Miten kobesosiek en indonyo amun tinye agetugul ngotutikyik kou ole kimindo ketik, ole kiribto ak ole kiyumdo report. Kiboisien biik che miten barak (validation and verification, V.C.S) ak Climate Community and Biodiversity Alliance Standard (CCBA).

TIST kotinye olik oeng

Netai miten biik che tinye kapuatet ne mie ko kon rabisiek, kogochi che kimin ketik. Nipo oeng komiten kombunisiek en US, Europe, Canadaa ak emotinwek alak chegitestai kotinye maget kepos koristo ne yaa.

TIST kotinye boiboiyet en amun tinye koristo ne kararan netinye mungaret, en olik che chang.