

Mazingira Bora



TIST

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

English Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Muthegera TIST Cluster during January 2019 monthly Cluster meeting.

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News about TIST's Marketing and TIST Profits.

Dear TIST Participants,

Last month we were able to announce that TIST had made a profit on its carbon sales, and would be paying the profit sharing to the eligible farmers. This month we are going to be working on developing the specific policies necessary for implementing that payment.

We are going to have a meeting of TIST Cluster Leaders at Gitoro Conference Centre from the evening of the 27th of January until the 31st. In those meetings we will be working to develop policies and plans to make the payment fair, transparent, and timely. For instance, if any Small Groups have "bushy groves" or groves that are far from the rest of the Small Group, and those groves have not been Quantified in 5 years, those groves do not count for the Verifications. If a member of the Small Group has 'clear cut' their grove, or has quit TIST, or is not maintaining the 'forest' as agreed, those tonnes will also not count. The Cluster Leader meeting will work to develop ways to make sure that each Small Group is treated fairly.

A reminder. The 'tree payments' that have been made to the Small Groups since TIST began in Kenya are "advances" or "pre-payments" on the Small Groups carbon income. So, a Small Group will have these profit payments first applied to the catch up on the advances already paid. The good news is that this approach will mean that over time all of the Small Groups will be receive the same amount of carbon payments per tonne of their Verified carbon reductions.

Early in February we will also have a meeting of the Cluster Servants, and develop the specific plans that will implement the information gathering necessary, and the payment process. Your Cluster Servants will be well informed and will be able to answer your questions at Cluster Meetings. Moreover we will inform you through this newsletter of the decisions your Cluster leaders will make as well as the implementation plan. If you wish for more clarification, please contact any member of the Leadership Council.

TIST: Why your Small Group should have more than 500 trees to qualify for payments.

Many Small Groups have been asking why they don't get tree incentives when their trees are less than 500.

To begin with, tree incentives are pre-payments for sale of carbon credits. It's a business. In business, people work hard to get profits. Like in all businesses, to get profit, costs or expenses must be kept low, and sales high.

When a Small Group has so few trees, the cost of quantification/ per tree goes up. The cost of paying such a group also is high. Importantly, the cost of validation, verification per tonne of carbon is also very high. Therefore, no profit can be made when the costs are high. We get a loss.

In order to stay profitable in TIST and therefore earn good income for yourself and your

Small Group, you should ensure your Small Group plants additional trees each planting season. TIST policy has recommended 5,000 trees as a reasonable number to get your Small Group to profitable levels in terms of carbon income and other trees benefits.

Some Small Groups decry high tree mortality as reason for not having many trees. TIST farmers have identified, tested and proved that a raised seed bed helps significantly in helping your seedlings survival once you plant in your farm. Please discuss this tree nursery technique at your next Small Group weekly or Bi-weekly meeting as well as in your Cluster meeting and learn more ideas.



TIST Mobile Website: A New, innovative way to get information about your Small Group and Cluster quickly and easily.

TIST has developed a new website a mobile website. This website will enable thousands of farmers to get information about their own groups and Clusters quickly and easily. It will help us be mutually accountable, transparent, and accurate if we use it well. Now you can get information such as number of trees counted for your group, in each individual grove, the members of your group, whether your group is qualifying for payments and if it has been paid recently.

In regard to your Cluster, you will be able to view the total number of groups in your Cluster (and you can compare with other Clusters), your next Cluster meeting date, the current leaders of your Cluster and when last elections were held.

Steps to login to this mobile website

There are (2) ways you can access this mobile website. If you are a TIST member and you have been assigned a TIST email address, you can login directly using your password. Signing in this way gives you access to more information. If you do not have a TIST email address, you can sign in as a guest. You can access this site from your phone if it has Internet capabilities or from cyber cafes.

TIST Quantifiers/Cluster Servants have been asked to be available in all Clusters meetings to train and support in other activities. They have been asked to provide palms to the Clusters during the Cluster meetings and members can view information about their Small Groups or Clusters or about TIST program right at the Cluster meetings.

Here are the steps:

1. Go to www.tist.org/mobile
2. If you have a TIST email address, log in with your TIST email address and use your password.
3. If you don't have a TIST email address, you can log in as a guest. Put in your name and organization and then tap log in. Organization can be the 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.

Access to past Mazingira Bora Newsletters

1. Go to www.tist.org
2. Click on documents to download. Choose Kenya newsletters.
3. You will be directed to the next page. You can choose any previous month newsletter by clicking on it.
4. For instance, if you decide to choose month of November 2015, just click on that particular date and it will open the newsletter for that month.



TIST: Seed Collection.

Seed Collection Questions and Answers

1. Which tree species should we grow in our area?

The best ones are those growing naturally in the area. TIST particularly encourages fruit and indigenous trees, and others that will remain in the ground for 20 years or more.

2. Are all trees good?

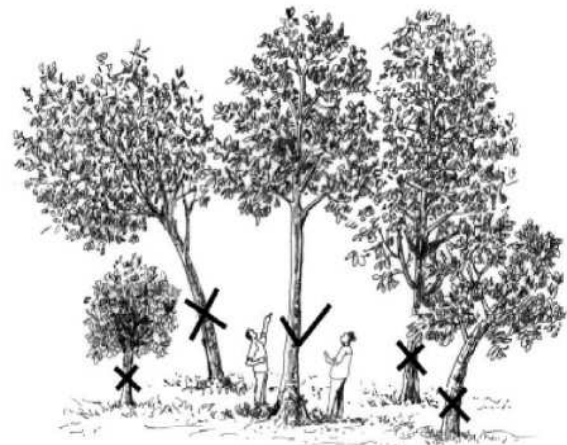
Not necessarily! Some may be difficult to control, be poisonous to your animals or use too much water. Choose ones you know will benefit your area. TIST discourages eucalyptus, for example, because planting these trees can reduce the water table.

3. Do trees produce seeds every year?

Most trees do, but observe your local trees to be sure. Some may only produce good quality seeds every 2-3 years.

4. Which is a good mother tree to collect seeds from?

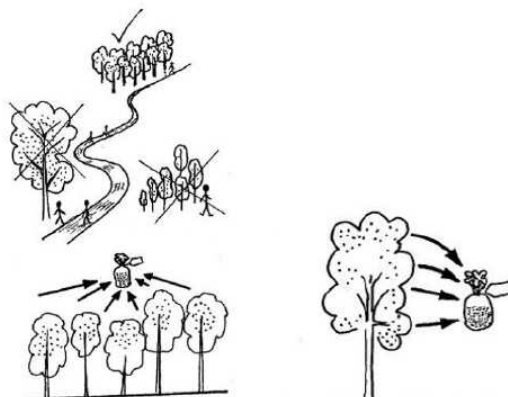
- o Collect seeds from healthy trees that are good seed producers.
- o Avoid isolated trees - in this case the seed is likely to have been self-pollinated which leads to poorer quality seeds.
- o Avoid unproductive trees and ones with a bad shape.
- o It is better to choose a tree in the middle of a healthy group of trees of the same species. Seeds will be higher quality from trees with flowers that are spread out rather than packed closely together.
- o Collect the seed from different places in the crown of the mother tree to ensure more genetic variation.



Selecting a good mother tree for seeds

- o It is a good idea to collect seeds from at least 30 trees of the same species. This helps ensure there is sufficient genetic diversity. Seed trees should be 50m-100m apart to help get more genetic variation.
- o The exact type of tree depends on what you want to use the tree for.
 - For example, good trees for timber are straight, few branches, fast growing, above average height and diameter, resistant to pests.
 - Good trees for fodder should be fast-growing, many branches with multiple stems, and fast growing leaves with the ability to recover after being pruned.
 - Good fruit trees should obviously have good quantities of healthy fruit, a uniform crown with low branches, fast growing.
- o Try to choose seeds from a tree growing at the same altitude, climate and soil type as where you want to plant.
- o Choose a mature tree, not a young one. Mature trees tend to have more seeds and younger trees may produce poorer quality seed.

Source: Robbins, 2004.



5. When do we collect the seeds?

- o Learn the time of the year when the seeds are ripe.
- o Ask other local people or observe the tree yourself.
- o Sometimes seeds are ripe when the fruit or pods change color, become dry, or break easily from the branch. Sometimes cones are ready when they change from green to brown. See table at end of the document for examples.



- o Most seeds are ready for collection when they fall from the tree naturally.
- o Remember to ensure you have permission to collect the seeds from the tree owners!
- o When you collect the seeds remember to label your bags and containers with the species name, date of collection and location.

6. How do we collect the seeds?

- o It is helpful to clear the area around the bottom of the tree first. Many seeds can be collected from the ground. However, wait for the more mature seeds to fall. Seeds left too long on the ground may perish. Inspect the seeds for insect damage. Seed of *Tectona grandis* (teak), *Gmelina arborea* (gmelina) and *Aleurites moluccana* (candlenut) are commonly collected by this method.
- o The tree can be climbed to collect the seeds, but take care!
- o Some fruit dry, open and disperse their seeds without falling to the ground. These are hard to collect if the seeds are small. Collect the fruit or pods after they are ripe but before they have split or fallen to the ground. Then dry the fruit or pod in a clean, sheltered place to obtain the seeds.
- o Some seeds can be knocked from the tree with a long stick.
- o Try putting a sheet under the tree and gently shaking the tree.
- o For tall trees a simple tool can be made by attaching one end of a pair of shears to a long, strong stick. The other handle can be attached to a rope.
- o Note that some seed species cannot be collected from the ground and have to be collected as wildlings. These are newly germinated seedlings found growing under mature trees. These can be transplanted to pots in your nursery. This is often the best method for trees that are hard to grow in a nursery or whose seeds are hard to collect.
- o All seeds must be removed from their fruit or pods. This can be done by hand, or by putting the fruit/pod in the sun and waiting for it to dry and split.

Collection of *Sesbania sesban* with telescopic shears at Muguga site, Kenya



7. How can we tell if the seed is good?

- o Firstly look at the seed and discard ones that are smaller, lighter or a different color than the others. Insects may have damaged some of the seeds.
- o Take a sample of seeds to cut into and inspect the inside for maturity and pest damage.
- o For some hard-coated species floating in water is a good test. Normally the good seed sinks and the bad seed floats (since dead embryos and insect damage causes air pockets).
- o With some seeds you can separate by blowing/winning/sieving to remove the lighter ones.

Sesbania sesban – cleaning seed by blowing



Tephrosia vogelii – cleaning seed by flotation





- o You can do a simple germination test. Take a small counted number of seeds (20-100). Do any pre-treatment needed. Put the seeds on a damp cloth in a bowl. Cover with another fold of the cloth, moisten it thoroughly and put in a warm (not hot) place. Check the seeds daily for signs of germination and keep the cloth moist. When germination begins keep a record of the day and number. The test usually lasts about two weeks depending on the species. Germination of over 50% means you have good seed. Small-seeded species having only 5% germination are still worth keeping.

8. Do we plant or store the seeds?

- o Some seeds do not store well and should be planted straight away (especially soft, fleshy seeds, fruit tree seeds or seeds with high oil content). For seeds with harder coats, the basic rule is to keep the seed clean, dry and cool.
- o Seeds should be removed from the fruit/cone and dried thoroughly. To dry the seeds put them in the sun for 2-3 days.
- o Storing in a paper bag or metal container out of the sun is good (avoid plastic bags as this makes the seed sweat and rot). Make sure the container is clean and airtight.
- o Label the container with the name of the seeds and the collection date and location.
- o Remember that the germination ability of the seeds will decrease with time. If seeds have been stored for too long they may expire.

9. Do all seeds germinate?

- o The percentage of seeds, which germinate, varies greatly between species. Some seeds require some form of pre-treatment. This will be covered in the February MB.
- o When you are collecting seeds remember that some die in storage, some die in the nursery, and some die when transplanted. So factor this into your planning when considering the number of seeds your group needs to collect.

10. How do we plant the seeds?

- o Some seeds that germinate readily can be sown directly into the field or into pots. Species that require special conditions to germinate are sown into a seedbed first.

- o The time taken for germination depends on the seed type, the temperature, the amount of water available and the age of the seed.
- o Generally sowing is done just before the rainy season starts.
- o As a general guide for direct sowing, seeds should be planted at a depth of two to three times their diameter and should be covered firmly with soil. The soil should then be kept moist.
- o Details on seedbeds are given in a separate training unit.

11. Do seedlings grow only from seeds?

- o Some tree species produce root suckers (young plants growing from the mother plant's roots). These can be cut and transplanted.
- o Cuttings can be taken off a young tree branch with at least three nodes or buds. Choose a long, healthy branch and make a clean, angled cut. Strip off the leaves. Plant the cutting into soil at least two nodal lengths deep, with at least one exposed. Keep it watered until sprouting occurs. Seedlings grown in this way will have the same characteristics as the parent tree and can be useful for making sure a productive fruit tree is grown.

Cluster Meeting Exercise.

At your Cluster Meeting, split the participants into groups of 6-10 people. Ask each group to pick a tree species that is good for TIST – long-term and beneficial to the environment. Remind the groups to pick a leader and co-leader.

The task is to get the following information for each tree species:

- Name of tree
- Description of seeds
- A good local place to find the seeds
- Method of collecting the seeds
- Method of storage
- Method of pre-treatment
- Method of sowing

Give people ten minutes to do the task, then ask each group to report back.

Please record the information in your exercise book and bring it to the next training session.

You may find it helpful to use a table like this:

Cluster Name:						
Tree Name	Seed Description	Local collection point	Collection method	Storage method	Pre-treatment method	Sowing method

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Kimereu Version

An Environmental, Sustainable
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Muthegera TIST Cluster wakiwa kwa mkutano wao wa Kilasta wa kila mwezi January 2019.

Inside:

Mageni jegii thoko na baita ya TIST. Page 2

TIST: Gitumi gia gikundi kienu kiniini kibwiri kwithirwa na miti nkuriki ya Magana jatano kenda gitikirua kuriwa. Page 2

Njira injeru ya kwona mantu jegie gikundi na cluster yaku ntuti na nauthu. Page 3

TIST: Kuuthurania mbeu. Page 4



Mageni jegii thoko na baita ya TIST.

Mugen arimi ba TIST,

Mwari juthirite nitwombire kubumenyithia ati TIST niithithitie baita kiri wendia bwa ruo, na tukambiria kugaa baita iji kiri arimi baria ba bwirite. Mwari juu tukethirwa tukithondeka njira iria jagirite kiri marihi jaja.

Tukethirwa turi na micemanio na atongerira ba clusters meru Gitoro Conference Centre kwambiria tariki 27 Januari mwaka tariki 31 Januari. Kiri micemanio iji tukethirwa tukithondeka mawatho na nkinya mibango ya marihi yagiirite, iri na weru na nkinya jakuthithika mathaa maria magirite. Kwa ngerekano, kethirwa gakundi ka nini kena munda itimenyeri bwega (bushy grove) kana miundi rir kuraja na miunda ingi ya gikundi na miunda iji yakurukia miaka itano itatarwa ringi, miunda ta iji ititegagirwa magita ja utegi (Verifications). Kethirwa mumemba wa gakundi ka nini ni atemete miti yonthe (clear cut) kana atiganiria TIST, kana atikumeneera miti buria kurikenie, tani iji jia miti nkinya jio ititarwa. Mucemanio jwa atongerira ba cluster bakarita ngugi ya kuthondeka njira iria tukundi tunthe itugeterwa bweega.

Kiririkania. Marihi ja miti jaria jonthe jana thithika kiri tukundi tunini kuuma riria TIST yambiririe Kenya jethagirwa jari advance kana gicunji kimwe kia mbeca iria jiumiti kiri Carbon (Pre-payments). Guku ni kuuga, gakundi kanini gakambagiria gutarirwa marihi jaja jari mbeca iria banenkeri. Ntumiri imbega ni ati njira iji ikoomba gutegera tukundi tunini tukugwata mbeca iria ibwirite oo kiri tani ya carbon iria itikiritue.

Kiambiria kia mwari jwa Feburuari tukethirwa turi na mucemanio na atari ba miti, na tukathondeka njira imbega jia kujejana ntumiri iria ikwendeka na nkinya njira ya marihi. Mutari waku wa miti akethirwa ari na ntumiri iji nkuruki na akoomba gucokia biuria bionthe kiri micemanio ya clusters. Kunari ugu, tugeeta na mbere kubumenyithia gukurukira ngathiti iji ya Mazingira Bora mantu jaria jonthe atongerira ba clusters bagakurukia na nkinya buria jagakinyanirua. Ukethirwa wenda kumenya nkuruki, uria mumemba oo wonthe wa Leadership Council.

TIST: Gitumi gia gikundi kienu kiniini kibwiri kwithirwa na miti nkuriki ya Magana jatano kenda gitikirua kuriwa.

Ikundi bibingi biniini nibikarite bikiuragia niki bationaga marii riria miti yao itigukinya Magana jatano (500)

Kwambiria, marii ja mbere ni ja wendia bwa marandu ja Carbon . Ni biashara. Kiri Biashara, antu baritaga ngugi na inya kenda bona baita. Oja kiri biashara cionthe, kenda wona baita , uriti bwa mbeca nomwanka bwithirwe buri nthiguru na wendia buri iguru.

Riria gikundi kiniini kiri na miti imikai mono, bei ya utari bwa miti iji okiri muti kaitagia. Na mbeca cia kuria gikundi ja giki iri iguru. Untu bwa bata mono , bei ya utari na unchunkuni okiri tani ya Carbon kinya yo iri iguru mono. Kwou guti baita yumba kuthithua riria bei iri iguru. Iji ni hasara twonaga. Kenda tumba gukara kiri baita ndene ya

TIST na kenda twona baita injega yenu na gikundi kienu kiniini, nibubwiri gutigira gikuundi kienu kiniini gikwaanda miti ingi mpongeri o sisoni ya kwaanda. TIST iri mutaratara jwa kwonera miti ngiri ithano (5000) ja namba injega ya gutonyithia gikundi kienu kiniini kiri lebo cia baita kiri mbeca cia Carbon na mawega jangi ja miti.

Ikundi bimwe nibikurira ni miti imingi kuregaa gukura na gitumi ni kwithirwa batina miti imingi. Arimi ba TIST nibarikitie kumenya, kugeria na kwona ati minanda ya miti yukiritue nitethagiria mono mbegu gukura riria yaandwa mundeene jwaku. Aririeni mthemba juu jwa munanda kiri mucemanio juu jungi jwa gikundi kiniini kana juria jungi jwa obumia biiri na kiri mucemanio jwa Cluster kenda bumanya njira ingi nkuruki.



Njira injeru ya kwona mantu jegie gikundi na cluster yaku ntuti na nauthu.

TIST niambiritie website ingi-ya thimu. Website iji ikoombithia arimi ngiri inyingi kwona mantu jegie ikundi na cluster ciao na ntuti na nauthu. Iगतutethia kumenyanira, kua antu ba weru na ba jaria jario jongwa twamitumira bwega. Nandi no umenye mantu ta miti iria itari gikundine giaku, ndene ya o munda, amemba ba gikundi giaku, kethira gikundi giaku gikariwa na kethira nikirii rua.

Mwegie cluster yaku, ukoomba kwona ni ikundi bing'ana biri kiri cluster yaku (na nouteganiria na cluster ingi), tariki iu ingi ya mucemanio jwa cluster, atongerira ba cluster yaku igitene riu na riria iithurano bia muthia biari. Kwongera, ukoomba kumenya uria cluster yaku ithiritwe igitumagira mbeba iria iejagwa o mweri.

Matagara ja gutonya kiri website iji ya thimu Kurina njira ijiri uumba gutumira gutonya kiri website iji ya thimu. Kethira uri mumemba wa TIST na nuei email address ya TIST, no utonye ugitumagira namba yaku ya witho. Gutonya nanjira iji nigukwonagia mantu jamaingi nkuruki. Kethira utina email address no utonye ja mugeni. No utonye kiri website iji na thimu yaku kethira niumbaga gutonya kana kiri nduka ciitagwa cyber.

Atari miti ba TIST niboritue gwita micemanione ya cluster kuritana na gutetheria kiri mantu jangi. Niboritue kuejana Palm ciao kiri cluster igitene ria micemanio ya cluster nikenda amemba bomba kwona mantu jegie ikundi na cluster ciao kana kwegie muradi jwa TIST ndene ya micemanio ya cluster.

Jaja nijo matagara.

1. Ita kiri **www.tist.org/mobile**
2. Kethira urina email address ya TIST, tonya na email address yaku na utumire namba yaku ya witho.

3. Kethira utina email address ya TIST, no utonye ja mugeni. Andika riitwa riaku na kambuni yaku riu uinye au kwandiki "Log In". riitwa ria kambuni no riithirwe riri riitwa ria gikundi giaku.
4. Ugaikua kiri page iu ingi. Au iguru, ukoona "Cluster", "Groups", "groves" na "Log out"
5. Kethira urienda kwona cluster yaku, inya "Cluster". Ugaikua page ikwonania ntuura cia TIST ndene yanthiguru yonthe. Taara na uinye aria ukwenda gutega (mung'uanano, Meru). Kuuma ja, ugeeta page iu ingi aria ukoona mariitwa ja cluster iria ciri Meru (kana naria naangi watara) jarina namba ya ikundi na miti iandiki amwe na tariki cia mucemanio jou jungi na tariki cia muthia cia ithurano.
6. Inya cluster yaku (mung'uanano, Ciakanyinga). Page injeru ikaruguka na ukoona ikundi bibinini biandiki na mariitwa jao, namba ciao, miti iria biri nayo na tariki cia muthia cia utari miti.
7. Inya riitwa ria gikundi giaku (mung'uanano, TARADA). Ugaikua page iu ingi. ukoona mantu jegie gikundi giki, amwe na kethira bukariwa na kethira gikundi nikithithitie jonthe jaria kibati nikenda gitonya thokone ya ruugo ruruthuku.

Kufikia gazeti za *Mazingira Bora* zilizopita

1. Enda kwa www.tist.org
2. Bonyeza tufuti uliopewa. Chagua gazeti la Kenya.
3. Utaelekezwa kwa ukulasa ufuatao. Unaweza kuchagua mwezi uliopita kwa kuibonyeza.
4. Kwa mfano, ukifikilia kuchagua mwezi wa Novemba 2015, bonyeza kwa hiyo mwezi na itafunguka gazeti la mwezi huo.



TIST: Kuuthurania mbeu.

Biuria na macokio kwegie kuuthurania mbeu

1. Ni miti mithemba iriku tubati kuanda ndene yaa ntuura yetu?

Miti iria miega buru ni iria ikuraga yongwa ndene ya ntuura iu. TIST niikagira inya mono uandi bwa mitunda na miti ya gintwire, na ingi iria igakara muthetune miaka mirongo iri kana nkuruki.

2. Miti yonthe ni imiega?

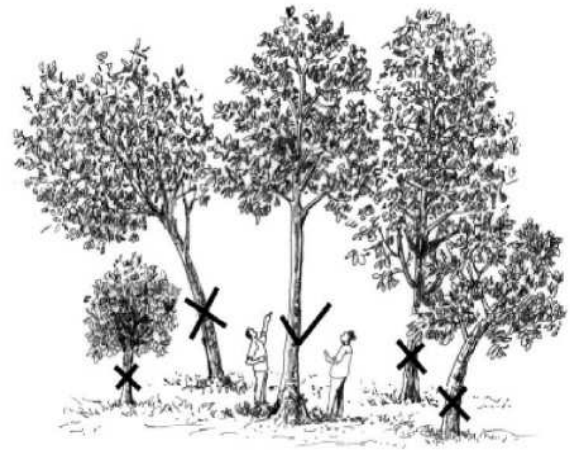
Ti mwanka! Miti imwe no igie inya gwika iria ukwenda niuntu bwa guciarana, no ithirwe iri sumu kiri ndithia ciaku kana igatumira ruuji rurwingi. Taara iria wiji ikaleta baita kiri ntuura yaku. Kujukia mung'uanano, TIST niregaga mibau, niuntu uandi bwa miti iji nobunyiye ruuji ruria ruri nthiguru ya muthetu.

3. Miti nithagirwa irina mbeu o mwaka?

Miti iria mingi niciaraga mbeu o mwaka, indi tegeza miti iria iandi akui nagwe nikenda umenya na mma. Imwe ithagirwa irina mbeu injega rimwe o miaka iri kana ithatu.

4. Ni muti juriku juri jumwega jwa kurita mbeu yaku?

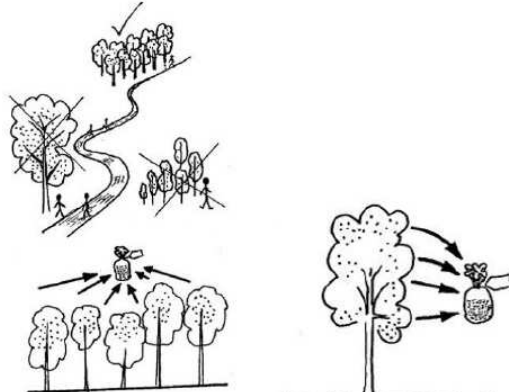
- Uthurania mbeu kuumania na miti iria irina thiria injega iria iciaraga mbeu inthongi.
- Ebera miti iria iri yonka – kiri miti iji mbeu yomba mono kwithira yuumanitie na muti gwiciarithia, untu buria buumba gutuma mbeu ikwethirwa citi injega mono.
- Ebera miti itiguciara na iria ikari bubuthuku.
- Ni kaba gutara muti juri gatigati ka miti iri amwe imingi ya muthemba jumwe irina thiria. Mbeu ikethirwa ibui nkuruki kethira niumenie na miti irina maua jaria jatamburuki nkuruki ya jaria jaikonderete amwe.
- Uthurania mbeu kuuma guntu mwanya mutine nikenda umenyeera ati kurina mwanya jwa mantu jaria igakamata kiri muti juju.



Kuthuura muti jumwega jwa gwita mbeu

- Ni ithuganio ririega kuuthurania miti kuumania na miti nkuruki ya mirongo ithatu mwanya ya muthemba jumwe. Bubu nibutethagia kumenyeera ati kurina mwanya kiri miti iria ikaumania na mbeu iu. Miti ya kurita mbeu nithirwe itaarenie mita mirongo itano kana igana nikenda umenyeera ati kurina mwanya.
- Muti juria jungwa ukathuura jukalingana na niatia ukwenda kujutumira.
- Mung'uanano, miti imiega ya mpau ni imitamburuku, irina biang'i bibikai, igukura ntuti, irina uraja na warie bwa miti ya kawaida, ikuumba gukabana na tunyomoo turia tuthukagia imera.
- Miti imiega ya kuriwa ni ndithia nibati kuuma na ntuti, irina biang'i bibingi na mathangu jagukuranga na jakumba kuumanga jagitwa.
- Mitunda imiega nibati kwithirwa irina matunda jamaingi jari na thiria, muti jurina mathangujang'anene kuunthe na biang'i biri nthiguru, ikuumanga na mpwi.
- Geria kuthuura mbeu kuumania na miti iumite antu kung'uanene, kurina rera ing'uanene na muthetu jumwe na aria ukwenda kuanda muti jwaku.
- Taara muti jukuri, ti jumwithi. Miti ikuri niithagirwa irina mbeu inyingi na miti iminini noiciare mbeu itiuma muti juthongi ja ng'ina.

Kiumo: Robbins, 2004.



5. Niri tuuthuranagia mbeu?

- Menya igita ria mwaka riria mbeu ithagirwa igundi.
- Uria antu bangi ba ntuura iu kana utege muti gwengwa.
- Rimwe mbeu nigundi riria gitunda kana giti kiagarura rangi, kioma kana kiaunika na uthu kuuma kiang'ine. Rimwe, makonde jari tayari riria jagarura rangi kuuma green gwita brown. Tega mantu jaria jaandiki aja nthi kenda wona mung'uanano



- Mbeu iria nyingi ciri tayari kuuthuranua riria yagwa yongwa kuuma mutine.
- Rikana kumenyeera ati urina rutha rwa kuuthurania mbeu kuumania na eene miti!
- Warikia kwoja mbeu rikana kuandika miuko yaku riitwa ria muthemba jwa muti, tariki ya kwoja na guntu kuria woja.

6. Niatia tuuthuranagia mbeu?

- Nibutethagia kutheria akui na rungu rwa muti mbele. Mbeu inyingi no yojwe kuuma muthetune. Indi, etera mbeu iria ikuri bwega cigwe mbele. Mbeu igatigwa muthetune igita riraja nithukaga. Tega mbeu bwega itikethirwe ithukitue ni tunyomoo. Mbeu cia *Tectona grandis* (teak), *Gmelina arborea* (gmelina) na *Aleurites moluccana* (candlenut), niuthuranagua mono na njira iji.
- Nowitie muti kuuthurania mbeu, indi menyeera!
- SoMatunda jamwe nijoomaga, jakaruguka na kunyagia mbeu jatigwite muthetune. Mbeu iji ciri inya kuuthurania mneu ikethirwa inyii. Uuthurania matunda na macau jaria jagundi indi mbele ya jaruguka na jagwaa nthiguru. Riu uumie gitunda kana gicau antu atheru na arina kirundu kurita mbeu.
- Mbeu imwe no ciringwe kuuma mutine ugitumagira muti jumuraja.
- Geria gwita gitambaa rungu rwa muti riu winainie muti mpaari.
- Kiri miti imiraja gantu ga kurita no kathithue na uthu gukurukira kuugera rutere rumwe rwa muti jumuraja na jwina inya magari ja kugita. Rutere rungi noruogerwe kiri murigi.
- Menya ati mbeu mithemba imwe itiojwa nthiguru na no mwanka yiuthuranue iumite yongwa. Mbeu iji ciumaga ikaa tumiti tutunini rungu rwa muti juria iumenie naju. Iji noithamirue mibukone ndene ya munanda jwaku. Iji niyo njira iria njega buru kiri miti iria iri inya kuumithia munandene kana iria mbeu itiuthuranagua na uuthu.
- Mbeu cionthe no mwanka ciritwe matundene kana macaune. Bubu nobuthithue na njara, kana gwika riuene na gwetere jauma na gwatuka.

Collection of *Sesbania sesban* with telescopic shears at Muguga site, Kenya



7. Niatia tumba kumenya kethira mbeu nibui?

- Mbele tega mbeu na ute iria cinyii, ciuthi kana cirina rangi mwanya na ingi. Tunyomoo twomba kwithirwa tuthukitie mbeu imwe.
- Juukia mbeu inkai na ugite riu utege ndene kethira niikuri na kethirwa niriitwe ni tunyomoo.
- Kiri mithemba imwe iria irina gikonde gikiumo, kuerera ruujine ni kithimi gikiega. Kawaida, mbeu injega niinamaga nthi na inthuku niereraga (niuntu mbeu inkuo na kurumua ni tunyomoo nikuretaga mibuko ya ruugo).
- Mbeu imwe no uuge/ ukeera/ugachunka nikenda wita mbeu iria mbuthu.

Sesbania sesban – cleaning seed by blowing



Tephrosia vogelii – cleaning seed by flotation





- No uthithie kithimi gikiuthu gia kumenya kethira mbeu ikauma. Jukia namba intare ya mbeu (mirongo iiri giwta igana).Thithiria mantu ja kuthuranira jaria ubati. Ikira mbeu gitambaene kirina ruuji na wikira mbakuline. Kunikira na gitambaa kingi, giake ruuji bwega na wike antu kuri na kutira (ti mwanki).Tegera mbeu ntuku cionthe nikenda woona kethira niikuma na wike gitambaa kirina ruuji rionhte. Riria mbeu ikaambiria kuuma, ika rekondi ya ntuku na namba. Kithimi giki nikia igita ria biumia biiri kulingana na muthemba. Kuuma gwa nkuruki ya gicunci kimwe kiri biiri ni kuuga urina mbeu injega. Mithemba ya mbeu inini irina gicunci kia mbeu ithano kiri igana niibati gwikwa.

8. Tuike kana tuande mbeu?

- Mbeu imwe itikaraga bwega na niibati kuandwa orio (mono mbeu iria iri imbuthu na irina matunda, mbeu ya mitunda kana mbeu irina maguta jamaingi. Kiri mbeu iria cirina gikonde gikumo, watho ni gwika mbeu itheri, iumi na irina mpio.
- Mbeu niibati kuritwa kumania na gitunda na cikomua bwega. Kuumia mbeu, miike riuene ntuku ijiri kana ithatu.
- Gwika mbeu karatasine kana gikebene gia cuuma kuraja na riu ni gukwegwa (ebera maratasi ja nyoni niuntu jaja nijatumaga mbeu ikathithina na ikoora). Menyeera ati mukebe juri jumutheru na jutigutonyithia ruugo.
- Andika mukebe muthemba jwa mbeu na ntuku na antu a kwojania.
- Rikana ati kuumba kwa mbeu kuuma gukanyia o uria igita rigwita na mbele. Kethira mbeu niiki igita riraja, no ithuuke.

9. Mbeu cionthe niciumaga?

- Gicunci kia mbeu, kiria kiumaga, nikiringanaga na muthemba. Mbeu imwe niciendagwa kwamba kuthuranirwa. Jaja jakethirwa jari kiri Mazingira Bora ya mweri jwa liiri.
- Riria ukuuthurania mbeu rikana ati imwe nikujaga igitene ria gwika, ingi ndene ya munanda, na ingi igitene ria kuthamiria muundene. Kwou, ikira jaja mubangone riria ukwenda kumenya ni mpindi ing'ana gikundi giaku kibati kuuthurania.

10. Niatia tukaanda mbeu iu?

- Mbeu imwe iria iumaga na uuthu no iandwe muundene kana mibukone o rimwe. Mithemba iria iendaga mantu mwanya nikenda iuma niandagwa munandene mbele.

- Igita riria rijukagua kuuma niriringanaga na muthemba jwa mbeu, murutira, ruuji ruria rurio na ukuru bwa mbeu.
- Mbeu iandagwa mwambirio jwa mbura.
- Ja mwongozo riria ukuanda muundene o rimwe, mbeu nibati kuandwa nthiguru maita jairi kana jathatu warie bwa mbeu na niibati gikunikirwa bwega na muthetu. Muthetu riu nijubati gwikwa jurina ruuji.
- Mantu jegie minanda jakaejanwa kiri uritani bungi.

II. Miti yumithagua aki kumania na mpindi?

- Mithemba imwe ya miti niuamaga miti ingi kumania na miri ya muti jou ng'ina. Iji no igitwe na ikathamua.
- Gicunci nokigitwe kumania na kiang'i gitikuri aria kurina ndungu ithatu kana nkuruki. Taara kiang'i gikiraja, kirina thiria na ugite o rimwe. Rita mathangu jonthe. Anda gicunci giki muthetune ndungo ijiri kana nkuruki ciri nthiguru ya muthetu , kuri na imwe kana nkuruki itigi iguru. Menyeera ati kurina ruuji rionthe mwanka woone jukiauma. Miti iria iumithitua na njira iji ikethirwa ikari umwe ja miti Iria iumenie nayo na njira cionthe na nioitethie mono riria ukwenda kumenyeera ati mutunda juguciara bwega jukuuma.

Ngugu iri cluster ibati kuthithia mucemanione.

Mucemanione jwenu jwa cluster, gaania amemba ikundine birina antu batantatu gwita ikumi. Uria o gikundi kuthuura muthemba jwa muti juria jubui kiri TIST- jwa igita riraja na jurina baita kiri naria kubuthiurukite. Rikania ikundi kuthuura mutongerina na mutetheria wawe.

Ngugi ni kuuthurania umenyo kwegie o muthemba jwa muti:

- Riiitwa ria muti—Mbeu uria ikari - Antu aega akui aria mbeu iu yumba kuuma—Njira ya kuuthurania mbeu - Njira ya gwika mbeu- Uthuraniri buria mbeu igwitia- Njira ya kuumithia

Nenkanira ndaika ikumi cia kuthithia ngugi, riu uurie o gikundi kureta macokio.

Aandikeni mantu jaja ndene iukune rienu na burete mucemanione jou jungi jwa uritani.

No bwone bugitethia kuandika na njira iji:

Riiitwa ria Cluster:						
Riiitwa ria muti	Mbeuuria ikari	Aria mbeu iriti	Njira ya kuuthurania mbeu	Njira ya gwika mbeu	Uthuraniri buria mbeu igwitia	Njira ya kuumithia

Mazingira Bora



TIST

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

Kikuyu Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Muthegera TIST Clusta mucemanio-ini wao wa o mweri wa Clasta January 2019.

Inside:

Uhoru wa wendia wa TIST na fainda iria tuonaga. Page 2

TIST: Gitumi kiria gakundu gaaku kagiriirwo ni gukorwo na miti makiria ya magano matano nigetha kirihwo. Page 2

Mutambo mweru wa Website wa thimu: Njira njeru na njega ya kuhotithia arimi aingi kunyita mohoro megii ikundi na cluster ciao naihenya. Niuugututeithia kugia na uigiririki, utheri na ukinyaniru. Page 3

TIST: Ungania wa mbegu. Page 4



Uhoru wa wendia wa TIST na faida iria tuonaga.

Kuri Amemba a TIST

Mwari muhitiku, nitwamumenyithirie ati TIST riu ni irikitie kuona faida kumania na wendia wa carbon. Na nitugukorwo tukiriha arimi aria carbon yao yendetio. Mwari uyu tugukorwo tukiariria uria tugundeka mitarata miega ya kuriha mbeca icio.

Nitugukorwo na mucemano wa Atongoria a Cluster mucii wa Gitoro Conference Center kuuma hwa-ini mwari 27 January nginya mwari 31. Hari mucemano ucio tugukorwo tukiariria mitarata miega ya kuriha marihi macio na njira ina waragania, utheri naya ihinda riria riagiririire.

Kwa ngerekano, angikorwo hari gikundi kina grove ii githakaini kana grove iri haraihu na iria ingi na itanakorwo itariirwo miti gwa kahinda ka miaka 5, groves ta icio ititaragwo hindi ya uthuthuria wa verification. Angikorwo memba wa gikundi niatemete miti kana akauma TIST kana akaremwo ni kumenyerera grove yak eta uria GhG contract irauga, tani ciake cia carbon itingiendio. Mucemano wa Atongoria a Cluster ukaririria njira ciagutigirira o gikundi nikiamukira waragania na kihooto.

Kuririkania. Marihi maria tukoretwo tukiriha oo muti kuuma TIST yambiriria Kenya ni marihi ma warufaji (advance) hari mbeca cia gikundi cia carbon. Kuguo, gikundi nigetha kirihwo mbeca cia faida ya carbon, marihi maria kiamukirite nimakamba kurutwo. Uhoru mwega ni ati, ikundi ciothe igakorwo ikiamukira uigananu wa marihi ma carbon o hari tani.

Kiambiriria kia mwari wa keeri, nitugakorwo na mucemano wa Cluster servants uria ukaririria njira iria igatumika hari marihi. Cluster Servant waku niakamenyithio oo kuigana nigetha a hote gucokia ciuria ciaku muri mucemano wa Cluster. Ona makiria ya uguo, nituguthii na mbere na kumumenyithia kuhitukira ngathiti ino. Ungienda uhoru makiria , araniria na mutongoria oo wothe wa Leadership Council.

TIST: Gitumi kiria gakundu gaaku kagiriirwo ni gukorwo na miti makiria ya magano matano nigetha kirihwo.

Ikundi nyingi niikoretwo ikiuiria nikii itakakoragwo ikirihwo riria miti yao ikoretwo itakinyite 500

Wambere, marihi ma miti ni warufanji hari wendia wa kaboni. Ni mbiachara. Thiinii wa biashara, andu marutaga wira na hinya nigetha muone faida. Hari biashara o yothe, nigetha wona faida, mahuthiro no nginya makorwo me thin a wendia ukorwo muingi.

Hindi iria gikundi kiri na miti itari miingi, thogora wa gutara hari o muti uthiaga iguru. Ona thogora wa kuriha gikundi kui uri oo iguru. Ona thogora wa guthuthuria niguo validation, verification okoragwo iguru o hari tani. Koguo, gutiri faida ingioneka riria matumiri mari iguru. Tukagia na hathara.

Nigetha tukoragwo na faida thiini wa TIST, na niguo wee uri mumemba ukagia na mbeca na uteithio, niwagiriirwo nigutigiriria o kimera niwanda miti miero. TIST yendekithagia miti 5,000 o hari gikundi nigetha gikundi kigie na faida njega hari wonjoritha wa kaboni hamwe na uteithio ungi umanagia na miti.

Ikundi iria ikoretwo na thina wa miti kwaga kugwata wega, riu kuri na njira njega ya kuhurana na thina uyu. Ciito cia kuoya na iguru niitethagia miti yaku gie na miri miumiriru na ina hinya na warikia kumitwara mugunda igatuika ya kugwata ona ihenya. Niukoria riria mugucemania muri gikundi kana Cluster, mwariririe uhoru wa nathari ino na mumigerie



Mutambo mweru wa Website wa thimu: Njira njeru na njega ya kuhotithia arimi aingi kunyita mohoro megii ikundi na cluster ciao naihenya. Niuugututeithia kugia na uigiririki, utheri na ukinyaniru.

TIST ina mutambo mweru wa website. Mutambo uyu urahuthika na thimu ya guoko. Tungiuhuthira wega. Riu nouhote kumenya muigana wa miti iria itaritwo gikundi-ini kianyu ona kana mugundai-ini waku kiumbe, amemba a gikundi kianyu kumenya kana gikundi giaku nigikinyaniirie ikiro cia gutairwo miti na kwamukira marihi ana kana nikirigite kurihwo.

Kuringana na cluster yaku, niukuhota kuona ikundi iria ciri thiini wa cluster ino(nanouroranie na cluster iingi), mucemano ucio ungi wa cluster ni wa ri, tongoria aria mari ho a cluster na riria ithurano ciekitwo. Na makiria niukuhota kumenya cluster yaku uria ikoretwo ikihuthira mbeca ciayo.

Makinya ma kuingira mutambo-ini uyu.

Kuri na njira igiri iria unghota kwamukira mutambo uyu nacio. Angikorwo uri memba wa TIST na uri na email adress ya TIST, nouhot kuingira mutambo-ini uyu orio ukihuthira password yaku. Kuingira na njira ino nouhote kwamukiauhoro muingi. Angikorwo nduri na email address ya TIST, noungire ta mugeni, no uhote kwamukira utungata uyu angikorwo thimu yaku iri na uhoti wa internet kana thiini wa cyber cafe.

Atari a miti a TIST nimoritio makorwo kuo micemano-ini ya TIST niguo mathomithie arimi kuhuthira mutambo uyu na mangi maingi. Nimoritio maheane palms kuri cluster thiini wa micemano ya cluster na niguo amemba mahote kuona uhoro uyu wa cluster na ikundi ciao kana mibango ya TIST riria mari mucemano-ini.

Makinya ni maya

1. thii [www,tist.org/mobile](http://www.tist.org/mobile)
2. angikorwo uri na email ya TIST, inira nayo na uhuthire password yaku.

3. Angikorwo nduri na email address ya TIST, no uigire ta mugeni. Ikira ritwa na kuria urutaga wira ta gikundi giaku.
4. Niugutwaro page iyo ingi. Hau iguru, niukwona “cluster”, :Group”, na “Log out”
5. angikorwo urenda kumenya uhoro wa cluster, hihinya “Cluster”. Niugutwarwo handu hagukwonia project cia TIST thi yothe. Hihinya kuria urenda kuona(kwa muhiano Meru). Kuma haha uguthii page iyo ingi kuria ukuona cluster iria iri Meru(kana gicigo kiria wathuura.) hamwe na muigana wa ikundi na miti ohamwe na muthenya wa mucemano na ithurano hituku.
6. Hihinya cluster yaku(kwa muhiano, Ciakanyinga). Page ingi niikuhinguka na niukwona ikundi nini na maritwa macio, namba ya TISY, muigana wa miti na mweri wa muico wa gutarirwo miti.
7. Hihinya gikundi giaku. (kwa muhiano, TARADA). Niugutwarwo thiini wa page ingi. Niukwona uhoro wa gikundi, hamwe na kana gikundi nigitikirikite kwamukira marihi na kana nigikinyaniirie ikiro cia gukorwo thoko-ini ya carbon.

Uria unghota guthooma ngathiti chia mieri mithiru (Mazingira Bora Newsletters)

1. Thii www.tist.org
2. Cooka uthii documents to download. Chagura Kenya newsletters.
3. Kuuma hau niukuona ngathiti ngurani chia mieri mithiru,
4. Kwa ngerekano ukorwo ukwenda ngathiti ya November 2015, ukimikora hau,



TIST: Ungania wa mbegu.

Ciuria na macokio ci ungalia wa mbegu

1. Ni mithemba iriku ya mitiingikura kwanyu?

Mithemba iria miega ni iria ikuragia na njira cia kiimerera. TIST makiria niihinyagiriria uhandi wa miti ya matunda nay a kinduire na ingi iria ingihota guikara gwa kahinda gakirite miaka 20.

2. Miti yoothe ni miega?

To muhaka! Miti ingi niiremaga gutungatika na ingi igakorwo na thumu kuri nyamu na ingi ikahuthira maai maingi. Thuura miti iria ingiteithia kwanyu. TIST niigiritie miti ya mibau kwa muhiano tondu niinyihagia maai tiiri-ini

3. Miti niirutaga matunda o mwaka?

Miti miingi niguu iikaga, no geria kurora kwanyu na miti ya kuu niguu umenye wega. Miti ingi ibataraga miaka 2-3 niguu irute mbegu njega.

4. Ni muti uriku mwega wa kunganiria mbegu?

- Ungania mbegu kuma mitiini iria iri na hinya mwega na iria iri na mbegu njega
- Ndukonganie kuma kuri miti iri iika handu hamwe tondu mbegu ciaguo nocikorwo citaciarithanitio
- Ndukonganie kuma kuri miti itari na ugima mwega
- Ungania kuma kuri miti iria iri gatagati-ini ka iria ingi ya muthemba umwe. Mbegu nicikoragwo cirri njega makiria riria mahua mayo mariruka wega
- Ungania mbegu kuma miena ngurani niguu ugie na mithemba miingi

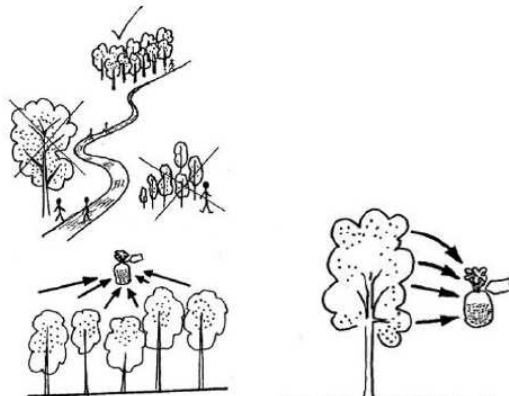


- Niwega kungania mbegu kuma kuri mithemba 30 na makiria ya miti niguu ukorwo na rurira rwega, miti ya mbegu yariirwo nigukorwo na utaganu wa 50m-100m niguu ikure wega
- Muti uria mwega uringanaga nakiria urenda kuhuthira muti ucio nakio
- Kwa muhiano, miti miega ya mbau yagiriirwo nigukorwo iri mirungaru, ikorwo na honge nini na ikure naihenya na utungu muigananiru ohamwe na uraihu na iingate tutambi
- Miti miega ya mahuti ma mahiu yagiriirwo ni gukura naihenya na honge nyingi na mahuti makorwo magikura naihenya thutha wa gucehwo
- Miti miega ya matunda yagiriirwo nigukorwo iri miega na mawega ma miti ya matunda
- Geria guthuura mbegu kuma mitiini iria ikurite na riera rimwe na muthemba umwe wa tiiri na kuria urathii kuhanda.
- Thuura miti iria ikinyitie ugima iria itari miithi. Miti migimaru niikoragwo na mbegu nyingi na miti mithi ikaruta mbegu nini.

5. Twagiriirwo ni kungania mbegu ri?

- Rora ihinda ria mwaka riria mbegu cirri nguru
- Uria andua nagi kana wirorere miti.
- Maita maingi mbegu cikoragwo cirri nguru riria matunda merua na macenjia rangi, moma na magua thi. Maita mangi cikoragwo cirri njega riria makoni mavenjia kuma green nginya brown. Roar maandiko muico wa ngathitimbegu nyingi cikoragwo cirri njega riria ciagua kuma mutiini
- Ririkana gutigirira ati uri na rutha rwa kungania mbegu kuma kuri mwene miti
- Riria wongania mbegu ririkana kwandika haria wekira na ritwa, muthenya na kuria wongania

Source: Robbins, 2004.





6. Twagiriirwo nikungania mbegu atia?

- Gutheria haria uronganiria mbegu niguteithagia. Mbegu nyingi nociunganio kuma thi. No ningi, eterera mbegu iria cigimarite cigue. Mbegu iria cिकारिते muno thi nicithukaga. Roar wega kana mbegu nithukie ni tutambi. Mbegu cia Tectona grandis (teak), Gmelina arborea (gmelina) and Aleurites moluccana (candlenut) ciunganagio na njira ino.
- No uhaice muti iguru utue mbegu no wimenyerere!
- M atunda mangi momaga, magathanduka mbegu ona matakugua thi. Mbegu ici nicikoragwo na hinya kunganika angikorwo mbegu ni nini. Ungania mbegu kana makoni riria cirri njiru no mbere ya cिकेकानित्ते na cikagua thi. Umithia makoni niguo uhote guthandura mbegu
- Matunda mangi nouringe kuma thin a muti muraihu
- Geria kwara kinndu gitinaini kia muti ucoke uinainie
- Kuri miti iria miraihu, nouhuthire muti muraihu woheireire kindu
- Ririkana ati mithemba ingi ya mbegu ndingiunganio kuma thi na yagiriirwo ni kunganio wega. Ici ni mbegu iria cimeraga wega iria cimerete na igakura rungu rwa miti minene. Ici nnocimunywo na cिकहन्द्वा migundaini. Nira ino niyo njega kuri miti iria ikoragwo itagukura wega nathariini kana iria mbegu ciaguo cिकोरग्वो na hinya kunganika.
- Mbegu ciothe niciagiriirwo ni kurutwo kuma makoniini. Undu uyu nowikwo na moko kana kwanika makoni riuaini niguo mome.

7. Tungimenya atia ati mbegu ni njega?

- Wambere roar mbegu na wehutie iria nini na huthu kana cirri na ngurani ya rangi kumana na iria ingi. Tutambi notukorwo tuthukitie mbegu.
- Oya muhiano wa mbegu na utinie na urore kana nicikinyitie ugima na kana nicithukitio ni tutambi
- Kuri mbegu iria cिकोरग्वो na ngothi nyumu, cिकीe maaaini niguo ucigeria. Mbegu njega nicirikaga maaini na iria thuku cikareera.
- Kuri mbegu iwe nouganyanie na kuhuhana gucunga niguo wehutie iria huthu

Collection of Sesbania sesban with telescopic shears at Muguga site, Kenya



- No wike magerio manini ma kumerithia. Oya mbegu nini (20-100). Cithondeke wega uria kwagiriire na wikire mbegu nguoini hehu thiini wa bakuri. Humbira na nguo ingi na ureke hakorwo na urugari(ti maai mahiu). Roar mbegu o muthenya kana cirri na dalili cia kumera. Riria ciambiriria kumera, iga namba ya muthenya na namba. Kigerio giki giikaraga gwa kahinda ka ciumia 2 kuringana na muthemba. Kumera gwa gicunji kia 50% mikuuga uri na mbegu njega. Mithemba ya iria ikoragwo na mbegu nini iria iri na kumera gwa gicunji kia 5% no kiega.

Sesbania sesban – cleaning seed by blowing



Tephrosia vogelii – cleaning seed by flotation



**8. Nikuhanda tuhandaga mbegu kana ni kuiga?**

- Mbegu nyingi citikaraga gwa kahinda kanene na ciagiriirwo ni kuhandwo orio(namakiria cirri njigu, iria huthu, cia matunda kana iria cikoragwo na maguta maingi). Mbegu iria cikoragwo na ngothi nyumu, watho ni kuiga mbegu icio cirri theru, nyumu na cirri na riera riega.

9. Ni mbegu ciothe cimeraga?

- Gicunjikia mbegu kiria kimeraga kiringanaga na muthemba wa muti. Mbegu imwe nicibataraga guthindekwo mbere ya kuhandwo. Maundu maya nitukamona ngathitiini ya February.
- Riria urongania mbegu ririkana imwe nicikuaga riria ciigitwo, ingi igakua cirri nathariini na ingi cigakua riria urathamia kuma nathari nginya mugundaini. Kwa uguo ikira maundu maya riria urabanga muigana wa mbegu uria ukuhanda

10. Tuhandaga mbegu atia?

- Mbegu imwe iria cimeraga naihenya nocihandwo mugundaini. Mithemba iria ibataraga maundu ma mwanya niguo imere ciambaga kuhandwo tutaini mbere.
- Kahinda karia mbegu cioyaga ga kumera karinganaga na muthemba wa, urugari na muigana wa maai na kahinda ka mbegu.
- Uhandi wa mbegu wikagwo mbere ya mbura yambiriirie.
- Ta wato wa kuhanda mbegu, ciagiriirwo ni kuhandwo na uriku wa maita matatu ma utungu wacio na cihumbirwo wega ni tiiri. Tiiri ucio wagiriirwo nigukorwo uri mugunyu.
- Uhoro wa tuta niuheanitwo githomoini kingi.

11. Mimera ikuraga kuma kuri o mbegu?

- Mithemba imwe ya miti niiciaraga njahirira na nocitinio na cihandwo ta muti.
- Guceha nogwikwo kuri muti uteri mukuru muno uria uri na marungo matanyihire matatu. Thuura karuhonge karaihu na karia kari na hinya na utinie na njira njega. Hurura mahuti na uhande tiiriini na uriku wa marungo meri na iringo rimwe utigitie. Itiriria maai nginya uthunduke. Mimera iria ikuratio na njira ino niikoragwo na mauthi ma muti uria waumite kuriguo na nimwega gutigirira matunda mega nimonekana

Maundu ma Micemanio ya cluster.

Thiini wa mucemanio wa cluster, gayania arimi na ikundi 6-10. Uria o gikundi kioye muthemba wa muti uria niwitikiritwi thiini wa TIST uri wa gutuura miaka miingi na ungitethia maria maturigiciriiie. Uria gikundu githuure mutongoria na munini wake.

Wira ni kungania uhoro wa o muthemba wa miti:

- Ritwa ria muti / uhoro makiria wa mbegu – kuria kwega ungiona muti ucio – njira cia kungania mbegu ciaguo – njira cia kuuiga mbegu – njira ciaguthondeka mbegu na njira cia kuhanda.
- Mahe ndagika 10 niguo marikie uguo na ucoke umorie makurehere macokio.
- Andika uhoro ucio thiini wa ibuku na ugoka naguo mucemanio-ini ucio ungi

Niwega kuhuthira table tai no.

Riitwa ria cluster:						
Riitwa ria muti	Uhoro makiria wa mbegu	Kuria ungiungania	Njira cia kungania	Njira cia kuiga	Njira cia guthondeka	Njira cia kuhanda

Mazingira Bora



TIST

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

Kiswahili Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Muthegera TIST Cluster wakiwa kwa mkutano wao wa Kilasta wa kila mwezi January 2019.

Inside:

Habari kuhusu mauzo ya Carbon ya TIST na faida tuliyoapata. Uku. 2

TIST: Kwa nini kikundi chako kidogo kinapaswa kuwa na miti Zaidi ya mia tano ili kuhitimu kuyapata malipo? Uku. 2

Tovuti ya simu za mkononi ya TIST: Njia mpya na yenye ubunifu ya kupata taarifa kuhusu kikundi na cluster yako haraka na kwa urahisi. Uku. 3

TIST: Ukusanyaji wa mbegu. Uku. 4



Habari kuhusu mauzo ya Carbon ya TIST na faida tuliyoipata.

Wapenzi TIST Washiriki,

Mwezi uliopita tuliweza kutangaza kwamba TIST ilifanya faida kwa mauzo ya kaboni, na ingekuwa kulipa faida kwa wakulima wanaostahili. Mwezi huu tutafanya kazi katika kuendeleza sera maalum zinazohitajika kwa kutekeleza malipo hayo.

Tutakuwa na mkutano wa Viongozi wenu wa Clusters katika Kituo cha Mikutano pale Gitoro kutoka jioni ya 27 Januari hadi 31. Katika mikutano hiyo tutafanya kazi ili kuendeleza sera na mipango ya kufanya malipo ya haki, ya uwazi, na wakati. Kwa mfano, kuna kikundi ndogo ambayo miti yake iko kwa kichaka na hivyo haiwezi hesabika. Ama iko na grove ambayo iko mbali na haijahesabiwa kwa muda zaidi ya mika tano, ama kuna mwanachama wenu amaekata miti yote katika grove, hiyo yote inamaanisha grove kama hizo haziwezi kuwa katika biashara ya carbon. Mkutano wa viongozi wa Clusters utafanya kazi ili kuendeleza njia za kuhakikisha kwamba kila kundi ndogo linatibiwa kwa haki.

Mkumbusho. ‘Malipo ya mti’ ambayo yamefanywa kwa vikundi vidogo tangu TIST ilianza Kenya ni “advances” au “kabla ya malipo” kwenye kipato cha kikundi ndogo. Kwa hiyo, Kikundi kitakuwa na malipo haya ya faida kwa mara ya kwanza kutumika kwa kukamata juu ya advances yaliyolipwa tayari. Habari njema ni kwamba njia hii itaanisha kwamba baada ya muda Vikundi Vidogo vitakuwa zimepokea malipo sawa ya kaboni kulingana na idadi yao.

Mapema Februari tutakuwa na mkutano wa watumishi wa Cluster, na kuendeleza mipango maalum ambayo itatekeleza mkusanyiko wa habari muhimu, na mchakato wa malipo. Watumishi wako wa Cluster wataelewa vizuri na wataweza kujibu maswali yako kwenye Mkutano wa Cluster. Aidha tutawaambieni kupitia jarida hili la maamuzi viongozi wako wa Clusters watafanya pamoja na mpango wa utekelezaji. Ikiwa unataka ufafanuzi zaidi, tafadhali wasiliana na mwanachama yeyote wa Baraza la Uongozi.

TIST: Kwa nini kikundi chako kidogo kinapaswa kuwa na miti Zaidi ya mia tano ili kuhitimu kuyapata malipo?

TIST: Kwa nini wanakikundi wanapaswa kuwa miti zaidi ya 500 kuhitimu kwa ajili ya malipo? Vikundi vingi vidogo vimekuwa vikiuiza ni kwa nini hawapati motisha ya mti wakati miti yao ni chini ya mia tano (500).

Kwa kuanzia, motisha ya mti ni malipo ya kabla kwa ajili ya mauzo ya kadi za kaboni. Ni biashara. Katika biashara, watu hufanya kazi kwa bidii ili kupata faida. Kama katika biashara zote, kupata faida, gharama lazima iwekwe chini, na mauzo yawe ni ya juu.

Wakati kikundi kidogo kinamiti michache, gharama ya upimaji / kwa mti huenda juu. Gharama ya kulipa kama kikundi pia ni ya juu. Muhimu sana, gharama ya uthibitisho, uthibitisho kwa tani ya kaboni pia huwa ni ya juu sana. Kwa hivyo, hakuna faida zinaweza kufanywa wakati gharama ni juu. Sisi hupata hasara.

Ili kuendelea kuwa na faida katika TIST na kwa hivyo kupata mapato mazuri kwa ajili yako mwenyewe na wanakikundi, lazima uhakikishe kuwa kikundi kidogo kinapanda miti ya ziada kila msimu wa kupanda. Sera za TIST zimependekeza miti elfu tano (5,000) na idadi ya kuridhisha ya kupata wanakikundi na viwango vya faida katika suala la mapato ya kaboni na miti mingine ya faida.

Baadhi ya vikundi vilisema kwamba vifo vya miti ni sababu ya kutokuwa na miti mingi. Wakulima wa TIST wametambua, kupima na wameonelea kuwa kuinua kitalu cha miti husaidia kwa kiasi kikubwa katika kusaidia miche yako kuishi mara moja baada ya kupanda katika shamba lako. Tafadhali jadili suala hili la vitalu vya miti katika mikutano ya kila wiki, baada ya wiki mbili na pia katika mikutano ya Cluster na mjifunze mawazo zaidi.



Tovuti ya simu za mkononi ya TIST: Njia mpya na yenye ubunifu ya kupata taarifa kuhusu kikundi na cluster yako haraka na kwa urahisi.

TIST imeanzisha tovuti mpya- ya simu za mkononi. Tovuti hii itawezesha maelfu ya wakulima kupata taarifa kuhusu vikundi na cluster zao haraka na kwa urahisi. Itatusaidia kuwa wenye kuwajibika, wenye uwazi na sahihi tukiitumia vizuri. Sasa waweza kupata taarifa kwa mfano nambari ya miti iliyohesabiwa katika kikundi chako, katika kila shamba, wanakikundi chako, kama kikundi chako kimehitimu kulipiwa miti na kama kimelipwa hivi karibuni.

Tukitilia maanani cluster yako, utawezak kuona nambari kamilifu ya vikundi vilivyomo katika cluster yako (na unaweza kulinganisha na cluster zingine), tarehe ya mkutano unaofuata wa cluster, viongozi wa cluster yako na tarehe za uchaguzi wa mwisho. Pia, utaweza kujua jinsi cluster yako imekuwa ikitumia pesa za bajeti ya cluster kila mwezi.

Hatua za kuchukuwa ili kuingia katika tovuti hii ya simu za mkononi

Kuna njia mbili za kuingia katika tovuti hii. Kama wewe ni mwanaTIST na umepewa anuani ya barua pepe, waweza kuingia ukitumia nenosiri. Kuingia hivi kutakuwezesha kuona taarifa zaidi. Kama hauna anuani ya barua pepe ya TIST, waweza kuingia kama mgeni. Waweza kuingia katika tovuti hii ukitumia simu yako kama yaweza kuingia kwa mtandao ama katika maduka yenye mtandao.

Wahesabu miti wa TIST wameulizwa kuwa katika mikutano yote ya cluster kufunza na kusaidia katika mambo mengine. Wameulizwa kuleta vifaa vyao vinavyoitwa Palm wakati wa mikutano ya cluster na wanacluster wanaweza kuona taarifa kuhusu vikundi na cluster yao au kuhusu mradi wa TIST wanapokuwa mkutanoni.

Hapa ni hatua za kufuatilia

1. Nenda kwa www.tist.org/mobile
2. Kama una anuani ya barua pepe, ingia ukitumia anuani yako ya TIST na nenosiri.

3. Kama hauna anuani ya TIST, waweza kuingia kama mgeni. Andika jina lako na kampuni halafu chagua “log in”. kampuni yaweza kuwa jina la kikundi chako.
4. Utaelekezwa ukurasa mwingine. Hapo juu, utapata “Cluster”, “Groups”, “groves” na “Log out”
5. Kama unataka kuangalia cluster, chagua “cluster”, utaelekewa ukurasa unaoonyesha maeneo ya mradi wa TIST duniani. Chagua na uguze mahali unapotaka (kwa mfano, Meru). Kutoka hapa utaelekezwa katika ukurasa mwingine ambapo utapata majina ya cluster zilizopo Meru (ama eneo lingine lolote ulilochagua) pamoja na nambari ya vikundi na miti na tarehe za mkutano unaofuata pamoja na tarehe za uchaguzi wa mwisho.
6. Chagua cluster yako (kwa mfano, Ciakanyinga), ukurasa mpya utafunguka na utaona majina ya vikundi vidogo, nambari zao za TIST, nambari ya miti na tarehe ya mwisho ya kuhesabiwa miti.
7. Chagua kikundi chako, (kwa mfano TARADA). Utaelekezwa ukurasa mpya. Utapata habari kuhusu kikundi hiki, pamoja na kama wamehitimu kulipwa na kama kikundi kimehitimisha yanayotakikana ili kuingia katika soko la hewa chafu.

Kufikia gazeti za Mazingira Bora zilizopita

1. Enda kwa www.tist.org
2. Bonyeza tufuti uliopewa. Chagua gazeti la Kenya.
3. Utaelekezwa kwa ukulasa ufuatao. Unaweza kuchagua mwezi uliopita kwa kuibonyeza.
4. Kwa mfano, ukifikilia kuchagua mwezi wa Novemba 2015, bonyeza kwa hiyo mwezi na itafunguka gazeti la mwezi huo.



TIST: Ukusanyaji wa mbegu.

Maswali na majibu kuhusu ukusanyaji wa mbegu.

1. Ni aina ipi ya miti tunafaa kukuza katika eneo letu?

Iliyo bora zaidi mi ile inayokua yenyewe katika eneo hilo, kwa hivyo chagua miti itakayokidhi mahitai yako. TIST sanasana hupendekeza mitunda na miti ya kiasili. Kumbuka kuwa unajitolea kuweka miti yako ikiwa hai kwa muda wa miaka thelathini au zaidi. Chagua ambayo itakupa faida unazohitaji kwa wakati huu; matunda, chakula cha mifugo, udongo bora kutokana na kupunguza mmomonyoko wa udongo au naitrojeni kutokana na miti ya familia ya kunde, kuni kutokana na matawi yaliyopuguzwa na faida nyinginezo.

2. Miti yote ni mizuri?

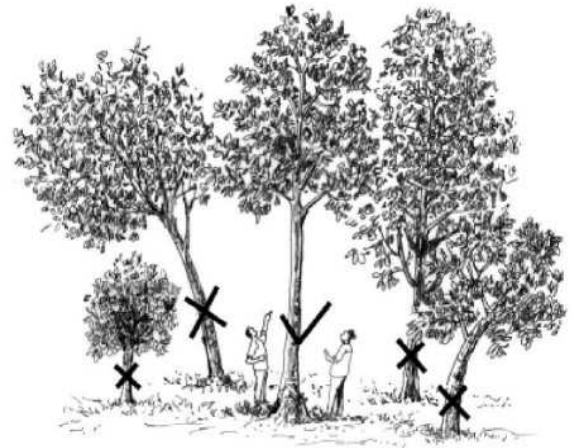
Si lazima! Mingine yaweza kuwa migumu kudhibiti, yaweza kuwa na sumu kwa mifugo yako au kutumia maji mengi sana. Chagua unayojua itafaidi inapopandwa.

3. Ni miti yote uzalisha mbegu kila mwaka?

Miti mingi huzalisha, lakini angalia miti iliyo hapo ili kupata uhakika. Mingine huzalisha mbegu nzuri tu baada ya miaka miwili kufika mitatu.

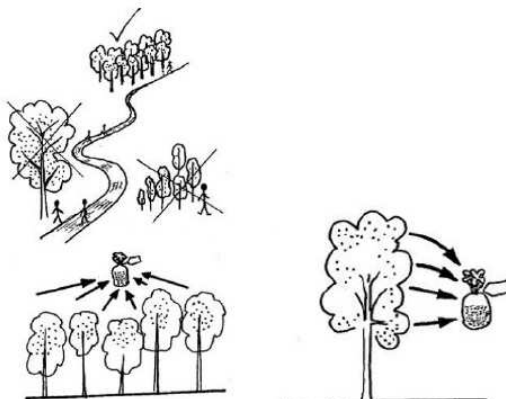
4. Ni mti upi ulio mzuri wa kukusanya mbegu?

- Kusanya mbegu kutoka kwa miti iliyo na afya ambayo huzalisha mbegu nzuri
- Epuka miti iliyosimama kipweke kwa sababu mbegu yake inauwezekano wa kuwa na mbelewele yakujitegemea ambayo inapelekea mbegu ya hali ya chini.
- Epuka miti isiyozalisha na yenye sura mbaya
- Chagua mti ulio katikati ya mingine yenye afya naya aina moja
- Mbegu kutoka kwa miti iliyo na maua yanayoenea nje itakuwa yenye ubora wa juu badala ya yenye maua yaliyojikusanya pamoja.



- Fikiria unavyotaka kuutumia mti kabla ya kuchagua aina ya mti. Kwa mfano, miti mizuri ya mbao ni iliyonyooka, iliyo na matawi machache na inayokua kwa upesi. Miti mizuri kama lisho kwa mifugo ni inayokua kwa upesi, yenye matawi yenye mashina kadha, na majani yenye kukua haraka yenye uwezo wa kujitibu haraka baada ya kupuguzwa. Miti mizuri ya matunda kwaudhahiri inafaa kuwa na matunda mengi yenye afya!
 - Chagua mbegu kutoka kwa mti unaokua katika eneo lililo katika muinuko na udongo sawa na unapotaka kupanda.
 - Chagua mti uliokomaa, si ulio mchanga.
- 5. Tukusanye mbegu lini?**
- Jua wakati wa mwaka mbegu zinapokuwa zimeiva na uwauliza wengine wanaoishi hapo au kuuangalia mti wewe mwenyewe.
 - Mara nyingine mbegu huiva matunda au maganda ya mbegu yanapogeuzwa rangi, kukauka, au kuvunjika kwa urahisi kutoka kwa tawi.
 - Mbegu nyingi huwa tayari kukusanywa zinapoanguka kutoka mtini zenyewe.

Source: Robbins, 2004.





6. Tukusanye mbegu vipi?

- Kuwazisha eneo lililozunguka mti kwanza husaidia sana. Mbegu nyingi zaweza kukusanywa kutoka kwa ardhi, lakini kwanza angalia mbegu kama imeumwa na wadudu.
- Mtu aweza kupanda mti na kuchukua mbegu, lakini jichunge!
- Matunda mengine huvunjika na kutawanya mbegu bila kuangusha chini yanapokauka. Haya ni vigumu kukusanya kama mbegu ni ndogo. Kusanya matunda au magi kupata mbegu.anda yanapoiva lakini kabla ya kuvunjika na kuanguka ardhini. Halafu ukaushe tunda au ganda mahali palipo pasafi na penye kivuli i
- Jaribu kuangusha mbegu zingine kutoka kwa mti kwa kugonga kwa mti mrefu.
- Jaribu kuweka shuka chini ya mti na kuutingiza mti kwa upole.
- Kwa miti mirefu, kifaa rahisi chaweza kutengenezwa kwa kufungilia upande mmoja wa jozi la makasi kwa kijiti kirefu na chenye nguvu. Upande mwingine waweza kufungiliwa kamba.
- Jua kuwa baadhi ya aina za mbegu haziwezi kukusanya kutoka kwa ardhi na ni lazima zikusanywe zikiwa zimemea kiasili. Miche hii ni iliyoota hivi karibuni na inayopatikana chini ya miti iliyokomaa. Miche hii yaweza kupandikizwa hadi kwa mikebe katika kitalu chako. Hii ni njia iliyo nzuri zaidi kwa miti inayoleta ugumu kuotesha katika kitalu na iliyo na mbegu zenye ugumu kukusanya.
- Mbegu lazima zitolewe kutoka kwa matunda au maganda yake. Toa kwa kutumia mikono au kwa kuweka tunda au ganda kwa jua na kulingoja kukauka na kuvunjika husaidia.

Collection of *Sesbania sesban* with telescopic shears at Muguga site, Kenya



7. Tunawezaje kujua kama mbegu ni nzuri?

- Kwanza angalia mbegu na utupe yoyote iliyomwa na wadudu, ni ndogo zaidi, nyepesi zaidi au ya rangi tofauti na rangi ya mbegu zilizo na afya bora.
- Kwa mbegu zilizo na ngozi ngumu, kuelea kwa maji ni jaribio zuri. Kwa kawaida, mbegu nzuri huzama kwa maji na mbegu mbaya huelea.
- Unaweza fanya jaribio lenye urahisi la kuota. Chukua mbegu chache zilizohesabiwa (ishirini hadi mia moja). Fanyia matayarisho yoyote yanayohitajika. Weka mbegu katika nguo yenye unyevu katika bakuli. Funika kwa kipande kingine cha nguo, tia unyevu vizuri na uiweke mahali penye joto (si moto). Angalia mbegu kila siku ili kuona dalili za kuota na uweke nguo ikiwa yenye unyevu kila wakati. Kuota kunapoanza, weka rekodi ya siku na nambari

Sesbania sesban – cleaning seed by blowing



Tephrosia vogelii – cleaning seed by flotation





ya mbegu zinazoota. Kuota kwa zaidi ya asilimia hamsini humaanisha una mbegu nzuri, lakini upesi ya kuota waweza kutofautiana sana kulingana na aina ya mti. Aina yenye mbegu ndogo ambapo asilimia tano pekee inaota bado ni nzuri ya kuweka.

8. **Tupande au tuweke mbegu?**

- Mbegu zingine hazikai kwa muda mrefu na lazima zipandwe mara moja (san asana mbegu nyororo na zilizo ndani ya matunda yenye maji maji, mbegu za miti ya matunda ama mbegu zenye mafuta mengi).
- Kwa mbegu zenye ngozi ngumu zaidi, mwongozo wa kimsingi ni kuziweka mbegu zikiwa safi, zilizokauka na penye baridi.
- Mbegu zitolewe kutoka kwa tunda na kukaushwa vizuri. Kukausha mbegu, ziweke kwenye jua kwa siku mbili au tatu.
- Kuziweka katika karatasi au mkebe nje kwenye jua ni vizuri (epuka makaratasi ya mipira kwani huzifanya mbegu kutoa jasho na kuoza). Hakikisha mkebe ni safi na usioingiza hewa.
- Andika mkebe jina la mbegu na tarehe ya kukusanya.
- Kumbuka kuwa uwezo wa mbegu wa kuota hupungua wakati unapopita. Kama mbegu imewekwa kwa muda mrefu sana, inaweza kuharibika. Baadhi ya aina hupoteza uwezo wa kuota kwa haraka zaidi ya aina zingine.

9. **Mbegu zote huota?**

Asilimia ya mbegu zinazoota hutofautiana sana kati ya aina. Mbegu zingine huhitaji aina ya maandalizi ya kabla.

10. **Tutapandaje mbegu?**

- Mbegu zingine zinazoota kwa urahisi zaweza kuoteshwa moja kwa moja shambani au mifukoni. Aina zinanazohitaji hali maalum ili kuota huoteshwa katika kitalu kwanza.
- Kumbuka kuwa mbegu zingine zitahitaji matayarisho ya kabla.
- Muda unaotumika na mbegu kuota hulingana na aina ya mbegu, joto, kiasi cha maji kilichopo na umri wa mbegu.
- Kwa ujumla, kupanda hufanyika kabla ya msimu wa mvua kuanza.
- Kama mwongozo wa kijumla, kama mbegu zinapandwa moja kwa moja shambani, zinafaa

kupandwa kina mara mbili au tatu upana wake na zafaa kufunikwa ilara kwa udongo. Udongo lazima ubaki wenye unyevu baada ya kupanda.

- Maelekezo kuhusu vbitalu yanafuata.

11. **Je, miche hukua tu kutoka kwa mbegu?**

Baadhi ya aina za miti hutoa vioteo (yaami mimea change kukua kutokana na mizizi ya mmea mzazi). Hivi vyaweza kukatwa na kupandikizwa,

Chukua kitawi kutoka kwa mti mchanga kilichona pingili na utumie vipandikizi hivi. Chagua tawi refu lenye afya na ukate mara moja kwa upande na kutoa majani. Panda kipandikizi udongoni angalau kina cha pingili mbili, na ngalau tumba moja likionekana juu ya udongo na ukiweke kipandikizi hiki kikiwa chenye maji hadi kuchipuka kuonekane. Miti inayokuzwa kwa nia hii itakuwa na sifa sawa na zile za mmea mzazi na yaweza kuwa saidifu wakati unahitaji kuhakikisha kuwa mti wa matunda wenye uzalishaji umekuzwa.

Kazi ya kufanywa na wanacluster katika mkutano.

Katika mkutano wa cluster yako, gawa washirika katika vikundi vya watu tano kufika kumi. Uliza kila kikundi kuchagua aina ya mti iliyo nzuri kwa TIST-mti hutakaokaa muda mrefu na ulio wenye faida kwa mazingira. Wakumbushe kuchagua kiongozi na msaidizi wake.

Kazi hii ni kutafuta ujuzi ufuatao kuhusu kila aina ya mti:

- Jina la mti—Maelezo kuhusu mbegu - Mahali karibu pazuri pa kupata mbegu hiyo- Ukusanyaji wa mbegu- Njia ya kuweka—Njia ya kutayarisha mbegu—Njia ya kukuza

Wape dakika kumi za kufanya kazi hiyo, halafu huwaulize kila kikundi kuleta ripoti.

Tafadhali andika ujuzi huu katika kitabu chako na uje nacho katika mkutano huo mwingine wa mafunzo.

Waweza kuona njia iliyo hapa ya kunakiri haya ikiwa mwafaka:

Jina ya Cluster:						
Jina la mti	Maelezo kuhusu mbegu	Mahali karibu pazuri pa kupata mbegu hiyo	Ukusanyaji wa mbegu	Njia ya kuweka	Njia ya kutayarisha mbegu	Njia ya kukuza

Mazingira Bora



TIST

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

Kikamba Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Ngwatanio ya TIST Muthegera wumbanoni woo wa mwai wa mbee 2019.

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Uvoo iulu wa Utandithya wa TIST na Vaita a TIST. Page 2

TIST: Niki kakundi kaku kethiwe na kena miti mbee wa 500 nikana kavikie ndivi. Page 2

Mwinamo na ni indii mwasakuanie. Ingi ni ukwithiwa utonya umanya undu mbesa syenyu sya kila mwai itumikite. Page 3

TIST: Kukolany'a Mbeu. Page 4



Uvoo iulu wa Utandithya wa TIST na Vaita a TIST.

Kwa aimi ma TIST,

Mwai muthelu nitweethiwe kwaniliila na kutangaasa kana TIST niseuvitye vaita kumana na utandithya wa nzeve itavisaa (Carbon Sales) na ni kwithiwa iyiiva aiming na kumaia kwianana na undu mekite. Mwei uu twienda kwia mawalany'o na nzia ila tukatumiaa kuiva imi ndivi ta ithi.

Nitukwithiwa na umbano na atongoi ma ngwatanio sya TIST kuuya Gotoro conference Centre kuma kiwioo kya matuku 27/01/19 kuvika matuku 31/01/19. Nthini wa wumbano uu nivo tuuneeanisa mawalanio aya ma ndivi ila yaile, yikwe utheuni kwa wumilu na ivindani yila yaile. Kwa ngelekany'o ethiwa kakundi kena miti yi ikuthu kana miti ivanditwe vamwe itathengeanie na ya kakundi kangi na miti isu ti mivitukithye kwa ilungu ya myaka itano, miti isu ndiutalika nthini wa uvitukithya. Ethywa ve member kakundini na nutemete miti yake kana nutite TIST kana ndetikilite kwikalay mutitu wake undu tweetikilanile, tani isu ii utalika. Wumbano uu wa atongoi wikomana vamwe kuikiithya kila kakundi kakuwa kwa wiananu.

Ulilikany'o. Ndivi sya miti ila syaiviwe tukundi kuma TIST yambiia Kenya ni maiviwe mbee kana manewa aluvasi kuma kwa ndivi ya nzeve itavisaa (Carbon income). Kwoou, kila kakundi keambi kusiwa kila kaivitwe nikana ndivi syothe syithiwe iitalika. Kwa nzia ino tuivika ivinda yiteyiasa wiithia kila kakundi kakaivawa undumwe wa kila tani ya nzeve itavisa ila mbitukithye na ngole.

Mwai wa keli (February) uyambiia nitukwithiwa na wumbano ingi na atongoi ma ngwatanio sya ikundi na kwikia mawalany'o ma kuikiithya uvoo ula twinaw'o na mawalany'o nitwamathukumithya na ndivi. Ingi atongoi ma ngwatanio sya ikundi menyu meithiwa mena umanyi na uvoo na matonya kusungia kila ikulyo mwinayo nthini wa mbumbano sya ngwatanio sya ikundi sya kila mwai. Ingi nituumumanyithya kwisila ithanguni yii ya Newsletter undu atongoi ma ngwatanio sya ikundi maamuie iulu wa kuikiithya walanio uu niweekwa.

Ethiwa ve undu ukwenda utheesya kwandaia neenania na mutongoi wa kanzu yenyu.

TIST: Niki kakundi kaku kethiwe na kena miti mbee wa 500 nikana kavikie ndivi.

Tukundi twingi nitwihitwe tuikulya niki tuteukwata ndivi na meba miti itavikite 500. Kwambiia, ndivi ino inenganawe mbee wa nzeve itavisaa itanambiia kutewa. Ni viasala, nthini wa viasala andu mathukumaa na kithito kukwata vaita. Kwa viasala w'oonthe kukwata vaita utumiku waile ikala withi na utandithya wi yiulu.

Youla kakundi kena miti minini utumiku wa kuvitukithya withiawa iugu kwa kila muti. Na kwoou utumiku wa kuiza uyithia wi yiulu.

Ingi utumiku wa kuthiana, kukunikila na kuvitukithya kwa kila tani withiawa iulu. kwoou uyithia vaina vaita yila utumiku wi iulu na kwiiu tukwata wasyo.

Nikana wikale wina vaita nthini wa TIST na kukwata vaita kwa kakundi kaku, niwaile ikiithya kana kakundi kaku nikavanda miti ingi mbua ino. Walanio wa TIST wendethasya miti ngili itano kwa kila kakundi nikana withie nikavikia ukwata vaita wa nzeve itavisaa na vaita ingi sya miti.

Tukundi tumwe nitwihitwe tuiteta kana miti kuma ni kitumi kimwe kyoo kya kwithiwa matena miti italika. Aimi ma TIST nimasakuite, makathima na kuikiithya kana kivuio kya kitanda nikitetheesye vanen kwa kwithiwa miti itonya kumiisya itina wa kuvandwa miundani. Kwandaia neenanisyai iulu wa nzia sya usevuya kivuio nthini wa wumbano wenyu wa kila mwai na ingi nthini wa wumbano wenyu wa ngwatanio kuete mawoni kivathukanio.



Mwinamo na ni indii mwasakuanie. Ingi ni ukwithiwa utonya umanya undu mbesa syenyu sya kila mwai itumikite.

Matambya ma kulika kana kulogin nthini wa mobile website ino
Ve nzia ili (2) ila utonya utumia kuvikia

kusisya uvoo nthini wa mobile website. Ethiwa wi umwe wa ene ma TIST na nunengetwe E-mail address, no ulogin imwe uitumia password yaku, uitumia nzia ino withiawa na ivuso ya kuvikia uvoo mwingi. Ethiwa ndwina email address ya TIST no ulogin ta mueni (login as guest). No uvikie website ino uitumia simu yaku ya kw'oko ethiwa yina internet kana kuma kwa cybercafes.

Avitukithya ma TIST (quantifiers) nimakulitw'e methiwe me mbumbanoni syonthe sya ngwatanio nikana mavundisye ene ngwatanio isu. Ni makulitw'e manengane Palms nthini wa kila ngwatanio yila kwina mbumbano nikana ene ngwatanio masisye uvoo wa ikundi na tukundi vamwe na ngwatanio ithi iulu wa walany'o wa TIST na kuikiithya ni waw'o na kana mbumbano isu sya ngwatanio syina uvoo ula waile.

Vaa ve matambya makuatiia uilogin

1. Wavika kwa itaneti andika **www.tist.org/mobile**
2. Ethiwa wina Email address ya Tist lika kwa itaneti na utumia address yaku vamwe na passwork kuvingua website ino.
3. Ethiwa ndwina email address ya Tist no ulogin ta mueni (guest). Andika isyitwa yaku na ngwatanio na uivinyiia log in. isyitwa no yithiwe ya ngwatanio, kikundi kana kakundi.
4. Kuma vau nuu tongoew'a kuthi itambya yila yingi nundu nukwithia vaa iulu vaandikitwe "Cluster", "Groups", "Groves" kana "log out"
5. Ethiwa wienda kwona ngwanio yenyu sakua "Cluster" kuma vau nukwona kula kw'othe kwi ngwatanio sya TIST nthi yonthe. Sakua

ngwatanio ila ukweda kuma ngwatanioni isu iandikitwe vau (ngelekany'o Meru) wamina usakua twasye Meru nuukwithia ngwatanio ila syi ungu wa meru na nukwithia kila kikundi kiandikitwe vamwe na miti yakyo na ni indii mena wumbano na usakuani woo wi indii.

6. Sakua kikundi kyenya (ngelekany'o Ciakanyinga) na nukwithia tukundi twothe tula twi ungu wa ciakanyinga tuandikitwe kwa masyitwa, namba yoo ya TIST, utalo wa miti yoo na muthenya wa muthya ula miti yoo yavitukithiw'e.
7. Nzakua kakundi kaku (ngelekany'o, TARADA). vaa nukwithia uvoo wa kakundi kau vamwe na kethiwa nimavikiie ndivi na kana kakundi kaa nikavikiite kwika mawendekethyo other ala mendekaa nthini wa soko ya nzeve itavisaa.

Wenda mathangu ma Mazingira Bora Newsletters ala maseuviw'e mbeeni kana mavituku ika uu

1. Vingua internet na uithi kwa web yitu kwa kuandika www.tist.org
2. Click kana uvinyiie download documents, sakua Kenya Newsletters
3. Nuutongoew'a kuthi ithanguni yiu yingi. No usakue newsletter ya mwai w'othe ukwenda na mwaka kwa kuviyiia mwai ula wina mwaka ula ukwenda
4. Kwa ngelekanio, ethiwa wienda usakua mwai wa ikumi na umwe 2015, vinyiia mwai usu wina mwaka waw'o na ithangu ya mwai wa November 2016 (newsletter Nov. 2015) niyiuvinguka na uitonya usoma kila ukwenda kuma vo



TIST: Kukolany'a Mbeu.

Makulyo undu wa kumbany'a na kukolany'ambeu na mausungio

1. Ni muthemba wiva wa muti waile umea kisioni kyaku?

Mithemba miseo ya miti ni miti ila itonya umea kisioni vate mundu kulikiliila. Ala methiwa nthini wa TIST nimathuthaw'a kaingi kuvanda miti ila itonya kwimesya isioni syoo kana miti ya kiene na mithemba ingi na kwikala iteutemwa vandu va ilungu ya myaka miongo ili kana mbeange.

2. Ni miti yoonthe miseo?

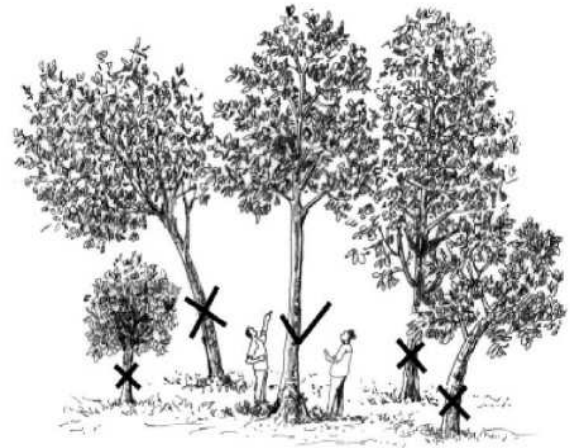
Ti lasima kila muti withiwe wi museo! mithemba imwe noyithiwe yi vinya kumiea, ingi ukethia ni sumu kwa indo, kana kwa kiw'u. Sakua miti ila wisi niya vaita kwa kisio kyaku. TIST ndyendeeawa ni aimi kuvanda misanduku nundu kuvanda miti ino nikuolaa kiw'u kila kimuthangani.

3. Miti nuyumasya mbindi/ mbei kila mwaka?

Miti mingi kwaw'o nisyaa na kunengane mbeu kila mwaka, lindi niwaile usyaaisya miti ila yi kisioni kyaku nikana umanye nesa. Miti imwe no ithiwa yumasya mbeu /mbindi nzeo itina wa myaka ili kana itatu.

4. Ni miti yiva yina usya museo wa kwa kwosa mbeu?

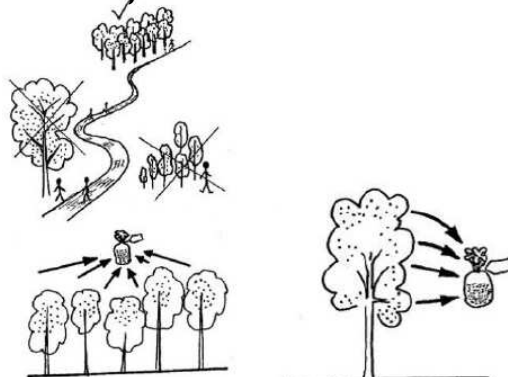
- Kolany'a mbeu kuma miti ila yina uima museo
- Ndukendeew'e ni mbeu sya miti ila imeete vandu yiyoka
- Ndukendeew'e ni miti ila itasyaa nesa na yina mbeu syina umbo muthuku.
- Nikaa kuyuva muti ula ukwosany'a mbeu wi katikati wa miti ingi miseo ya muthemba umwe nundu ninenganae mbeu nzeo ya muthemba usu wa muti.
- Umbany'a mbeu kuma ngavani kivathukany'o sya muti ula wa sakua.



nzakua muti mbeu kuma mutini musyai museo.

- Ni useo kwosany'a mbeu kuma mitini inyiva mithemba 30. Kii kitetheeasya kwithiwa na mithemba mingi. Osany'a mbeu kuma mitini yina utaaniu wa 50m - 100m nikana ukwate mbeu kivathukany'o na syaile.
- Muthemba wa muti kaingi uamuawa ni vata wa muti ula ukwenda.
- Ngelekany'o, kwi miti minzeo kwa mbau nayo ni ila imeaa ukethia ni miasa na ndina ngava mbingi na yanaa kwa mituki na ndithuthawa.
- Miti miseo kwa uithyo wa indo nayo yaile ithiwa yi miti ikwiana mituki, yina uthui na ngava mbingi, na itonnya kuthongooa na mituki.
- Miti miseo ya matunda yaile ithiwa yina usyao museo wa matunda, ngava syi nthi kana syi vakuvi, na itonya kwiana na mituki.
- Tata usakue mbeu kuma mitini ila yanaa na mituki muthangani, nzeveni, na utuluni umwe na vala ukwenda uvanda.
- Nzakua miti miimu na ti ila yesanga. Miti miviku yithiawa na mbeu /mbindi mbingi kwi muti munini.

Kuma: Robbins, 2004



5. Ni indii tukolanasya mbeu?

- Ivundisye kuwosany'a mbeu yitunda yeew'a
- Kulya andu ma kisio/atui maku kana usyaiisye muti we mwene. Ingi mbindi/ngii nisyithiawa syeew'a yila ikonde yavindua langi, syooma kana itonya utilika mituki kuma ngavani. Ingi nzuu nisyiw'aa kwa kuvindu ikonde kuma langi wa kisusuni (ngilini) kutwika langi wa kaki/muthanga. Syisya musolo itina ithanguni yii wone ngelekany'o.



- Mbindi mbingi syithiawa tayali syavaluka kuma mutini
- Lilikana kuvoya mwanya wakwosa mbeu/mbindi / ngii kuma kwa mwene muti
- Wa mina kumbanya mbeu weekia vala weekia lilikana kuandika isyitwa ya muti, matuku ma kumivuua na niva wamyumya.

6. Nata tukolanasya mbeu?

- Nuseo kuthesya ungu wa muti ula tukwosany'a mbeu. Mbindi/Ngii mbingi nitonya kwosyanw'a ungu wa muti sya valuka. Onakau niwaile eteela ila ukwo syi mbiku nesa ukethe syo sya valuka. Ndukaeke syikale muno vau uthi nundu nitonya kwaa. Syisya kana ni ndonye, syina uwau kana ni mbanangiku mbee wa kusyosania. Ngii/mbindi ta sya Tectona grandis (teak), Gmelina arborea(gmelina) Aleurites moluccana (candlenut) nikolanaw'a kwa nzia ino.
- Mundu no kulisa mutini kwuvuua mbeu lakini wisuvia kuvaluka!
- Matunda amwe ma miti momaa na kwatuka na kunyaiikya mbeu nthi. Kwosany'a mbeu ino yavaluka kwivinya muno ethiwa ngii/mbindi syayo ni nini. Osany'a mika kana matunda ma miti taino meew'a vandu va kweteela yatuke na kuyaiikya mbeu. Anika vandu vaseo vatheu wisi syaatuka ii nutonya kumbania na kwosa mbeu.
- Mbeu imwe nutonya ukuna na muti muasa ivaluke.
- Tata wie kyandalua ungu wa muti ula ukumia mbeu na uithingithya o kavola wite mbindi/ngii.
- Kwa miti ila miasa nutonya umiseuvisya mboloi uitumia muti muasa kwa kuwoveea mukasi kwokoni kumwe na ikanda kula kungi.
- Manya mithemba imwe ya mbeu nditonya ukolany'a yavaluka indi no yeemesya ungu wa muti usu. Niwithiaa tumiti tumeete ungu wa muti uyu na vaa nivo waile usakua tula tuseo na kutwaa kivuioni na tuvisu. Ino niyo nzia ila nzeo muno kwa mithemba ya miti ila yi vinya kumea kana mbeu syayo syi vinya kukolany'a.
- Mbeu syoothe nisyaiile umwa mikaeni kana matundani. uu nutonya kwikwa na kw'oko kana kwanikia sua syiatue.

Collection of *Sesbania sesban* with telescopic shears at Muguga site, Kenya



7. Nata utonya umanya mbeu ni nzeo?

- Mbee ni kwa kusisya na kuveta ila nini kwi ila ingi, ila syina langi utailye ta iingi, ila mbanange ni tusamu.
- Osa mbeu imwe watue usisye nthini kana ni mbiku na kana niyithiwa na muiinyu.
- Kwa ngii/mbindi imwe ila syina kikonde kyumu no uivathukany'e kwa kwikia kiw'uni nundu ila nthuku nithambalalaa (Nundu maima ma ngulu na itema ya ngii ino enthiwa ti iviku niyitiaa maima ma nzeve)
- Kwa mbeu imwe nuvathukanasya kwa kusunga kana kuulukya na nzele kuveta ila mbuthu.

Sesbania sesban – cleaning seed by blowing



Tephrosia vogelii – cleaning seed by flotation





- Nutonya kusyimithya mbeu umanye kana nitonya umea. Osa namba nini ya mbeu ila ukolanitye ya ngii ta (20-100) ethiwa nisyaiile kuitwa siiite na syikie ikulani yiu na uilinga, ia vandu vena muutia na tivavyu na uyikalya ikula yii yi yiu kila ivinda na uisiasya kila muthenya wone kana nikumya minguthe. Syambiia umya minguthe ia lekoti ya undu imeete kila muthenya. Iseso yii ya kusyimithya mbeu yaile ikala vandu va ilungu ya syumwa ili kwianana na muthemba wa muti. Ethiswa 50% ya mbeu ila uusyimithasya niyaumya minguthi nuumanya wina mbeu nzeo. Mbeu yina mbindi/ngii nini yina kumea kwa 5% ve vata wa kwiwa.

8. Nituuwanda kana twikita kwia mbeu?

- Mithemba imwe ya mbeu ndiakaa yendaa kukethwa ivanditwe (mithemba ila yi na matunda moaa na mituki na ngii ila mbololo, na mbindi/ngii sya miti ya matunda muna muno ila yina mauta maingi). Kwa mbindi ngii ila syina mbindi nyumu mwio wasyo ni ia syi theu, vandu vomu na vathithu.
- Mbeu niyaile kumwa ikondeni na kwanikwa inyae nesa. Kwanika mbeu syanike suani vandu va mithenya ili kana itatu.
- Kwia ithanguni kana mukeve wa kyuma vandu vate sua (nuseo kuleikia ithanguni ya nailoni nundu syanyala nikwoa) Ikkithya vala weekia ni vatheu na niwakunika nesa.
- Vandika kathangu kena isyitwa ya mbeu, matuku ala woosanisyee na niva wamyumisyee.
- Lilikana utonyi wa kumea wa mbeu uendaa uolekete kwianana na ivinda yila uendee na kwia mbeu ino.

9. Ni mbeu syoothe sumasya ming'uthe kana kumea?

- Kilio kya mbeu/ngii/mbindi ila iume muno iamuwawa ni muthemba wa muti ula syumite. Imwe nisyendaa kuitwa be na uu ukalew'a ithanguni ya mwaini w keli.
- Yila ukolany'a mbeu lilikana imwe waia nikusaa, imwe nikwiiiaa kivuioni, na ingi iithamwa kuma kivuioni. Kwoou uyu nundu wa ikia maanani yila uuvanda kana kikundi kyenyu kiuvua kina kieleelo kya kwithiwa na miti kiasi kina nonginya mongele mbeu ila meuvuua na yila meukolanya mbeu.

10. Nata tutonya uvanda mbeu?

- Mbeu ila imeaa vate thina no ivamwe imwe vala yaile. Mithemba ila yendaa kusesengwa niyaile uvuiwa kivuioni mbee wa utwawa kithekani.

- Ivinda yila mbeu ikukua kumea yitengemea muthemba wa mbeu, uvyuvu, kiw'u na ivinda yila mbeu yiithiitwe yitwe.
- Uvandi niwambiia oyila mbua yambiia.
- Kwoondu wa ukutongoesya kwa uvandi ni vanda ngii uliku wa kundu kwili kana kutatu kwa uthathau wa ngii/mbindi na ikalya muthanga wi mwiu.
- Umanisyo iulu wa kuseuvya ivuio ukanenganwe ivinda ya uvundisyo ungi.

II. Niw'o mbeu ya mbindi/ngii noyo itonya utune tumiti?

- Mithemba imwe niyumasya nthongoo ila (nthongoo ithi syithiawa imeete kuma miini ya miti ila iisyaite) itumiawa ta mbeu kwa kutemwe kana kukuwa na kuvandwa vandu vangi.
- Matilo ma miti ni mosawa kuma ngavani sya miti na methiawa na metho kana kundu kwa kuthongoela kuinyiva kutatu. Usakua itilo sisya ukava ula utena kitau, uwau na mutheu tila ta usavite. veta matu vanda itilo yii muthangani metho eli me ungu wa muthanga na yimwe yisa. Endee na ungithya nginya wone niyakwata na yambiia kuthongooa. Muti wa uvanda uu withiawa uilyi ta muti ula waumisye mbeu na nundu utonya utuma uvanda muti museo wa matunda.

Umbano wa ngwatanio

Yila mwina umbano wa kila mwai aanai ikundi sya andu 6-10. Kulya kila kikundi kisakue muthemba wa muti ula museo kwa TIST kwa ivinda iasa nawina vaita kwa mawithyululuko. Lilikanya kila amwe masakue mutongoi na munini wake. kii nikutetheesya kwosa uvoou uu iulu wa kila muthemba wa muti:

- Isyitwa ya muti, uelesyo wa mbeu yaw'o, vandu ve vau vakuvi utonya kwosa mbeu, Nzia ya kukolanya I mbeu, Undu wa kumia, undu wa kumiiita na nzia ya kuvanda. Manenge ivinda ya ndatika ikumi kwika undu uu na uikulya kila kikundi kitunge livoti.

Andika livoti ino ivukuni na uyuuka nayo ivindani yila yingi kwina umanyisyo. Nowone yui useo kuvanga ta uu

Isyitwa ya ngwatanio:						
Isyitwa ya muti	Uelesyo wa mbeu	Vala utonya umikwata ukuvini	Nzia ya ukolany'a	Nzia taKwia	Kuitta mbee wa uvanda	Nzia ya uvanda

Mazingira Bora



TIST

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

Kipsigis Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Muthegera Tist Kilasta en tuiyet January 2019 nebo kila arawa

Inside:

TIST Ngalek che kororonen agobo mungaret ak kelunoik en TIST. Page 2

En TIST komwoe kole en kurubit konyolu kotinye ketik che sire 500 asi konyor kelibonchi. Page 2

Mobile website nebo TIST: Oret ne nyumnyum ne imuche inyorunen logoywek chebo groupit neng'unget. Page 3

TIST: Kayumetab kesuwek. Page 4



TIST Ngalek che kororonen agobo mungaret ak kelunoik en TIST.

Okwek che koomiten en TIST,

En arawet ne kosirto ko kikimuch kibarasten akobo kelunenoik che kikinyoru en mungaretab TIST yekin kialda koristo ago kilibochin temik che choton ye kipcheyat kelunoik choton. En arawani keyome kechob ngotutik che tonochin libananaton.

Tun kimiten tuiyetab kondoik chebo Kilasta en Gitoro Confrence Centre kongeten 27 to 31 st . en tuiyonoton kechenge ketech ngotutik ak tetet ne kararan asi kolibanak komie, ne togu ak en kasarta ne notok. Kou korogutietab kurubisiek che tinye imbarenik che bugonok anan che lochin ak alak chetomo kiiti ketik ye kikobata kenysisiek 5 ak imbarenik chemoitotin komotinye chomchinet. Agot komiten chito ne kigomusuch ketik anan kiistogei en TIST anan morib ketik kou ole nyolu

tanisiek choton kimeto ko moitotin. Miten kondoik chebo Kilasta chegere agobo wolutik cheu chuton. En anyun kurubisiek tugul che tam konyoru rabisiek ko ngeten iginam TIST en Kenya kotesetai kou kila. Asi konyoru chebo kelunoik go netai konyoru chebo kila. Ngalek che kororonen kurubisiek tugul konyoru rabisiek che kergei en kila tamit ye iborgei koristo ne kibosok.

En arawetab oeng kotun ketinye tuiyetab kondoikab kilasta asi komuch kiyomen wolutik ak tetet ne ka kobit ak tesetab tai en libanet. Itin anyun kabarastaet kondoikab Kilasta asi komuch komwowok en tuiyosiekab Kilasta. Onyorunen kora ngalechuton en baronok chebo kila arawa. Kobwotut nebo kondoikab Kilasta ak koyochinet. Agot imoche missing inai inyoru member nebo leadership council age tugul.

En TIST komwoe kole en kurubit konyolu kotinye ketik che sire 500 asi konyor kelibonchi.

Che chang en temikkotinye tebutik kole amunee asi monyoru rabisiek yon moite ketik 500. Miten kouni niton ko chobetage nebo altaetab koristo, niton ko mungaret. En mungaret ko miten kokiletage en biik asi konyor kelunoik chemiten barak. En chuton tugul asi kosich faida, che kagibosien konyolu komiten nguony ak kialda en beit ne mitenbarak.

Angot kotinye kurubit ketik che ngerin komiten barak koitetab ketik age tugul kounoton libanetab kurubit neu noton agine. Amun miten kiboitinik chebo kereet ak chigilet ago boisien

ichek tanisiek che tinye ketik ak niton komiten barak melekwek che nyoru agichek ko ne mutiny kenyoru asara.

Asi konyor kurubit kelunoik chebo barak ko kotes ketik en kila kenyit kot koit konyor ketik 5,000 konyoru kurubit tononet ne kararan ak kogimit en melekwek. Tinye kurubisiek rirek amun motinye ketik. oret ne kararan koni ocheng otou kabeti ne kararan amun moite kobek ketik en kabeti ongalalen en tuiyet ne otinye en wigit ana ko en arawa en kila Kilasta.



Mobile website nebo TIST: Oret ne nyumnyum ne imuche inyorunen logoywek chebo groupit neng'unget.

TIST koko'kochop website ne mpya – ne kimuche kero en simuit. Oranito komukyin temik che chang' konyor lokoywek chebo groupishek kwai ak cluster chechwaget. Niton kotoretech keigun che iyonotin, chebo lobkeyet, ak che. Ingunon imuche inyoru logoywek chebo numbait 'ab ketik chemi groupit ngung', en grovit agetugul, membaek chebo groupit ngung', angot ko qualifyeni groupit neng'unget ke liban ak angot kokokeliban.

Agobo cluster nengung, imuche inyoru logoywek chetinye'ge ak nambait 'ab groupishek chemiten en cluster nengung' (ak imuche ikerchine ak clusters alak), petut nebo cluster meeting, kondoik chebo cluster chemiten en kasaraton petut nikikiyoe lewenishet neletu. Kora imuche inyoru logoywek chetinye ge ak budget nebo cluster neng'unget nebo kila arawet.

Oret ole kiloge^ndo kechut mobile website initon.

Miten oratinwek oengu che kimuche kechuten website initon. Angot ko l'membayat 'ab TIST ak itinye email address nebo TIST, imuche ichut website ak iboishen password neng'unget'. Yon keboishen oraniton kokonin inyoru ngalek chechang'. Angot kometinye email address nebo TIST, imuche l signen – in ko guest (tondet). Imuche ichut website initon iboishen simuit angot kochu'te internet simuit ngung, anan iro en cybercafé .

Kogesom TIST Quantifiers komiten en tuyoshek chebo clusters asi kotoret en traing ak konet membaek . Kokisom icheket kokochi palms koba clusters en tuyoshek chebo clusters ak komuche koker membaek ngalek chetinye ge ak groupishek chemeng'echen anan ko clusters anan ko programs chebo TIST en tuyoshek chebo clustres.

Ichochu ko oratinwek.

1. Inyorunen **www.tist.org/mobile**
2. Angot itinye email address nebo TIST, ichuten email address inoten ak iboishen password.
3. Angot kometiche email address nebo TIST, imuche logen-in ko itondet . Inyit kainet ng'unget ak organization akityo l logen-in. Organization komuche koik groupit ng'unget.
4. Kikonin directions en pagit ne isupu. En parak inyoru Cluster", "Groups", "groves" ak "Log out"
5. Yon imoche iker Cluster, ichile en " Cluster". Kiborun pagit ne tinye projects chebo TIST en ng'wony. Imuche iker komoswek che kemokiyinike (kou, Meru) kong'eten yu imuche iwe pagit ne isupu asiro Clusters chemiten en Meru (anan ko komoswek alak che imokiyinike) koboto ketik che miten en komosoton ak petushek chebo tuyoshek ak election che ko'koibota.
6. Chill cluster neng'unget (kou, Ciakanyinga). Ko yotoksek pagit ne impya ne iboru groupishek che meng'echen, nambait nebo TIST, ak nambait ketik petut ne ki-quantification ketik.
7. Chill en Groupit ng'unget. (kou, TARADA). Kosipten inoniton iwe pagit ag'e. Inyoru ngalek che tinye eke ak groupit noton, chetinyege ak ole kilibonden ak angot kokoitchi groupit magutik chebo carbon market.

Kiit ne miten tai en kasetitab Mazingira Bora

1. Ui www.tist.org
2. Ui olemiten sirutik ak isuwe. Lewen kasetitab Kenya.
3. Koborun ole iwendi en bechit ne isubu. Anan ko ne kigobata nebo arawetagei.
4. Kou koborunet agot ilewen arawetab November 2015 ko itinye torigit nebo arawanaton kogonu chebo arawet ne isibu.



TIST: Kayumetab kesuwék.

Kesuwék tebutik ak Wolutik.

1. Miten ketik chegimuchi kemin ek kaa Ochon ketik choton?

Ketik chegororonen kochon kiinyortoi icheget ko kigorut. En TIST kemwoe kele kemin kou Logoek ak cheboo kipkaa ak alak cheimuchi kotar kenysisiek 20 ak kosir.

2. Kororonen ketik Tugul?

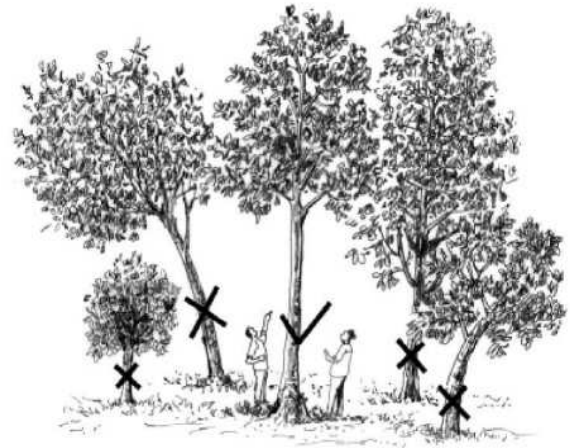
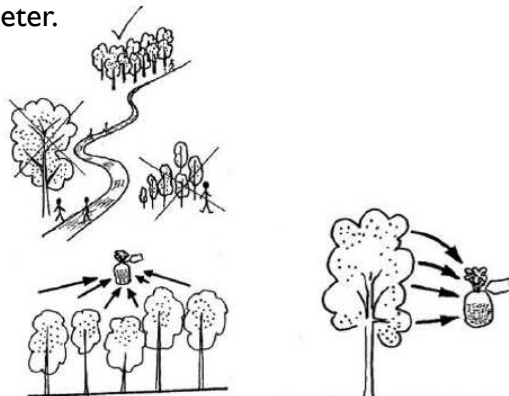
Ketik tugul komogororon, amun alak komokimuchi kerib amun tinye sumu alagei koebek chechang. Konyol ye gole ketik ichigil chenomegei ak ole imenye. Ketik cheu Chepkogutgei (Eucalyptus) ko bose beek en Emet.

3. Tos tinye keswék ketik en kenyt?

Ee unoton en ketik alak. Akomising Iger en ketik chemiten kaa. Alak Komuchi kotar kenysisiek 2-3.

4. Oinon ketik neimuchi kenyorunen keswék chegororonen?

- Lewen kesuwék chebo ketit nekararan
- Ketik nemiten inegen komat inemu kesuwék, motinye chekororonen.
- Ketit ne motinye iton komat ibut
- Cheng ketit ne miten kwenutab ketik cheninan chegergei.
- Iyumenkesuwék en kebeberuwék cheter ak cheter.



Lewen Ketik Chetinye Kesuwék Chegororonen.

- Karan missing iyum kesuwék en ketik chechang kegetoton, ago che motinye kosibiny.
- Tiyengei Kesuwék cheimoche imin boisiet ne imoginigei kou;
- ❖ Kou chebo bogoinik komoche che kiteta, che motinye temenik chechang ak sogek
- ❖ Chebo tuga kemoche chechogu ago chetinye sogek chechang ak temenik chechang.
- ❖ Chebo logoek ,kotinye togek chegororonen chetinye temenik che ngerinen ago chechogu.
- ❖ Lewen keswék chenomegei ak Ole imenye; Konamegi ak ngungunyek.
- ❖ Lewen ketik ne kongat amun ketit ne ngarngar komotinye kesuwék chegororonen.



5. Kasarta ainon ne Keleweni Kesuwek?

- Rib kasarta kenyt ye rurio Logoek.
- Teben biik alak alan isochigen ak inye
- Bitunen waletabgei en Logoek konam alak kobotiyo anan koyatak motogoik kometo kesuwek.
- Ye inyoru chemiten nguong ko tinya koborunet kole kogongiyo.
- Nyoru chomchinet en nebo imbaret iyum kesuwek.
- Cheng motoget negararan nebo kesuwek ak isir torigit ak kainetab kesuwot.

Collection of *Sesbania sesban* with telescopic shears at Muguga site, Kenya



6. Ole Komuchi Kiyumta Ano Kesuwek?

- Nebotai ko Isuach ketit kel kolabait asi kobuti nguong kesuwek ak irib amun alagei ko kigochut susurik.
- Alage kelonye asi kinem logoek
- Imuchi iite Tantaruwet ak itumtum ketit.
- Alagei komogimuchi kenyor kesuwek amun ibe koristo koloe gitun-ketik kon;Aonet ,Nadi flame ak alak.
- Alagei koyoche ketorms ak ketor kesuwek
- Ketit angetugul kotinye Oret ne kimuchi kinemunen kesuwek.

- ✓ Ker kesuwot angenge ngo kongat anan kotinye sususrik.
- ✓ En kesuwekchuton miten cheimuchi koib koristo koboru kole mogorororen.
- ✓ Yon imoche igue igogorororon kesuwek imuchi inemu kesuwek (20-100) ak inde ole inyuot amta inde bek,Rib anyun en kila betu kotgoit wekisiek Oeng ingany Ole kimoguto kesuwek.

7. Ole kimuchi kamwa kele kororonen kesuwek?

- ✓ En Keret kotinye besiet amun alak komengechen alak kotinye itondo ne magergei ago tugul ko kesuwek chebo kot agenge.

Sesbania sesban – cleaning seed by blowing



Tephrosia vogelii – cleaning seed by flotation





8. Komuchi Kemin anan Kegonor Kersuwek?

- Kesuwek alagei komotinye Kegonor asi tu kemin .Kimine en kasarta amun tesetai kongoti alak kotinye Magatet neu neyoche kebetes asi kinem kesuwot.
- Ye igonori kesuwet ko mat inde sabebe amun igochi konun kesuwot.
- Inde kainet ak torigit lolet ne gende kesuwek.
- Mat kogage kesuwek amun tun komonyor bitet ne kararan.

9. Igotos Kesuwek Tugul?

- Tinye besiet kesuwek kosibgei ak terchinetab ketik alak kotore betusiek che ngerin ko alak koibe betusiek chechang.
- Ye imine kesuwek Komuchi alak komeiyo alagei kobegu en kabet.

10. Kimuchi keminta ano kesuwek?

- ❖ Kesuwek alak komuchib kemin ko moginde kabeti alak kindo motogoik asitun kemin.
- ❖ Kesuwek alak kotinyengei kasarta bek ak burgeiyet.
- ❖ En abogora k o kararan kegol kesuwet en kasarta ne momite Robta

- ❖ Tagenyoru Lesonit nebo kabeti en kasta nenyo

11. Kinyorunen Ketik kasuwek kitiyo?

- a) Ketik alagei kimuchi kenyor en tigitikab ketik kinemu a kemin.
- b) Miten kora chemotinye kesuwek ago kimuchi ketil ak ketumda en ngunguyek,alak kotinye chego toreti missing korut alak kobo logoek.

Boisiet en tuiyetab kilasta.

En yon miten tuiyetab kilasta kebchei biik koyob kobureito nebo biik (6-10) asi Komuchi kogo agetugul kesuwek chebo ketik nenin ne kararan negoi ago neimuci kowal itondab Emet .Ingolewen kodoindet ak Rubeiwot asi Komuchi kosir kou ni kainetab keti- kesuwot - Ole kimuch kenyorchi-Kigesto Ono – Konorenyin-Keribto-Kolenyin. En let anyun Kogon kurubit agetugul Karenyuan. Konor wolutichuton asi tun koik Konetisiek en tuiyet neisibu.

Cluster Name:						
Tree Name	Seed Description	Local collection point	Collection method	Storage method	Pre-treatment method	Sowing method