

Mazingira Bora



TIST

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

English Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Farmer and a Leader, Dorothy Muriuki preparing her shamba using Conservation Farming (zero tillage Method. Many farmers have reported increased crop harvests after using CF.

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TIST: Boost Your Energy.

Like your car, your body runs on fuel, but feeling energetic takes more than filling up with calories. Regular meals at intervals throughout the day is important – don't skip meals. Repeated cycles of low and high blood sugar sap our physical and mental energy. One sure way to keep your blood-sugar level more constant is to eat regular meals. While you may not be hungry, eating something small at meal times, even a piece of fruit, can help to stabilize your blood sugar level. Keep away from really sweet stuff. When our body's blood sugar level indicator flashes red we tend to crave simple carbohydrates, such as biscuits and chocolate, which give quick energy. Although such foods can give us a momentary lift, they often just give us calories with no useful minerals or vitamins. We feel satisfied for a short time, but then our blood sugar can quickly become low again and the cycle of craving for a sugary snack continues. More regular meal times, or healthier snacks (a handful of nuts, a boiled egg, a banana, some roasted grain) are preferable.

Regular physical activity energizes the body in a number of ways. First, it can help improve the oxygen supply to the brain and other parts of body. It strengthens the heart and lungs, and with some light weight resistance, can increase our bone density. Regular exercise can help reduce our risk of type II diabetes and cardiovascular disease. It also makes us feel alert and more able to concentrate on our tasks. Another advantage of regular exercise is its effect on sleep. Devotees of regular daytime exercise seem to sleep better. A good time to get some extra rest is after lunch. Take off your shoes, turn out the lights, and put your calls on hold and sleep. Fifteen to twenty minutes is all you should need to feel refreshed. More sleep will leave you feeling lethargic. About 90 percent of mammals get their quota of sleep as an accumulation of naps during the day and night. A well-timed nap does wonders for your energy levels and productivity. Learn to take a power nap.

Food generates waste and without water the body cannot properly rid itself of these waste products made during the process of creating energy. To help the body flush waste, get into the habit of drinking plenty of water throughout the day. Coffee, tea and cola are refreshing and give a quick lift, but go easy on caffeine. It has stimulating effect on the brain and hinders your chances of getting quality sleep. The later in the day you consume caffeine, the more likely it is to disturb your slumber. If you are sensitive to caffeine, stick

to one or two drinks a day and avoid it after midday. Since regular tea, coffee and colas are diuretics (which mean they can dehydrate us) it's good advice to drink one cup of water in addition to every cup of those drinks you take. Otherwise try herbal teas, many of which do not contain caffeine and are naturally rehydrating.

Some reports say moderate, regular alcohol consumption (1-2 drinks per day) by men over 40 and postmenopausal women can reduce the risk of heart disease in the long term. However, overdoing it with the booze and we kiss our vitality goodbye. Alcohol is one of the things that can cause our blood sugar to soar, and then plummet precipitously. That's partly why we often feel terrible the morning after a few drinks. Too much alcohol dehydrates the body and over time weakens the liver. Excessive alcohol intake is also associated with liver disease, some cancers and problems with your heart. If you're going to drink, don't have more than one or two drinks a night.

Most people sitting at their desk tend to slump forward, which causes physical imbalance and discomfort, says Richard Casebow, a practitioner of the Alexander Technique at the Holistic Health Centre in Edinburgh. If you spend a significant proportion of your time at a desk make sure you are sitting comfortably. Choose a chair that is sturdy and adjustable, allowing you to alter the height and back of seat. Your hips and knees should be level with feet placed comfortably flat on the floor and position the back of the chair to support your lower back.

Attitude can have a powerful influence on how dynamic we feel. There is nothing like dreading a particular task to make us feel tired and unmotivated. Fortunately, there's a neat mental trick we can play on ourselves to help us over any negative mental hurdles. Instead of focusing on the potential horror of the task in hand, concentrate on the feeling of satisfaction you will enjoy on its successful completion. If your other half is nagging you to put up some kitchen shelves, picture the completed shelves next to your partner's happy smiling face, rather than chaos you expect to manufacture with few lengths of wood.

Sometimes the hardest thing to do is nothing, but that is just what some of us need every once in a while to get back on our feet. Some complementary therapies can be very effective in helping the body take time out. Massage and aromatherapy are not just good for relaxing the body; they can also be energizing and stimulating. TIST farmers – enjoy good health!



Water pollution: Why does it matter and what can we do?

When people fetch and drink untreated, polluted water, they may get very sick. We need to educate people in the cluster and community about the danger of untreated water so that they can better know how to treat water to stay healthy.

Water pollution has many causes:

1. Discharge of untreated industrial waste and sewage
2. Careless human action around water points [rivers, wells, boreholes].
3. Poor drainage, so that waste runs into water source and water stagnates. Chemicals, like fertilizers and pesticides, can run from our shambas and pollute water.
4. Bathing and washing clothes at the water sources
5. Urinating and defecating near water sources.
6. Cracked cover slab at boreholes or wells.
7. Lack of latrines in rural areas. Rainwater can wash human waste into water sources.
8. Animals grazing near or in water sources used by people or upstream of people.

Water pollution causes many problems:

1. Pollution can directly poison and kill plant and animals (including people) or cause poisoning through eutrophication, when nitrogen-containing fertilizer and waste are washed into water, causing increased aquatic plant growth. When these plants die, they cause the water to lose oxygen, which causes death for aquatic animals.
2. Polluted water used for cooking, washing and drinking, spreads many human diseases. These include intestinal worms, skin diseases, cholera, and diarrhea.

3. Some chemicals in polluted water can build up in our bodies over time, slowly poisoning us and causing harm to us and our children.

What can we do about pollution?

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



February – March is the perfect time to begin preparing your farm for Conservation Farming.

Many TIST Small Groups have reported that Conservation Farming best practices have helped them get better harvests, even in the very worst years when rainfall is little and unreliable. In good years, the harvest has been impressive. Some groups in dry areas have reported 2 to 5 times improvement in their crop yields!

In Conservation Farming, you add compost manure to holes where you grow your crops and leave crop residues on the field, and do not plow, which limits erosion and the loss of soil nutrients this causes. Crop seeds therefore get many more nutrients than if they were planted using conventional farming methods. The extra nutrients help the seeds to grow into stronger plants with

greater yields.

The holes provide other benefits as well. The holes are very important when the rains come, because instead of washing the good soil and the seeds away, the water flows into the holes and helps the seeds grow better. The combination of the holes and the manure means that the water is held near the seeds for longer, so when the sun comes out again it does not become dry as fast. The holes protect the seeds and you can weed around the holes without hurting the plants.

Remember, when you harvest your crop you should not let the animals destroy or burn the remainder from your farm. The remains of crops will rot and return many good nutrients to the soil, preparing and enriching it for the next planting season.

Indigenous trees: What are they, and why are they important?

Farmers in TIST plant hundreds of species of trees, including fruit and nut trees, trees for fodder, trees that improve soil fertility, and species that can be harvested for timber. More and more farmers are choosing to plant indigenous tree species for their many benefits.

What is an indigenous tree?

An indigenous, or native tree is one that is well adapted to an area because it has grown and reproduced naturally there over a long period of time. Not all species that are familiar to us are

indigenous. Many have been introduced by people from areas far away. There are over 800 species of trees that are indigenous to Kenya.

Why are indigenous trees important?

Because indigenous trees have evolved with the local environment, animals, plants, and other organisms around them, they are well suited to the area. Often, this means that they can grow well without expensive additional inputs like pesticides or fertilizers. They often require less maintenance than exotic, introduced species. They diversify our



farms, so that risks of pest outbreaks can be lower. They provide habitat and food for wildlife and diverse benefits for us from their fruits, timber, leaves, and traditional medicine. Introduced, or exotic species, can provide many benefits, but some can become weedy and crowd out other trees or crops.

When we plant indigenous trees on our farms, we are helping protect species that have been useful to our mothers and fathers, to our grandparents, and to the people and wildlife of Kenya for generations. We are still learning about the benefits of the many species around us. When we plant indigenous species, we can help ensure that the trees and their benefits are there for our children. In TIST, we have some additional incentives for planting indigenous tree species. Groups near rivers who follow TIST best practices for riparian areas and plant indigenous trees may qualify to receive an additional incentive through the TIST Riparian Initiative. TIST Small groups near protected forests who plant indigenous trees may be eligible to join CFAs to plant indigenous species and earn carbon income in these forests. Starting in this payment, you'll notice an additional Indigenous Tree Incentive on your vouchers. Each indigenous tree quantified in your TIST grove qualifies for this new incentive of 1 shilling per indigenous tree per year. It is important to note that this incentive is available because of support from USAID. Unlike the tree payments, which are funded through carbon sales and so will last for at least 30 years, the incentive for indigenous trees is shorter-term, and dependent on outside funding. Currently, we have funding for the additional indigenous tree incentive through 2013. We will work to try to secure additional

funding so that we may be able to extend the incentive for a longer time.

Which tree species are indigenous?

There are hundreds of indigenous tree species in Kenya, and many introduced species that also provide good benefits. Here are some examples of each:

Indigenous trees for Kenya

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Some other trees have been in Kenya for a long time, and are very useful, but are not indigenous. Some of these include mango, macadamia, casuarina, gravellia, bottlebrush, and Mexican green ash.

Try planting some indigenous trees in your shamba today! Look around and see what species grow in the forests near you. Ask your neighbors and cluster members what trees they grow, and which trees in forests provide important benefits for them. If we work together, we can protect this great resource of diverse forests for our children and generations to come. Please call Jeniffer Kithure for information on indigenous trees or the Riparian Initiative at 0726319539.



Deforestation and forest land degradation are serious problems. What can we do?

Deforestation is the removal of trees and other woody vegetation cover.

Forests and woodlands cover about a third of the world's land surface. They regulate climate, protect water resources, provide forest products (e.g. timber, medicine, fruit, and more) worth billions of dollars and support a tremendous variety of plant and animal species. Yet they are being destroyed at a rate of 20 million hectares per year. Half of the world's population depends on these forests for fuel, yet roughly 100 million people do not have enough fuel for minimal energy requirements.

Major causes of deforestation:

- Deforestation occurs when vegetation is cleared for activities like farming or grazing and uses such as: firewood, brick making, fish smoking, tobacco curing, tea drying, construction, and timber.
- Forest degradation is when a forest becomes less diverse and resilient due to poor use and management (for example, when old trees are all cut, leaving mainly brush, or when a useful species is all harvested so that it disappears from the forest, or when forest is heavily grazed, so that trees can't grow to replace those that die).
- Much of deforestation and forest land degradation results from a lack of awareness of the full value of trees.
- In some cases, the value of trees may be known but poverty and the idea that there are no good alternatives lead people to clear trees.

Consequences of Deforestation:

- **Soil erosion:** lack of tree cover and root binding exposes soil to erosion.
- **Lack of forest resources:** removing trees destroys habitats, reduces biodiversity, removes

food and medicinal resources, and increases competition for construction materials. People will have to walk further for firewood, and if forest products are being bought, prices will rise.

- **Deforestation also means we lose the many other benefits of trees:**

Trees act as a windbreak, retain moisture, add oxygen to the air, and add nutrients to soil. Hence without trees the local climate will become drier with increased risk of flooding, wind erosion, decreasing soil fertility and diminished air quality.

What can we do to prevent deforestation and forest degradation?

- Establish tree nurseries and distribute or sell seedlings to the community.
- Use energy-saving cook stoves that use less firewood and charcoal.
- Use alternative sources of energy and fuel when possible (e.g. heating from the sun, sawdust, coffee and risk husks, grass, weeds, crop wastes, animal waste).
- Carry out tree planting activities. Become a successful, effective TIST group! Encourage your neighbors and friends to join TIST as well.
- Do not cultivate land bordering a river or swamp. Leave trees and vegetation to grow to protect these waters.
- Be careful to not over-graze land. Limit animals' access to tree seedlings that they may destroy to give the forest a chance to regrow.
- Encourage agro-forestry or the use of woodlots. Having trees on your land provides good access to forest products and helps protect nearby forest.

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TIST: Ongera inya yaku.

Ja ngari yaku, mwiri jwaku jurititagua ngugi ni maguta, indi wigua urina inya nikujuagia nkuruk i ya kwithira ujuri. Kuria irio o nyuma ya igita ni antu burina bata mono – ugakurukira irio magita jaria ubati kuria. Kinya ukethira utina mpara, ria twirio tunini igita rionthe riria ubati kuria. Riria cukari iria iri ndamune yakara igitagia na kwinama magita jamaingi, inya yetu ya mwiri naya kuthugania ninyiagua. Njira imwe ya kumenyeera ati cukari iria iri ndamune irikara amwe magita jonthe ni kuria irio o igita nyuma ya igita. Ebera irio birina cukari inyingi. Riria cukari yetu ya mwiri ikwonaninia hatari jaria maingi nitwigagua gukara tukirijaga irio bibiuthu bia gwikira miiri inya ja biskuiti na chocolate, biria bituejangaga inya. Kinya kethira irio bibi nibituitithagia o rimwe, jaria maingi nibituejaga urito butina mineral kana vitamin iria ciumba gutumika. Nitwigagua tujuri igita ririkai, indi riu cukari yetu ya ndamu ikenamanga kairi na tukeendelea kwigua kuria gintu kirina cukari. Kuria o igita nyuma ya ririkai, kana kuria twirio tutunini turia turi inya (ta karanga, nkara ya kutherukia, kirigu, njugu imbakie) nitu twega.

Gwita ngugi o igita nyuma ya igita nigwikagira mwiri inya na njira inyingi. Mbele, nigutethagia kwongera ruugo rwa oxygen ruria rukinyaga akiline na icunci bingi bia mwiri. Nigwikagira inya nkoro na mauri, na gukurukira urito bubukai, no kwongere urito bwa midindi. Michetho ya o igita o igita nitethagia kunyiyia kumbika gwa kugwatwa ni murimo jwa diabetes type II na murimo jwa nkoro. Nigutumaga kinya tukaigua tubui na tukiigagua jaria jagwita na mbele jonthe nakuumba kuthithia mantu jetu bwega. Baita ingi ya michetho ya o igita nitethagia kiri kumama. Baria bamenyaga bakuthithia michetho ntuku cionthe nibamamaga bwega nkuruki. Igita ririega ria kunogoka bwega ni warikia kuria irio bia muthenya. Rita iratu biaku, oria weru na worie thimu yaku riu umami. Daika ikumi na ithano gwita mirongo iiri nicio ugwitia nikenda wigua ukunogoka. Toro inying nkuruki ya ou nitumaga ukaigua unogi. Gicunci mirongo kenda kiri igana kia nyomoo iria ciitagwa mammals nicimamaga toro ing'ani gukurukira kumama magita jamaingi muthenya na utuku. Toro ithimiri nithithagia marigaria kiri inya yaku na mantu jaria umba kuthithia. Menya kumama toro yainya.

Irio nibithithagia ruuko na gutina ruuji mwiri jutumba kurita ruuko ruru ruthithagua riria inya ikuthithua kumama na irio bibi. Gutethia mwiri gwita ruuko menyeeria kunyunyaga ruuji rurwingi ntuku yonthe. Kauwa, majani kana cola niguchachamuraga na niigwikagira inya ntuti, indi nyiyia kauwa na majani. Bibi nibitumaga utombo bwaku bugaita ngugi nkuruki na bikanyiyia kuumbika gwaku gwa kumama bwega O uria ukanyua kauwa kana majani gutuki nkuruki, nou umbikia kwaga toro inthongi. Kethira mwiri jwaku nijwigangagua kauwa

kana majani, nyua gikombe kimwe kana biiri o ntuku na ukaminyua kwarikia gukinya thasita muthenya. Nontu chai, kauwa kana cola e kawaida niitumaga miiri yetu ikaigua kunyua ruuji, ni bwega kunyua gikombe kimwe kia ruuji amwe na o gikombe kia bibi kiria ukanyua. Kethira ti ou geria majani jatikitue factory iria jaria maingi jati gintu gigwitua caffeine na nijatumaga ruuji rugacoka mwiri.

Ripoti imwe niciugaga ncombi ithimiri ya igita o igita (imwe kana ijiri o ntuku) kiri arume barina miaka mirongo inna gwitia na kiri aka baria bakurukitie igita ria kugia aana niinyiagia kuumbika kwa murimo jwa nkoro ndene ya igita riraja. Indi-ri, twanyua mono nituebanagira na maisha jetu. Ncombi ni gintu kimwe kiria gituma cukari yetu ya damu gwitia na riu kwinama orimwe. Kiu nikio kimwe gia gitumi kiria twigagua bubuthuku rukiri twanyua ncombi inkai. Ncombi inyingi niitumaga mwiri jukathira ruuji na ikathiria gitema gietu inya. Kunyua ncobi inyingi ni kugwetanagirua na murimo jwa gitema, cancer imwe na thina cia nkoro yaku. Kethira ukanyua, ukanyua nkuruki ya ncobi imwe kana ijiri utuku bumwe.

Antu babaingi baria bakaraga methane ciao nibacimagera, untu buria butumaga urito bwa mwiri gwita rutere rumwe na kurega kung'anira, niu Richard Casebow akuuga, daktari wa Alexander Technique naria Holistic Health Centre iria iri Edinburgh. Wajukia igita riraja methene, menyeera ati nukari nthi uria ukwigua ung'aniri. Taara giti kiria kirungi na kiria kiumba gwitaitithua, kiria gigakuumbithia gukara ukinyiagia na kureiya uraja bwa giti giaku na aria umamirite giti giaku. Ntandi na maru jaku jabati kwithirwa jang'anene na maguru jaku jarikiri jakinyite nthi bwega na ugeka mugongo jwaku gitini nikenda ugwatira mugongo jwaku jwa nthi.

Uria uthuganagia no kugarure uria ukumba kuthuganiria mantu mwanya. Guti gintu gitunogagia na gigatuita motisha ja gukira kuthithia untu. Kuthongomia mantu, kurina untu bumwe buria tumba kuthithia gwitethia kueberia mathuganio jaja jatibui. Antua kuthuganiria uria ukaigua kuthithia untu bou, thuganiria uria ukaigua ung'aniri warikia untu bou. Kethira uria bukaraga nawe nagukara agikunogagia gwaka ntara riikone, thuganiria ntara iu cithithitue akui nan a kirera kirina gikeno kia mwekuru waku antua uuko runthe ruria ukathithia na mpau inkai.

Magita jamwe untu buria buumo buru kuthithia ni kurega kuthithia gintu, indi bou nibu bamwe betu betagia igita rimwe nyuma ya igita riraja nikenda bacooka kairi magurune jao. Therapy imwe cia gutetheria ciomba gutethia mwiri kunogoko. Therapy cia gucorwa na kununkira into bimwe (massage na aromatherapy) ititethagia aki kunogokia mwiri jwaku, nocicokie na kwongera kinya inya yaku. Arimi ba TIST- Gwirirueni thiria ya mwiri!



Kuthukua kwa ruuji: Niki burina bata na niatia tuumba kuthithia?

Riria antu bataaga na kunyua ruuji rutiriti ruuko, no bajue. Nitugwitia kuthomithia antu ndene ya cluster na nturene kwegie uthuku wa ruuji rutiikiri ndawa nikenda bamenya nkuruki njira cia kurita ruuko ruujine na bakara na thiria.

Kuthukua kwa ruujo kuumanagia na mantu jamaingi:

1. Kurekerua kwa ruuji rutikiri ndawa kuuma ibandene na rukone rwa bioro.
2. Mantu ja kiumatha ja antu akui na biumo bia ruuji (miuro, ithima).
3. Mitaro ya gwitithia ruuji itikari bwega, kwou ruuko nirutonyaga kiumone kia ruuji na ruuji rukaigara. Into bibi bia kuthithua ja fertilizer na ndawa cia tunyomoo, nibikamatagwa kuuma miundene na kuthukia ruuji.
4. kuthambira na kuura nguo kiumone kia ruuji
5. Kuumaga na gwita kioro akui na nduuji.
6. Nkuniki cia ithima iria ciatuki.
7. Kwaga bioro nturene. Ruuji rwa ngai norukamate kioro kia muntu na rugagityithia kiumone kia ruuji.
8. Ndithia ikirijaga akui kana biumone bia ruuji bwaruguru ya aria antu bangi bakurutumira.

Kuthukua kwa ruuji nikuretaga thina inyingi:

1. Ruuko ruujine norue sumu na kuuraga imera na nyomoo (amwe na antu) kana gwikira sumu gukurukira gutuma maria jamaingija ruuji jauma. Riria imera bibi bikujaga, nibitumaga ruuji rukathira ruugo rwa oxygen, untu buria butumaga nyomoo cia ruuji ikua.
2. Ruuji rwina ruuko rugatumirwa kuruga, kuthambia na kunyua, nirutambagia mirimo ya antu. Iji ni amwe na njoka cia kiu, mirimo ya

miguta kana ngozi, cholera na kumatuka.

3. Into bimwe ndene ya ruuji rwa ruuko nobingie miirine yetu ndene ya igita riraja, na mpari kua sumu na kwou kugitaria batwi amwe na aana betu.

Niatia tuumba kuthithia kwegie ruuko?

1. Ugata ruuko kana witura ruuji rwa ruuko ndene ya kiumo kia ruuji. Ikira bangi inya kuthithia ou.
2. Anda miti nterene cia miuro na iria. Miiri ya imera ni imieega kiri guchunka ruuko na gutigithia muthetu gutonya ruujine riria rwakamwatwa.
3. Ebera kuanda imera akui mono na nduuji, iria na ithima kwebera gukinya kwa fertilizer ruujine.
4. Ikira antu inya gwaka kuraja na nteere cia nduuji.
5. Menyeera ati ithima nibikumenyeerwa bwega.
6. Irigira kiumo kia ruuji nikenda ndithia itikathukie ruuji.
7. Ugetikiria antu kuurira akui na pampu.
8. Menyeera ati bioro bia kwinja biri mita mirongo itano kana nkuruki kuuma kiri kiumo kia ruuji. Menyeera ati kurina mitaro imieega ya gwikia ruuji kirinyene kiria kiinjiri untu bubu na kiujuritue na maiga aria ruuji rukomba gutonya nthiguru.
9. Thithia nkunuki ya kithima orio riria yaatuka na uthambie antu au o igita nyuma ya igita.
10. Kethira utinganiri ni utheru bwa ruuji, ruchamukie mbele unyua nikenda uuraga tunyomoo turia tuumba gukwajithia.



Mweri jwa iiri – jwa ithatu niko kagita karia keega ga kwambiria kuthuranira munda jwaku niuntu bwa urimi bubwega.

Ikundi bibinini bibingi bia TIST nbitumite ripoti ati mitire iria miega buru ya urimi bwega niibatethetie kwongera maciara jao, kinya ndene ya miaka iria mithuku buru riria kwithiritwe kurina mbura inkai na itiumba gweterwa. Ndene ya miaka imiega, maciara nijethiritwe jari ja kurigaria. Ikundi bimwe ndene ya ntuura injumu nibaugite ati niboonete maciara ja imera biao jakiongereka maita jairi gwita jatano!

Kiri urimi bubwega, wongagira mboleo marinyene aria ukuanda imera biaku na gutiga matigari ja imera muundene, na utirimaga, untu bubu nibunyiagia gukamatwa kwa muthetu na kuura kwa nutrienti cia muthetu kuria kuumanagia na bubu. Mpindi cia imera kwou niconaga nutrient ingi inyingi nkuruki ya iria iringiona njira cia gintwire iringi tumirwa. Nutrient iji cia kwongera nicitethagia mbeu

gukura na kua imera birina inya na birina maciara jamanene nkuruki.

Marinya kinya nijaretaga baita ingi. Marinya jarina bata mono riria mbura ijaga, niuntu antua gukamata muthetu jumwega na mpindi, ruuji nirutonyaga kirinyene na rugatethia kimera gukura bwega nkuruki. Marinya na mboleo amwe ni kuuga ruuji nirwikagwa akui na mbeu igita riraja nkuruki, nikenda riu riaumira kairi gutiumanga ntuti. Marinya nijaitaga mbeu na womba gukurira iria ukithiurukaga marinya utigukinyira imera.

Rikana, riria waketha kimera giaku utibati kureka ndithia ithukia na uithia matigari kuumania na muunda jwaku. Matigari ja imera jakooro na jacokie nutrient inyingi injega muthetune na kujuthuranira na kujunoria niuntu bwa mbura iu ingi.

Miti ya gintwire: Nimbi, na niki irina bata?

Arimi ndene ya TIST nibaandaga mithemba ya miti Magana, amwe na mitunda na miti ya nkandi, miti ya irio bia ndithia, miti iria yongagira unoru bwa muthetu na mithemba iria yumba kugitwa niuntu bwa mpau. Arimi bangi na bangi nibakuthuura kuanda miti ya mithemba ya gintwire niuntu bwa baita ciayo inyingi.

Muti jwa gintwire ni juriku?

Muti jwa gintwire ni juria jumenyaniritie naantu ana nontu nijukurite na jwaciarana jungwa au ndene ya igita ririraja. Ti mithemba yonthe iria twiji iri ya gintwire. Imingi nireti ni antu kuuma ntuura cia

kuraja. Kurina mithemba ya miti ya gintwire nkuruki ya magana janana ndene ya Kenya.

Niki miti ya gintwire irina bata?

Niuntu miti ya gintwire nigarukanitie na rera ya antu au, nyomoo, imera na into bingi biri moyo biria bimithiurukite, na niithagirwa ing'anirite antu au. Jaria maingi, bubu nitakuuga ati noikure bwega kwinya gutina into bia kwongera ja ndawa cia tunyomoo na fertilizer. Jaria maingi niitaga kumenyerwa kugukai nkuruki ya mithemba iria ireti. Niaramagia miunda mwanka kwithirukua gwa kuumbuka gwa tunyomoo turia tuthukagia imera gukanyia.



Niejaga nyomoo cia kithaka gikaro na irio na gutua baita inyingi ja matunda, mpao, mathangu na ndawa cia gintwire. Miti iria ireti kinyayo no itweae baita inyingi, indi imwe niejaga iria na kuumba miti kana imera

Riria twaanda miti ya gintwire miundene yetu, nitugutethia kumenyeera mithemba iria ithiritwe igitumagirwa ni mami na baba betu, juju betu na kiri antu na nyomoo cia kithaka cia Kenya niuntu bwa nthuki inyingi. Notukuthoma kwegie baita cia mithemba imingi iria ituthiurukite. Riria tuandaga mithemba ya gintwire, notutethie kumenyeera ati miti iu na baita ciayo irio niuntu bwa aana betu.

Ndene ya TIST kurina motisha ingi niuntu bwa uandi bwa miti mithemba ya gintwire. Ikundi akui na nduji biria bithingataga mitire imiega nkuruki ya TIST kiri ntuura iria iri akui na nduui na bikaanda miti ya gintwire nibiumbaga kuewa motisha iji gukurukira mubango juria jwitagwa TIST Riparian Initiative. Ikundi bibinini bia TIST akui na miitu biria biandaga miti ya gintwire nobitonye kiri CFA nikenda bianda mti ya gintwire na bikoona mbeba kuumania na kwendia kaboni iria ijukagua ni miitu iji. Kwambira igitene riri ria kuria, ukoona ati kurina motisha ya kwongera niuntu bwa miti ya gintwire kiri vucha yaku. O muti jumwe jwa gintwire juria jutaragwa ndene ya munda jwaku jwa TIST nijuumbaga kuriwa motisha iu njeru ya shilingi imwe kiri o muti omwaka. Burina bata kumenya ati motisha iji irio niuntu bwa utethio bwa USAID. Mwanja na mbeba ingi, iria cionekaga gukurukira kwendia kaboni na kwou igakara miaka nkuruki ya mirongo ithatu, motisha iji ya miti ya gintwire niya igita ririkai, na ikaringana na utethio bwa kimbeba kuuma oome. Thaa iji, turina mbeba cia motisha iji iria igatukinyia mwishi jwa mwaka jwa 2013. Tukarita ngugi kugeria kwona

mbeba ingi nikenda tuumba kuejana motisha iji igita ririraja nkuruki.

Ni mithemba iriku ya miti iri ya gintwire?

Kurina miti mithemba ya gintwire Magana ndene ya Kenya, na imingi iria ijite kinyayo nituejaga baita injega. Aja ni mithemba imikai:

Miti ya gintwire Kenya

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Miti ingi nikarite Kenya igita ririraja na irina utumiri bubwingi, indi tiya gintwire. Miti imwe ya iji nita miembe, mibukandu, casuarina, mikiribiria, bottlebrush na Mexican Green ash.

Geria kuanda miti imwe ya gintwire muundene jwaku narua! Tega akui nagwe na umenye ni mithemba iriku igukura ndene ya miitu iria iri akui nagwe. Uria aturi baku na amemba ba cluster miti iria baandite na miti iria iri miitune ibaejaga baita. Tukarita ngugi amwe, notumenyeere gintu giki gikinene kia miitu irina mithemba ya miti imingi niuntu bwa aana betu na nthuki inyingi iria ikeeja. Ringira Jennifer Kithure wenda kumenya untu kinya buriku kwegie miti ya gintwire kana mubango jwa motisha kiri miunda iria iri ntereene cia nduui na namba iji 0726319539.



Niatia tuumba kuthithia? Ugiti miti na uthukia bwa miunda ya miitu ni thiina inene.

Ugiti miti ni amwe na uriti bwa miti na imera bingi biria bikunikirite nthi.

Miitu na ithaka nibikunikagira gicunci kimwe kiri bithatu kia nthi yonthe. Niithongomagia rera, igakaria nduuji, ikaejana into kuumania na miitu (ta mpao, ndawa, matunda na bingi) bia mbece inyingi na ikagwatira imera na nyomoo cia mithemba imingi. Na gintu gia kurigaria no ikuthukua miitu iri miundene ya hectare milioni mirongo iiri o mwaka. Nusu ya antu ndene ya nthiguru yonthe nibatumagira miitu ta nkuu nakurigaria akui antu milioni igana batina nkuu ing'ani cia utumiri bwa nthiguru buru.

Itumi biria binene bia kugiita miti:

- Ugiti miti bukarikaga riria imera bigitagwa nikenda miunda irugurwa gutumirwa mantune jangi ta kurima kana kurithia na mootumiri jangi ta: nkuu, kuthithia maiga ja gwaka, gutogia makuyu, kuithia mbaki, kunyaria majani, gwaka na mpao.
- Uthukia bwa miunda ya miitu ni riria mwitu junyagia mithemba ya imera na nyomoo na uumiria bwaju niuntu bwa utumiri na umenyeeri bubuthuku (mung'uanano, riria miti imikuru yagitwa yonthe gugatigwa na miti iminini aki, kana riria muthemba jurina bata jwagitwa junthe mwanka jukathira mwitune, kana riria mwitu jwarithua nainya mwanka miti ikaremwa kuuma antua iu ikuite).
- Ugiti miti na uthukia bwa miunda ya miitu buria bwingi buumanagia na kwaga umenyo kwegie bata ya miti.
- Rimwe na rimwe, bata ya miti noithirwe iijikene indi ukia na kwithirwa gutina kingi gia gutuumira nigutumaga antu bakagiita miti.

Mantu jaria jaumanagia na ugiti miti:

- **Gukamatwa kwa muthetu:** kwaga miti ya gukunikira na kugwata muthetu nigutumaga muthetu jugakamatwa.

- **Kwaga into biria biumanagia na miitu:** Kurita miti nikwinyangagia ikaro, gukanyia gukaranira kwa nyomoo na imera bia mithemba imingi mwanya, gukarita biumo bia irio na ndawa na gukaingiyia gushindanirwa kwa into bia gwaka. Antu bakaa bageeta kuraaja nkuruki gucua nkuu na kethira into bia kuumania na miitu kabikugurwa, uguri bugaitia.
- **Kugiita miti kinya ni kuuga tukaaga baita ingi cia miti:** Miti niritaga ngugi ya kunyiyia ruugo, gwika ruuji, kwongera ruugo rurwega, na kwongera irio bibiega muthetune. Kwou gutina miti rera ikooma nkuruki na kuumbika gwa kuigara kwa ruuji, gukamatwa kwa muthetu ni ruugo, kunyia kwa unoru bwa muthetu na kunyia kwa utheru bwa ruugo ruria tugukucia gukongereka.

Niatia tuumba kuthithia nikenda tutigithia ugiti miti na uthukia bwa miunda ya miitu?

- Ambia minanda ya miti na wenderie miti ntuura yaku.
- Tuumira mariko ja nkuu kana makara jamakai.
- Tuumira into bingi riria gukuumbika(ta mwanki jwa riuu, sawdust, mati ja kauwa na muchele, maria, matigari ja imera na ja nyomoo)
- Andeni miti. Eeni gikundi gia TIST gigwita ngugi na gikumbana! Ikira moyo aturi na acore baku gutonya kiri TIST.
- Ukarima muunda juankene na ruuji kana irimba. Tigana na miti na imera biume bimenyeere nduuji iji.
- Menyeera utikarithie nkuruki ya uria ubati. Ukenda nyomoo ikuiiria miti iminini ciija kuthukia kana gwata mwitu kanya ga gukuura kairi.
- Ikira moyo antu kurima imera amwe na miti kana kuanda miti ithiurukirite miunda. Kwithirwa urina miti muundene jwaku nigukuejaga into bionthe kuumania na mwitu na gugatethia kumenyeera miitu iria iri akui.

Mazingira Bora



TIST

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

Kikuyu Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Farmer and a Leader, Dorothy Muriuki preparing her shamba using Conservation Farming (zero tillage Method. Many farmers have reported increased crop harvests after using CF.

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TIST: Ongerera hinya.

Ota ngari yaku, mwiri waku niuhuthagira maguta, no riria waigua uri na hinya ni makiria ma kwongerera calories. Irio cia o hingo itaratigana muno ni cia bata muno – ndukage kuria irio. Gucokerwo muno kwa cukari kuambatira na kunyiha nigutumaga tugie na mathina ma mwiri ona meciria. Njira imwe njega ya kuiga cukari uri mugananiru ni kuria maita maingi. Ona angikorwo nduri muhutu, kuria kindu kinini ihinda ria kuria ona gacunji ka matunda noguteithie kuigananiria cukari. Witheme na kuria indo ciri na cukari muingi. Riria miiri iitu yaruta tawa mutune nituiguaga tukienda kuria carbohydrates, ta biscuits na chocolate iria iheanaga hinya wa na-ihenya. Ona gutuika irio muthemba uyu nociheane hinya wa na-ihenya cituheaga calories iria citari na minerals kana vitamins. Nituiguaga twaiganira gwa kahinda kanini no cukari noucoke thi o ringi na-ihenya na kaundu kau ga kwenda kuria irio muthemba ucio gagecokera. Kuria irio maita maingi na irio huthu ciri na hinya ta matumbi, marigu na ingi ni njega.

Kurutithia mwiri waku wira nigwikiraga mwiri hinya na njira nyingi. Wa mbere, niguteithagiriria kugayania riera thiini wa hakiri na kungi mwiri-ini. Gugekira ngoro hinya o hamwe na mahuri na gwikira mahindi hinya. Ungika uu makiria nikunyahaga ugwati wa type II diabetes na mirimu ya cardiovascular. Nyingi nigutumaga tugaikara tukiimenyaga na kuhota kuruta mawira maitu. Mawega mangi makurutithia mwiri wira ni toro mwega. Aria marutithagia miiri yao hinya nimakomaga wega. Mahinda maria mega makugia na kihuruko kiega ni thutha wa kuria lunch. Ruta iratu, horia matawa na uhorie thimu ucoke ukome. Ndagika 15-20 nicio urabatara niguo kuigua wega. Gukoma wega nigugutuma uigue uri na hinya mweru. Gicunji ta kia 90% kia mammals kiamukagira quota ya toro wacio kumana na tucunji tunini twa toro utuku na muthenya. Toro mwega ndumakaga kana uri na hinya na kana niurahota kuruta wira. Wirute gukoma wega.

Irio nicithondekaga giko na hatari maai mwiri ndungihota kuruta giko giki hatari na maai riria urathondeka hinya. Na niguo guteithia mwiri gute giko giiki, wimenyerie kunyuaga maai muthenya wothe. Kahuwa, macani na cola niciheanaga hinya wa na-ihenya no nyihia unyui w caffeine. Niitumaga hakiri ciambatire na igatuma ndukage na toro muiganu. O uria wacererwo hari unyui wa caffeine,

noguo uguthumbuka ugikoma. Angikorwo niuthumburagwo ni caffeine, wimenyerie kunyua imwe kana igiri na ndukanyue thutha wa lunch. Na tondu chai, kahuwa na cola nocinyihie maai mwiri-ini, niwega kunyua gikombe kimwe kia maai iguru ria kunyua ikombe ici. Kana ugerie chai wa ki-nduire, uria utakoragwo na caffeine.

Ripoti nyingi ciugaga unyui wa njohi muigananiru (1-2) o muthenya kuri arume aria mari na miaka 40 na makiria na atumia aria matigite kugia ciana nokunyahie ugwati wa murimu wa ngoro. Ona kuri o uguo, kunyua muno nokurehe ugwati wa murimu wa ngoro. Njohi niyo kindu kiria kingituma cukari wa mwiri wambatire. Undu uyu niumwe wa maria matumaga mundu aigue uuru rucini thutha wa kunyua njohi. Njohi nyingi niing'aragia maai mwiri-ini na ugatuma ini ria mundu riage hinya. Unyui muingi wa njohi ningi niurehaga murimu wa ini, cancer ingi namathina ma ngoro. Angikorwo niukunyua makiria ma njohi igiri o utuku.

Andu aria matindaga maikaire thi nimekunjaga undu uria utumaga ciiga cia mwiri cinoge, niguo Richard Casebow, muthomi wa Alexander Technique kuria Holistic Health Center thiini wa Edinburgh. Riria wahuthiragicunji kia mahinda maku uikaire thi, tigurira niuikarite wega. Huthira giti kinginyihanyihio kana kuraiharaiho, gutwarwo mbere na thutha. Njikariro na maru maku ciagiriirwo nigukorwo cigananiirie maguru matamburukitio wega.

Mweciririe niutumaga mundu aigue wega na njira nyingi. Gutikoragwo ta gwika kaundu niguo kuigua uri munogu na utari na mayu. Kwa munyaka, nigukoraguo na njira ya njira ya meciria tungithaka nayo niguo kuhoreria mwiri. Handu hagwiciria uria uri na wira muritu, wicirie uria ungiiganira riria warikia wira uyu. Angikorwo mwendwa waku niaraguthumbura guthondeka riiko, wicirie uria riiko riu ringikorwo riri na riri riri riega mwendwa waku arugamite hau mwena handuini ha guikara ukirehage thina.

Maita maingi maundu maria mari hinya gwika ni guikara uguo, no uguo niguo umwe amwe aitu magiriirwo nigukorwo magika niguo kuhota guthii na-mbere. Maundu magwikirwo hinya nimega na nomateithie miiri kuhuruka. Gucocora mwiri tikuiganu kuhurukia mwiri. Arimi a TIST giai na ugima wa mwiri mwega!



Uthukia wa Maai: Uhoru uyu ni wa bata niki na niatia tungika?

Riria andu mataha na manyua maai mari na giko na matari mathondeke, no marware. Niturabatara guthomithia andu aitu thiini wa cluster na matuura-ini mogwati ma maai matari mathondeke niguu mataukirwo na mamenye guthondeka maai na maikare mari agima.

Maai mathukagio ni maundu maingi:

1. kunithiria maai ma iganda andu-ini.
2. Ciiko citari na umenyereeri ruui-ini na ithima-ini.
3. Kunithia maai ma giko uru nginya ruui. Chemicals ta fertilizer na dawa cia tutambi nociume mugunda na cithukie maai.
4. Gwithambira na kuuurira nguo ruui.
5. Guthuguma na kumia maaini.
6. Gwatuka kwa ruthingo rwa ithima.
7. Kwaga cioro micii-ini. Maai ma mbura nomakuue mai nginya ruui.
8. Kuriithia mahiu hakuhi na ihumo cia maai.

Uthukia wa maai niurehage mathina maingi:

1. uthukia wa maai nourage mimera na mahiu ohamwe na andu. Ningi no guthukie kuhitukira eutrophication, riria fertilizer iria iri na nitrogen na giko kingi giathii maai-ini. Riria mimera ino yakua niitumaga maai mage oxygen, iria itumaga nyamu cia maai-ini cikue.
2. Maai mari na giko maria mahuthikaga kuruga, guthambia na kunyua, nigutheremagia mirimu

miingi ya nyamu. Uu nita joka, mirimu ya ngothi, kuharwo.

3. Chemical ingi thiini wa maai mari na giko nocikuririre miiri-ini iitu gwa kahinda na kwongerera ugwati kuri ciana ciitu ohamwe naithui.

Tungika atia niundu wa maai mari na giko?

1. Ndugate giko kana uite giko ruui-ini. Hinyiriria aria angi meke taguo.
2. Handa miti ruteere-ini rwa ruui. Miri ya miti nimiega na gucunga maai na kugitira tiiri gukuuo ni maai.
3. Ndukahande mimera na irio hakuhi na ruui kana ithima niguu fertilizer ndigathii ruui.
4. hinyiriria andu matikage hakuhi na ruui.
5. Tigirira ithima na marima ma maai niciamenyererwo wega.
6. Irigira ihumo cia maai niguu kugitira mahiu matikaingire ruui.
7. Ndugetikirie andu mathambirie ruui.
8. Tigirira cioro cia irima ciri 50m na makiria kuma ihumo cia maai. Tigirira maai nimaunithirie wega.
9. thinga miatuka yothe ruthingo rwa ithima.
10. Angikorwo nduri na uma na utheru wa maai, therukia mbere ya kunyua niguu urage indo iria ingituma urware.



February – March ni kahinda kega ga kwambiriria kuhariria mugunda niundu wa Kilimo Hai.

Ikundi nyingi cia TIST niciugite ati Kilimo Hai ni urimi mwega na niunateithitie kugia na magetha maingi, ona riria mbura iri nini na itarehokeka. Riria kimera kiri kiega nimakoragwo na magetha mega. Ikundi imwe iria ciri kundu kuumu nimakoretwo na wongerereku wa magetha wa maita 2-5.

Thiini wa Kilimo Hai, wongagirira thumu marima-ini kuria ukuragia irio na ugatiga matigari mugunda, ndukarime niguo tiiri ndugakuu ni maai na wage unoru. Mbegu cia mimera nicigiaga hinya gukira iria cihanditwo kuhuthira njira cia tene. Hinya ucio niutumaga irio cikure wega na magetha

maingihe.

Marima nimakoragwo na mawega mangi maingi. Marima ni ma bata riria mbura yaura, tondu handu ha guthambia tiiri na gukuuambegu, maai maingiraga irima-ini na guteithia gukura wega. Gukorwo na irima hamwe na thumu nikuga ati maai nimaikaraga irima-ini makiria, kwa uguo riria kuri na riuu mimera ndingiuma na-ihanya. Irima nirigitagira mbegu tondu nourimire irima-ini thiini itakuhutia mumera.

Ririkana, riria wabetha irio, ndukareke mahiu mathukie kana ucine matigari ma mugunda. Matigari ma irio nimakuorera mugunda na mathondeke tiiri, niundu wa kimera giukite.

Miti ya Ki-nduire: Ni iriku, niya bata niki?

Arimi thiini wa TIST nimahandaga magana maingi ma mithemba ya miti, hamwe na miti ya matunda na nuts, miti ya kurio ni mahiu, miti ya kwongerera unoru wa tiiri na mithemba ingi ya gwaturwo mbau. Arimi makiria nimaracagura miti ya ki-nduire niundu wa mawega mayo.

Muti wa ki-nduire ni uriku?

Muti wa ki-nduire ni muti uria ukurite na njira cia ki-nduire gwa kahinda karaihu. Ti mithemba yothe

iria tuui ikoragwo iri ya ki-nduire. Ingi irehetwo ni andu kuma kundu kuraihu. Kuri na makiria ma mithemba 800 iria niya ki-nduire guku Kenya.

Miti ya ki-nduire niya bata niki?

Na tondu miti ya ki-nduire niikuraniirie na maria maturigiciirie, nyamu, mimera na indo ingi nyingi, niikoragwo yagiriire. Maita maingi, uu nikuga ati ndibataraga gutungatwo muno na niikuraga itara na umenyereki munene ta miti ya guka. Niutumaga migunda iitu ikure indo nyingi na ugwati wa tutambi



ukanyiha. Niithondekaga ituuro na irio kuri nyamu cia githaka ohamwe na kuruta matunda, mbau, mahuti na dawa cia ki-nduire. Miti ya guuka noikorwo na mawega no ingi noikorwo na riia riingi na ihumbire miti iria ingi.

Riria twahanda miti ya ki-nduire migunda iitu, niturateithiriria kugitira mithemba iria ikoretwo iri na bata kuri aciari aitu, kuria aciari a aciari aitu na andu angi an nyamu cia githak. Noturathoma mawega ma mithemba miingi ya miti iria iturigiciirie. Riria twahanda miti ya ki-nduire, niturateithia gutigirira miti na mawega mayo nikuri ciana ciitu.

Thiini wa TIST, turi na njohherera kuri aria mahanda miti ya ki-nduire. Ikundi iria ciri hankuhi na ruui iria cirumagirira mitarata ya TIST ya kuria kwaraga na niirahanda miti ya kinduire. Ikundi cia TIST iria irihakuhi na mititu ya thirikari iria ciahanda miti ya ki-nduire nociitikirike kuingira CFA niguo magia na mbecha kumana na wendia wa carbon. Kwambiriria marihi maya, niukuona njohherera makiria cia miti ya kinduire thiini wa voucher cianyu. O muti wa ki-nduire watarwo mugunda-ini waku niundu wa njohherera ino ni 1 shilling hari o mwaka. Niwega kumenya ati njohherera ciri ho niundu wa USAID. Tiga uria miti irahagwo, kuhitukira wendia wa carbon credits na guthii uguo nginya miaka 30, njohherera cia miti ya ki-nduire ni cia kahinda kanini na nicia uteithio kuma nja. Gwa kahinda gaka, turi na uteithio kuma nja niguo gutuhotithia kuheana njohherera.

Ni miti iriku ya ki-nduire?

Kuri na miti magana maingi iria niy ki-nduire thiini wa Kenya, na ingi yakurehwo iria irehaga

mawega maingi. Ino ni imwe yayo:

Miti ya kinduire thiini wa Kenya

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Miti ingi niikoretwo Kenya gwa kahinda karaihu na niya bata, no tiya ki-nduire. Ino nita maembe, macadamia, causuarina, gravellia, bottle brush na mexican gren.

Geria kuhanda miti ya kinduire migunda-ini yanyu! Rora na wone ni miti iriku ya ki-nduire ingikura kwanyu. Uria aria muriganitie na cluster cianyu miti iria makuragia, na miti iria ikoragwo na mawega maingi kuri o. riria twaruta wira turi hamwe, notugitire maundu maya ma mititu niundu wa ciana ciitu. Hurira Jeniffer Kithure kwa uhoro makiria wa miti ya kinduire kana maundu ma uhandi wa miti kuria kwaraga kuhitukira 0726319539



Utemi wa miti na uthukangia wa migunda ya mititu ni thina munene, tungika atia?

Mititu ikoragwo ihumbirite gicunji kia imwe hari ithatu gia thi. Niyo inyitagirira riera, kugitira ihumo cia maai, gutuhe mbau, dawa na matunda iria ni cia goro muno na gutuma nyamu na andu maturue. Na noirathii nambere na guthukangiona njira nene muno. Nuthu ya muingi wa thi ukoragwo wihokete mititu, na andu ta 100 milion matiri na ngu ciakuigana.

Itumi nene cia utemi wa miti:

- Utemi wa miti wonekaga riria kwoneka nokurimike kana kuriithio mahiu na njira ingi ta gutema ngu, ucini wa maturubari, utegi ucini wa thamaki, ucini wa mbaki, umithia wa macani waki na waturi wa mbau.
- Uthukangia wa mititu ni riria mititu yanyiha niundu wa kuhuthirwo uuru na kwaga kumenyererwo(muhiano ta riria miti minene yatemwo gwatigara miti itari miraihu kana miti ya bata riria yatemwo ona kana kuriithio mahiu)
- Uthukangia na nutemi wa mititu muingi umanaga na kwaga umenyo wa bata munene wa miti.
- Njira-ini ingi, bata wa miti noumenyeke no ukia na andu gwiciria gutiri na njira ingi nigueumaga mititu ithire.

Maciaro ma uthukangia wa mititu.

- Gukuuo gwa tiiri ni maai: kwaga kindu kihumbirite tiiri

- Kwaga mawega maria maumanaga na miti ta nyamu,dawa irio, andu mathiaga kundu kuraihu gucietha.
- Kwaga mawega maria marehagwo ni miti: miti niihuthikaga kunyihanyihia ruhuho, kuiga ugunyu na gutheria riera o hamwe na kwongerera tiiri hinya. Tutari na miti riera riitu niriguthuka na tukorwo ugwati-ini wa wa ng'aragu.

Niatia tungika kugitira uthukangia wa mititu?

- Ambiriria tuta na uheane kana wendie mimera ya miti.
- Huthira riiko ritarahuthira ngu nyingi.huthinra njira ingi ya kuruga na kuhiuhia maai(ta kuhiuhia maai na riuu, mhanda mitiura, makoni ma kahua nyeki na mai ma ng'ombe).
- Handa miti kwa uingi, ingira TIST na uingiria angu.
- Ndukarime mugunda hakuhi na ruui. Reke miti na mimera ingi cikure na ugutire maai.
- Ndukariithie mahiu mugunda muno. Ndukareke ng'omb irie kuria kuri na mimera ya miti.
- Handa miti mugunda-ini uria uria urahanda irio. Riria wahanda miti mugunda niuhotaga kwigwatira mawega ma mutitu.

Mazingira Bora



TIST

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

Kiswahili Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Farmer and a Leader, Dorothy Muriuki preparing her shamba using Conservation Farming (zero tillage Method. Many farmers have reported increased crop harvests after using CF.

Ndani:

TIST: Ongeza nguvu yako. Page 2

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Ukataji miti na kuzorota kwa mashamba yenye misitu ni shida kubwa sana. Tunaweza kufanyeje? Page 6



TIST: Ongeza nguvu yako.

Kama gari lako, iili yetu inatumia ngata ili kufanya kazi, lakini hisia ya nguvu uchukua zaidi ya kujijaza kwa kalori. Chakula cha vipindi vya mara kwa mara siku yote ni muhimu sana – usipitie masaa ya kukula. Mizunguko iliyofuatana ya sukari nyingi na ndogo katika damu hupunguza nguvu yetu ya kimwili na kiakili. Njia moja ya kuhakikisha sukari katika damu haibadiliki ni kula chakula kila baada ya muda Fulani. Hata usipokuwa na njaa, kula kitu kidogo wakati wa vyakula, ata kipande cha tunda, chaweza kudhibiti sukari katika damu yako. Jiepushe na vitu vilivyo vitamu sana. Wakati sukari katika miili yetu inaonyesha hatari mara nyingi tunatamani vyakula vyepesi vya wanga, kama biskuti na chokoleti, vinavyotupa nguvu ya haraka. Ingawa vyakula hivyo vyaweza kutupa nguvu ya upesi, hutupa kalori isiyo na madini na vitamin muhimu. Tunahisi tumeshiba muda cfupi, halafu sukari katika damu inashuka haraka tena na mzunguko wa kutamani kitu chenye sukari unaanza unaendelea. Chakula cha vipindi vilivyo sawa, ama vyakula vyepesi vyenye afya (kama njugu chache, yai lililochemshwa, ndizi, njugu zilizochomwa) ni vyema.

Michezo ya mwara kwa mara huupa mwili nguvu kwa kupitia njia mbalimbali. Kwanza, inasaidia kuongeza kiasi cha hewa ya oksijeni kinachofika ubongoni na katika sehemu zingine za mwili. Inatia moyo na mapafu nguvu na kwa upinzani usio mzito, huongeza uzito wa mifupa yetu. Michezo ya mara kwa mara yaweza kupunguza uwezekano wa kupata ugonjwa wa kisukari aina II na wa moyo. Inatusaidia kusikia tupo tahadhari na wenye kumakinika katika kazi zetu. Faida nyingine ya michezo ya mara kwa mara ni katika usingizi. Wanaofanya michezo ya mara kwa mara hujipata wamelala vizuri zaidi. Wakati mzuri wa kupata mapumziko ya ziada ni baada ya chakula cha mchana. Toa viatu vyako, zima taa, zima simu na ulale. dakika kumi na tano au ishirini ndizo unazohitaji kulala ili kujisikia umechangamka. Usingizi zaidi hukufanya kujisika mnyonge. Asilimia tisini ya wanyama hupata usingizi wanaofaa kupitia usingizi kidogo kidogo mchana na usiku. Usingizi uliopimwa hufanya maajabu kwa nguvu yako na uzalishaji. Jifunze kulala usingizi wenye madaraka.

Chakula hutoa uchafu na bila maji mwili hauwezi kuutoa uchafu huu unaotengenezwa katika mchakato wa kutengeza nishati. Kusaidia mwili kutoa uchafu huu, jizoeshe kunywa maji nyingi siku yote. Kahawa, chai na cola husisimua na kutuongeza nishati ya haraka, lakini punguza kahawa na chai. Hivi vina uwezo wa kuisimua ubongo na hupunguza uwezekano wa kupata usingizi tosha. Unavyokunywa hivi vinywaji usiku zaidi, ndivyo unavyoongeza uwezekano wa kusumbua usingizi wako. Iwapo mwili wako huhisi hii kafeni kwa haraka, kunywa kikombe

kimoja au viwili kwa siku na hujiepushe nayo baada ya saa sita mchana. Kwa sababu chai, kahawa na cola ya kawaida hupunguza maji mwilini) ni ushauri mzuri kunywa kikombe kimoja cha maji pamoja na kila kikombe cha hivi vinywaji unchokunyua. Kama si hivyo jaribu chai zenye mitishamba, nyingi ambazo hazina kafeni na zinaupa mwili maji.

Baadhi ya ripoti husema pombe kidogo, ya mara kwa mara (chupa moja au mbili) kwa wanaume wenye umri zaidi ya arobaini na wanawake waliopitisha umri wa kupata watoto yaweza kupunguza uwezekano wa ugonjwa wa moyo kwa muda mrefu. Hata hivyo kunywa sana na tunayaaga maisha kwaheri. Pombe ni kitu kimoja kinachoweza kufanya sukari katika damu kupanda mara moja na kasha kushuka kwa upesi. Hiyo ndiyo moja ya sababu za kusikia vibaya sana asubuhi baada ya chupa chache. Pombe nyingi huacha mwili hukiwa hauna maji na baada ya muda humaliza nguvu ya ini. Kunywa pombe kupita kiasi husababisha magonjwa ya ini, ugonjwa wa saratani mbali mbali na shida za moyo.

Watu wengi wanaoketi mezani hulalia meza, jambo ambalo husababisha kukosekana kwa usawa wa kimwili na kusumbuka, asema Richard Casebow, daktari wa Alexander Technique, kituo cha afya cha Holistic Health Centre kilicho Edinburgh. Unapochukua muda mrefu ukiwa mezani hakikisha umekaa bila kusumbuka. Chagua kiti kilichosimama vizuri na kinachokuruhusu kubadilisha urefu na jinsi ulivyolalia kiti. Makalio na magoti yako yawe yamepimana na miguu yako iliyowekwa chini kwa ustarehe na ulaze mgogongo wako kitini ili kushikilia mgogongo wako wa chini.

Jinsi unavyochukua mambo ina ushawishi mkubwa wa mambo unayojihusisha nayo. Hakuna kitu kinachotufanya kuchoka na kupoteza motisha kama kuogopa kufanya kitu Fulani. Kwa bahati nzuri, kunavyo unaweza kuchezea ubongo wako ili kujisaidia kuepuka mafikira mabaya. Badala ya kufikiria sana kuhusu ubaya wa jambo unalofaa kufanya, makinika kwa hisia ya kuridhika utakayofurahia ukimaliza kufanya jambo hilo. Kama mwenzako anakusumbua kupigilia rafu jikoni, fikiria rafu zilizokamilika karibu na uso wa mwenzako wenye furaha badala ya machafuko unayotarajia kupata kutokana na mbao chache.

Wakati mwingine kilicho kigumu kufanya ni kutofanya chochote, lakini jambo hili ndilo baadhi yetu huhitaji kila baada ya muda ili kurudisha nguvu yetu. Matibabu ya ziada yaweza kusaidia sana kupumzika. Matibabu ya massage na aromatherapy si mazuri tu katika kupumzisha mwili; yaweza kutumiwa pia kurudisha nguvu na kuusisimua mwili. Wakulima wa TIST – furahia afya nzuri!



Uchafuzi wa maji: mbona unamaana na twaweza kufanya nini?

Watu wanapochota maji machafu yasiyotibiwa na kuyanyua, waweza kuwa wagonjwa. Tunahitaji kuwaelimisha watu katika cluster na jamii kuhusu hatari za maji yasiyotibiwa ili wajue vizuri zaidi jinsi ya kutibu maji ili kukaa wenye afya.

Uchafuzi wa maji husababishwa na vitu kadha:

1. Kuachiliwa kwa maji ya viwanda na ya choo yasiyotibiwa.
2. Shughuli za binadamu wenye kutojali karibu na maji (mito, visima).
3. Mitaro mibaya, hivyo basi maji ya uchafu huingia katika chanzo cha maji na maji yanafukara. Kemikali kama mbolea a viwanda na dawa za wadudu, hubebwa kutoka mashambani na kuchafua maji.
4. Kuoga na kuosha nguo katika vyanzo vya maji.
5. Kukojoa na kuenda haja karibu na vyanzo vya maji.
6. Vifuniko vya visima vilivyopata nyufa.
7. Ukosefu wa vyoo mashinani. Maji ya mvua hubeba uchafu wa binadamu hadi majini.
8. Wanyama kulishwa karibu au katika vyanzo vya maji yanayotumika na watu walio chini zaidi ya mto huo.

Uchafuzi wa maji husababisha shida kadha:

1. Uchafuzi waweza kutia sumu moja kwa moja na kuuua mimea na wanyama (pamoja na watu au kutia sumu kupitia kumea kwa mimea mingi ya majini. Mimea hii inapokufa, inafanya maji kupoteza hewa ya oksijeni, jambo ambalo husababisha vifo vya wanyama wa maji.
2. Maji machafu yanapotumika kupika, kuosha na kunyua, hueneza magonjwa ya binadamu. Haya

ni kama minyoo, magonjwa ya ngozi , kipindupindu na kuharisha.

3. Baadhi ya kemikali katika maji machafu zaweza kuongezeka katika miili yetu kwa muda mrefu na kutupa simu pole pole na kuleta madhara kwetu na kwa watoto wetu.

Twaweza kufanyeje kuhusu uchafuzi?

1. Tusitupe taka au kumwaga taka katika vyanzo vya maji. Hamasisha wengine kufanya vivyo hivyo.
2. Panda miti kando ya mito na katika maziwa. Mizizi ya mimea huchuja taka izuri na pia huachisha udongo kuingia katika vyanzo vya maji kupitia mmomonyoko wa udongo.
3. Jiepushe na kupanda mimea karibu sana na mito, maziwa au visima ili kuepukana na mbolea za viwanda kuingia majini.
4. Hamasisha watu kujenga mbali na kando ya mito.
5. Hakikisha visima vinasimamiwa inavyofaa.
6. Tia uzio ukizunguko vyanzo vya maji kuachisha wanyama kuchafua maji.
7. Usiwaruhusu watu kuoshea karibu na pampu.
8. Hakikisha vyoo vya kuchimba vipo zaidi ya mita hamsini mbali na vyanzo vya maji. Hakikisha kuna mitaro mizuri na uchimbe mingine ya kutoa maji na kuyapeleka mashimoni yenye mawe ili yaingie udongoni.
9. Tengeneza nyufa zote zilizo kifunikoni mara moja zinapoonekana na uzisafisha mara kwa mara.
10. Kama hauna uhakika na usafi wa maji, yachemshe kabla ya kuyanyua ili kuuua vijidudu vinavyoweza kukufanya kuwa mgonjwa.



Februari – Machi ni wakati mwafaka wa kuanza kutayarisha shamba yako kwa kilimo hai.

Vikundi vingi vya TIST vimeripoti kuwa mienendo bora zaidi ya kilimo hai imewasaidia kupata mavuno bora, hata katika miaka iliyokuwa mibaya zaidi yenye mvua chache na usioaminika. Katika miaka mizuri, mavuno yamekuwa yakuridhisha sana. Vikundi vingine katika maeneo kavu vimeripoti ubora wa mavuno yao ata mara mbili kufika mara tano ya mavuno yao ya kabla!

Katika Kilimo Hai, unaongeza mbolea yako ya mimea mashimoni unapotaka kupanda mimea yako na kuacha mabaki ya mimea shambani, na usilime, jambo ambalo hudhibiti mmomonyoko wa udongo nakupoteza virutubisho vya udongo kunakoandamana na jambo hili. Hivyo basi, mbegu za mimea hupata virutubisho zaidi ya ambavyo zingepata katika ukulima wa kawaida. Virutubisho vya ziada husaidia mbegu kukua na kuwa mimea

yenye nguvu na yenye mazao bora.

Mashimo pia hutupa faida zingine. Mashimo ni muhimu sana mvua unapokuja kwani badala ya kuosha na kubeba udongo mzuri na mbegu, maji yanaingia mashimoni na kusaidia mbegu kukua vizuri zaidi. Mashimo pamoja na mbolea humaanisha maji yanawekwa karibu na mbegu kwa muda mrefu zaidi, ili jua linaporudi kuwaka hakukauki haraka. Mashimo hulinda mbegu na waweza kupalilia bila kudhuru mimea.

Kumbuka, unapovuna mimea yako usiachilie mifugo kuharibu au kuchoma mabaki ya shamba lako. Mabaki ya mimea yako huoza na kurudisha virutubisho vingi vizuri udongoni, na kutayarisha na kuurutubisha kwa sababu ya msimu unaofuata wa kupanda.

Miti ya kiasili: Ni ipi, na ni kwa nini ina umuhimu?

Wakulima katika TIST hupanda aina mamia za miti, panoja na mitunda na miti ya mafuta, miti ya kulisha mifugo, miti ya kurutubisha udongo, na aina zinazovunwa ili kupata mbao. Wakulima wengi wanachagua kupanda miti ya kiasili kwa sababu ya faida zake nyingi.

Mti wa kiasili ni upi?

Mti wa kiasili ni ambao umezoeana vizuri na mahali Fulani ambapo umekua na umezalisha kwa njia ya kiasili kwa muda mrefu. Si ain azote tunazojua ni za kiasili. Mingi imeletwa na watu wa kutoka mbali sana. Kuna zaidi ya aina mia nane za miti ya kiasili katika Kenya.

Ni kwa nini miti ya kiasili ni muhimu?

Kwa sababu miti ya kiasili imebadilika pamoja na mazingira hayo, wanyama, mimea na viumbehai vilivyoizunguka, imefaana na mahali hapo. Mara nyingi, hili humaanisha kuwa yaweza kukua vizuri bila ya vitu nyongeza kama dawa za wadudu na mbolea za viwanda. Mara nyingi haihitaji kuchungwa kama aina zilizoletwa. Inaongeza viumbe hai katika mashamba yetu hadi uwezekano wa wadudu kuzuka unapungua. Inawapa wanyama pori makazi na chakula na kutupa faida kadha kama matunda, mbao, majani na dawa za kiasili. Aina zilizoletwa pia zaweza kutupa faida, lakini baadhi yazo hukua kama magugu na kumaliza aina zingine.



Tunapopanda miti ya kiasili katika mashamba yetu, tunasaidia kulinda aina zilizotumika na wazazi, mababu, na kwa watu na wanyama wa Kenya kwa vizazi vingi. Bado tunasoma kuhusu faida za aina nyingi zinazotuzunguka. Tunapopanda aina ya kiasili, tusaidia kuhakikisha kuwa miti na faida zake zitakuweka kwa watoto wetu.

Katika TIST, tuna pesa nyongeza kwa wanaopanda miti ya aina ya kiasili. Vikundi karibuna mito vinavyofuatilia mienendo bora ya kufanya mambo ya TIST katika maeneo yaliyo karibu na mito na kupanda miti ya kiasili vyaweza kuhitimu kupata motisha hii nyongeza kupitia mradi wa TIST Riparian Initiative. Vikundi vidogo vya TIST karibu na misitu ya serikali vinavyopanda miti vyaweza kuhitimu kuingia CFA ili kupanda miti ya kiasili na kupata pesa kutokana na mauzo ya kaboni katika misitu hii. Kuanzia malipo haya, utaweza kuona kuwa kuna nyongeza ya kupanda miti ya kiasili katika vocha zenu. Kila mti wa kiasili unaohesabiwa unahitimu kupata nyongeza hii ya shilingi moja kwa kila mti wa kiasili kila mwaka. Ni muhimu kukumbuka kuwa nyongeza hii imewezekana kwa sababu ya usaidizi wa USAID. Tofauti na malipo ya miti, ambayo hutokana na mauzo ya kaboni na kwa hivyo yatakaa miaka thelathini na zaidi, motisha hii ni ya muda mfupi, na inalingana na usaidizi wa kipesa kutoka nje. Kwa wakati huu, tuna pesa za nyongeza hii zitakazotufikisha mwisho wa mwaka wa 2013. Tutatia bidii kutafuta usaidizi nyongeza ili tuweze kuwapa nyongeza hii kwa muda mrefu zaidi.

Ni miti ipi iliyo ya kiasili?

Kuna mamia ya aina za miti ya kiasili zilizo Kenya na aina nyingi zilizoletwa ambazo pia hutupa faida nzuri. Hapa ni mifano ya kila mojawapo:

Miti ya kiasili ya Kenya

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Miti mingine imekuwa Kenya kwa muda mrefu sana na ina matumizi mengi, lakini si ya kiasili. Baadhi yahi ni miembe, macadamia, casuarina, bottlebrush na Mexican green ash.

Jaribu kupanda baadhi ya miti ya kiasili katika shamba lako leo! Angalia karibu nawe ili uone ni aina zipi zinakua katika misitu iliyo karibu nawe. Uliza majirani na wanacluster yako miti wanayokuza, na miti ipi katika misitu huwapa faida. Tukifanya kazi pamoja, twaweza kulinda rasilimali ya misitu yenye aina kadhaa za miti kwa watoto wetu na vizazi vijavyo. Pigia Jeniffer Kithure ili kupaata taarifa zaidi kuhusu miti ya kiasili au mpango wa Riparian Initiative kwa nambari hii 0726319539.



Ukataji miti na kuzorota kwa mashamba yenye misitu ni shida kubwa sana. Tunaweza kufanyeje?

Ukataji misitu ni kutolewa kwa miti na mimea mingine yenye mbao.

Misitu na vichaka hufunika sehemu moja juu ya tatu ya ardhi. Miti hubadilisha tabianchi, hulinda maji, hutupa vitu vinavyotokana na misitu (kwa mfano, mbao, dawa, matunda na vingine) vinavyo ughali mkubwa na huruhusu mimea na wanyama wengi tofauti kuishi. Hata hivyo inakatwa kwa mwendo kasi; hectare milioni ishirini kila mwaka. Nusu ya wanaoishi kwa hii dunia hutumia misitu kama nishati, hata hivyo watu kama milioni mia moja hawana nishati tosha kutumia kwa matumizi madogo madogo.

Sababu za ukataji misitu

- Ukataji miti hufanyika wakati mimea inakatwa ili kufungua shamba kutumika kwa njia nyingine kama kufungua shamba ili liweze kulimwa au kwa matumizi mengine kama kutumika kama kuni, kutengeneza matofali, kukausha samaki, kukausha majani chai, kujenga na kama mbao.
- Kuzoroteka kwa shamba lenye msitu ni wakati msitu unakuwa na miti ya aina chache na unashindwa kuyavumilia mabadiliko yanayokuja kwa sababu ya utumizi na usimamizi mbaya (kwa mfano, miti mizee inapokatwa, ikiachwa midogo, ama aina fulani iikatwa yote, hadi inapotea kutoka msituni, ama msitu unalishwa wanyama zaidi ya inavyoruhusiwa, hadi miti inashindwa kukua badala ya iliyokufa).
- Ukataji miti na uharibifu wa shamba lenye msitu mwingi hutokana na kutokuwepo kwa ujuzi kuhusu thamani kamili ya miti.
- Wakati mwingine, thamani ya miti yaweza kuwa inajulikana lakini umaskini na kutambulika kusio sahihi kuhusu ukosefu wa lingine la kufanya hulazimisha watu kukata miti.

Shida zinazojitokeza kufuatilia ukataji wa misitu

- **Mmomonyoko wa Udongo:** Ukosefu wa miti ya kufunika ardhi na mizizi huacha udongo hatarini na huruhusu mmomonyoko wa udongo.
- **Ukosefu wa rasili mali ya msitu tunayohitaji:** kukata miti hugaribu mahali pa

wanyama pa kuishi, hupunguza viumbe hai/bioanuwai, hutoa rasili mali ya chakula na dawa na huongeza ushindani ili kupata vifaa vyz ujenzi. Watu wanahitajika kutembea mbali zaidi ili kupata kuni, na bei za bidhaa zinazotoka misituni zinapanda juu sana.

- **Ukataji misitu unamaanisha ukosefu wa faida nyinginezo za miti:** miti hupunguza upepo, uhifadhi unyevu, huongeza hewa safi hewani, na huongeza virutubisho udongoni. Kwa hivyo bila miti hali ya anga ya mahali hapo itakuwa kavu zaidi na kuongeza hatari ya mafuriko, mmonyoko wa udongo unaosababishwa na upepo, kupunguzwa kwa rutuba ya udongo na kupunguzika kwa usafi wa hewa.

Tunaweza kufanyeje ili kuzuia ukataji wa miti?

1. Kuanzisha vitalu vya miti na kukuza miti ya kupanda na kupeana au kuuza miti kwa wanajamii. Twafaa kutia moyo wengine kupanda miti pia, na kujiunga na TIST!
2. Tumia meko ya kuokoa nishati, ambayo hutumia kuni na makaa chache
3. Tumia nishati badala inapowezekana (kwa mfano, joto la jua, machujo ya mbao, maganda ya kahawa, nyasi, magugu, mabaki ya mimea, taka za wanyama).
4. Kujihusisha na shughuli za upandaji miti za jamii. Kuweni kikundi kizuri cha TIST chenye mafanikio!
5. Himiza majirani na marafiki yako pia kuingia katika TIST
6. Usilime shamba lililopakana na mto. lache miti na mimea kumea ili kulinda maji haya
7. Kuwa mwenye macho usije ukalisha mifugo shamba kuliko inavyoruhusiwa. Usitake mifugo ikaribie miche isije ikaharibu na kunyimu msitu nafasi ya kukua mara ya pili.
8. Himiza kilimo mseto na matumizi ya mashamba madogo ya miti. Kuwa na miti shambani mwako hukupa vitu vinavyotokana na msitu na husaidia kulinda msitu ulio karibu.

Mazingira Bora



TIST

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

Kikamba Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Farmer and a Leader, Dorothy Muriuki preparing her shamba using Conservation Farming (zero tillage Method. Many farmers have reported increased crop harvests after using CF.

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TIST: Undu wa kwongela vinya mwiini.

Ota ngali yaku, mwii waku uendaa namauta, indi kwiw'a wina vinya ni kwosaa mwolooto wa kwithiwa ti kususya ivu tu. Kuya liu mala maingi ivindani yitianite kwa muthenya ni undu wa vata muno .

Ndukakilile liu. Kwithiwa na sukali kana unini wa sukali thakameni ni muisyo kwa vinya wa mwii na kiliko. Nzia imwe ya kuikiithya sukali niwekala kithimoni kila chaile utekethea kana kwongeleka ni kuya ila twaile vatekutiia kana kusongangya ivinda. Onakau no withiwe utekwiw'a nzaa ni useo kuya kindu onethwa no kaliu kana katunda kanini nikana sukali witu wikale kithimoni kila kyaile uteutheea kana kwongeleka. Ikala vaasa na liu wi sukali mwingi. Yila sukali wi nthi kaingi nitwithiawa twina wendi wa kuya syindu ta misukuti, kyokoleti kila kitunengae vinya wa mituki. Onakau syindu ithi nitonya utunenga kwiw'a tunakwata vinya kaingi ikitaa kutwongela unou. Itina wa kavinda kanini nitwambiia kwiw'a ingi mea/itomo ya kuendee na uya syindu isu syina sukali. kuya ivindani yaile kana kuya liu muvuthu wa matunda ala nita, Mbindi ta sya ngandania, itumbi ya utheukya, iiu kana ona mbemba ya uvivya withiawa wakwata vaita mbee kwi uite syindu sya sukali.

Kuthingithangya mwii kana Kwikithya mwii mathau nikwongelaa mwii vinya na nzia mbingi ta. Nikwongelaa kutwawa kwa nzeve oxygen kilikoni na isioni ingi sya mwii. Ingi nikwongelaa mavui vinya, ngoo na kutuma tuola kilo na kwongela mavindi maitu vinya. Kwika mathau kila muthenya nikutonya kuola uwau wa sukali na kukunwa ni ngoo. ingi nikutumaa twiw'a twi metho kila ivinda na ukethia no twikie kiliko undu ni ula tukwika. Ala meyumasya kuthingithanga muthenya kaingi makomaa nesa utuku. Ingi ivinda yingi iseo ya kuthumua ni wamina uya liu wa muthenya (lunch) umy'a iatu na na uikoma vandu va ivinda ya ndatika ta 20 kana 25 wukilaa uyiw'a wina vinya mweu. Kaingi mamals kilungu kya 90 iulu wa yiana kikomaa kana kwombosya muno muthenya na usu niw'o withiawa too mwianiu.

Liu wamina utumika mwiini nutwikaa kiko na vau nivo nakyo kiw'u kyukaa utwika kya vata. nundu kiw'u kitevo mwii ndutonya kumya kiko undu vaile. Kutethee sya mwii kumya kiko itina wa mwii kwosa kila kyaile nthini wa liu nywa kiw'u kingi muthenya

w'otho. kyai na sota ingi nosyithiawa nzeo onakau nitumaa mundu akwatwa ni caffein ila syithiawa nayo na nitumaa withiwa utatonya ukoma nesa. oundu unywite kyai kingi now'o withiawa utatonya ukoma. ingi nundu kyai kaawa na sota nitonya utuma twithiwa tutena kiw'u mwiini tata withie nndunainywa muno muthenya. Yithiawa useo wa nywa kaawa, kyai kana sota ethiwa wanyw'a kikombe kimwe ukaatisya kiw'u kikombe.

Livoti imwe sya kuw'a uki syi asya kana kunywa 1 - 2 kwa muthenya kwa aume ala mena myaka 40 na aka no iole uwau wa ngoo kwa ivinda iasa. Onakau uthengi timuseo niwanangaa misyi. Ingi uthengi ti museo nundu nutumaa sukali wa nthakame wambata na kwithiwa wi yiulu kiu nikyo kitumaa waamuka kwakya ethiwa ukomie wimumile wiw'a wina hangover. Nundu kaingi uki niuolaa kiw'u mwiini na ingi ni iwetaniaw'a na kuete cancer. Ethiwa niwathi unyw'a ndukanywe suva mbingi mbee wa umwe kana ili.

Ingi andu mekalile ivila syoo me wiani kaingi nimeekaa nambee. uu ndwaile kwina na musomi Richard Casebow ula withiawa Alexander Teachnique ila yi Holistic Health Centre nthini wa Edinburgh.

Ethiwa nukwikala mesani uthukuma kwa ivinda iasa ikala kivilani undu vaile ute kweeka na mbee ila ni mau maile ithiwa meanene na syikalilo (kitimba) na uikinya nthi mauu me vulati nas uyaisya muongo kivilani. Nzakua kivila utonya kwia undu ukwenda na ukwiw'a wi mwianie uilye.

Ingi undu mundu ukwiw'a ena utanu ngooni now'o uthukumaa nesa e mwianie kwoou ni useo kwithiwa na mwiw'ile museo. Ethiwa wiiw'a utena utanu nii useo kuisya na kwikia kiliko kyaku wiani ula ukuna na kwia kilikano kyaku unduni wa mwiso wa wia uu undu ukethiwa uilye ethiwa ukamina na kwithiwa na utanu na nuukwata vinya na kutana yila uendee na uthukuma.

Ingi undu ula wi vinya kwika ni kwika vathe. Ona kau ithyi andu nitwendete uu mavindnai amwe nikana tukwate vinya wa kuendee. Kutitiwa mwii na kukwatangwa tikw'o kutuma mwii wiw'a minoo yi mithelu tu no ngithya twikale tuyosa ivinda ya kuthumua na kwosa vinya. Aimi ma Tist tania uima wa mwii.



Kuthokoanw'a kwa kiw'u: Niki kututhini'e na nata tutonya kwika?

Yila andu mauta na kunywa kiw'u kite kitheukye kana kuiitwa, kiw'u kithokoany'e kana kina kiko

niutuma mundu awaa muno. nitwaile umanyisya andu na mbaitu iulu wa mathina ala maetawe ni kiw'u kite kiiite kana kutheukw'a nikana mamanye undu maile ikana na kiw'u nikana mekale na uima wa mii.

Kiw'u nikithokoanaw'a na nzia mbingi:

1. Kiko kuma kambunini kana siwengyi ya indusituli.
2. Mawia matena uatiano museo ma andu vakuvi na kula tuutaa kiw'u ta mbusi, silanga, ndovoi
3. Kiw'u kwithiwa kiteni mitau miseo ya ukitwaa. Kiw'u kutindia na kiyithiwa na chemical taq vatalaisa, ndawa sya mitutu kuma miundani yitu no ilike masilangani, ndovoi etc.
4. Kuthamba kana kuvuia ngua kula kuutawa kiw'u
5. Kumaa na kuthi kyoo vakuvi na kula kiw'u kyumaa
6. Nguniko mbatuku ya ndovoi kana kithima
7. Kwithiwa kute na syoo vala kiw'u kya mbua kikuaa kiko kiu na kutwaa mbusini.
8. Indo kuithw'a vakuvi na mbusi.

Kuthokoanw'a kwa kiw'u nikuetae mathina maingi.

1. Kiw'u kina kiko ni mituki kuaa na kumya miti kana kua indo na andu. Ngelekany'o yila vatalisa walika kiw'uni na wina Nitrogen nutumaa miti kiw'uni yongeleka na yakwata uma na kwoea kiw'uni kiu itwika ingi muisyo kwa nyamu sya kiw'uni nundu wa kukosa nzeve ya kuveva.

2. kiw'u kina kiko kya tumniwa kuua nikiyaiikasya uwau kwa andu na kumanenga uwau ta , uvee, minyoo, kwituuu nakutavika.
3. Kemikoo imwe syalika kiw'uni niitunengae uwau okavola kavola na kwa ivinda iitunenga uwau ithyi ona syana.

Nata tutonya kwika iulu wa kuthokoana kwa kiw'u?

1. Ndukekye kiko vakuvi na w'umo wa kiw'u na thuthya andu ala angi maikekye kiko mbusini.
2. Vanda miti nguumoni sya mbusi, masilanga na maiia kusii vatalisa kuvika kiw'uni kila ki thini wa mbusi, silanga, ndovoi na maia.
3. Eka uvanda liu vakuvi na usi, silanga ka ngome kusiiia vatalisa kulika kiw'uni.
4. Thuthya andu kutua vaasa na nguumo sya mbusi
5. Ikiithya Ndovoi, silanga na ngome nisya suwiwa undu vaile.
6. Ikiia wiio kusiiia indo kulika kiw'uni na kuthokoany'a
7. Nduketikile andu mathambie vakuvi na ndovoi, silanga
8. Ikiithya syoo nisyenzwa vaasa ta matambya 50 vala ve kiw'u kya utumia. Ikiithya vena nzia nzeo sya kiw'u kana kiko kuma kyooni itonya kuthi vate kuvika vala kiw'u kii.
9. Tungii na kwaka myalika ila yi ngunikoni ya ndovoi kana kithimani na uyikalya kisio kila kithyululukite kikitheu.
10. Ethiwa ndwina uw'o wa kiw'u ikiithya niwakitheukya mbee wa kunyw'a kuikiithya kinaete uwau.



Mwai wakeli na wakatatu niyo myai miseo ya kwambiia useuvya miunda kwondu wa nima yakusuvia.

Tukundi twingi twa TIST niotutungite livoti ya kwithiwa nima ya kusuvia ni nzeo kwa ngetha ona

yila kutena mbua nesa. Yila kwi mbua nesa ngetha yithiawa ya kwendeesya muno. Isioni imwe ila syithiawa na mbua nini muno oyu nitungite livoti ya kana mambiia utumia nzia ya uimi wa kusuvia nimakwataa ngetha kundu kwili kuvika kundu kutano kwoondu manakethaa.

Yila tuutumia nzia ya uimi wa kusuvia nitwaasyaa kana niwaile ikia vuu yimani yila uuvanda na kuvwika muunda na makusa nikana usuvie kwaa kwa unou wa muthanga na muthanga kukuwa. ndukaima na mulau nundu niwongelaa kukuwa kwa muthanga. Yila mbeu yavandwa uitumia nzia ya nima

ya kusuvia mumea nukwataa unou mwingi kuma muthangani nundu yiima yiu niwikiaa vuu na uitetheesya mumea kwika nesa.

Mama aya ingi nimethiawa na moseo angi nundu itina wa kwikia vuu nimasyokaa makatea kiw'u vandu va kuyaiika mbua yaua kwoou mbeu ila ivanditwe vo kwithiwa na kimeu kana kiw'u kwa ivinda iasa na iyika nesa. Ingi yima yii niyisuviaa mumea uyu ukethia ndwanangika na ingi no uimie mumea umwe vate kuumisya mumea.

Lilikana kana wamina uketha ndukaeke indo syanange makusa memuundani kana kuvivya. Nuseo kueka makusa aya makoa na kuete unou wamuunda kwoondu wa mbua ingi yukite.

Miti ya Kiene: Yo ninyau, na niki yavata?

Aimi nthini wa TIST nimavandaa mithemba mingi ya miti ila ni mithemba ta miti ya matunda, uithyo,

kwongela muunda unou, mbwau na ngu. Aimii aingi nimaendee na usakua kuvanda miti ya kiene kwoondu wa vaita kwoo.

Muti wa kiene niwiva?

Miti ya kiene ni miti ila yithiitwe iime vandu kwa ivinda iasa vate kusuviwa ni mundu na niyikaa nesa kisioni kiu. Ti mithemba yonthe tumisi na tumyonaa ne ya kiene, mbingi niyaetiwe na kuvandwa ni

andu kuma isioni ingi. Ve mithemba ya miti mbee wa 800 ila ni ya kiene na wumo wayo ni Kenya.

Niki miti ya kiene ne yavata?

Nundu miti ino niyithiitwe iialyuka na mawithyululuko makisio kiu, nyamu, mimea na tusamu tula twikalaa muthangani na yithiawa yimianie. Kaingi kii kyonanasya noyimesye na kwika nesa utekwongela ngalama ya ndawa sya kuaa mitutu kana vatalisa. Kaingi iyendaa kusuviwa muno na miti yakuka. Nithathaasya wumi wa miunda yitu nundu imwe nilungasya tusamu tula twanangaa mimea.



Kaingi mithemba ino ya miti nitunengae mawikalo ma nyamu, matunda, mbwau, matu na liu wa indo, ndawa na ngu. miti ya kuka imwe noyithiwe na moseo maingi indi itina wa ivinda nitonya utwika yia na kuete wasyo. yila twavanda miti ya kiene miundani kwitu nitwasuvia muthemba usu wa muti kwaa iulu wanthi nundu yaiya vata kwa asyai na aaumae maitu na kwa andu ma kenya na nyamu situ. Notuendee na ivundisya iulu wa mithemba ila itwithyululukite. Yila twavanda miti ya kiene tuikiithasya kana syana situ ikeethia mithemba ino ya miti na kukwata vaita yayo.

Nthini wa TIST nitunenganae ndivi ya uthuthio kwa ala mavanda miti ya kiene Ikundi ila syivakuvi na mbusi na maatiia mawalany'o ma Tist ma kuvanda miti nguumoni sya mbusi munamuno miti ya kiene nimekwithiwa na ivuso ya ukwata ndivi ya uthuthio. Ingi ikundi ila syivakuvi na mititu ya silikali na nimavandaa miti ya kiene nimaile ukwatana na CFAs kuvanda miti ino ya kiene ithekani sya mititu ya silikali nikana makwate ndivi ino ya uthuthio. Kwambiia ndivi ya mwai uyu nukwambiia kwona kivathukany'o kwa ala mavandaa miti ya kiene mathanguni menyu. Kila muti wa kiene uvanditwe nthini wa miti ya TIST ukweethiawa utonya uete silingi imwe ya uthuthio kila mwaka. Ni useo kwona kana uthuthio uyu wivo nikwoondu wa useo wa USAID. Na tita ndivi ya miti ila iivawa kuma kuta nzeve itavisaa na ni ikwikala vandu va ivinda ya myaka 30, mbesa ithi sya uthuthio nisya ivinda ikuvi na yitengemea kukwatwa mbau kuma nthi sya nza. Kwa yu twina ndivi ya uthuthio kuma 2013 . nitukuendee na utata twonme kana

nituu kwata jwingelwa kukwatwa mbau kimbesa nikana twone kana undu uu nutonya kwikalanga kwa ivinda iasanga.

Ni mithemba yiva ya miti ni yakiene?

Kwi mithemba mingi ya miti Kenya na mithemba ingi yakuka ila yithiawa na moseo. vaa ve ngelekanyo ya imwe

Miti ila wumo wayo ni Kenya

Cardia Africana

Meru Oak, Muhuru (vitex keniensis)

Mugumo, Mirumba (Ficus thonningii)

podo, Muthengera (podocarpus falcatus)

Mwiria (Prunus africana)

Mutoo, Mukeu, Dombeya rotundifolia

Murubati, Muuti, (Eruythrina abyssinica)

Sesinbania (Sesbania sesban)

Muuuku (Terminalia bwrownii)

Mikongoro, (Acacia Albida)

Mihongoro (Acacia abyssinica)

Mithemba imwe ya miti yithiitwe Kenya kwa ivinda iasa na niyavaita muno onakau ti yakiene.

imwe kati wa ino nita:- iembe, makandania, Casuarina, ivela, bottlebrush na Mexican green ash.

Tata uvande miti ya kiene umunthi muundani kwaku. Sisy miti ila ikwithyululukite na uikulya atui maku umanye ni mithemba yiva ya miti ila mavandaa na yikaa nesa na yithiawa na vaita munene kwoo kuma mitituni. Twathukuma vamwe nituusuvia mititu na miti yitu ya kiene kwoondu wa syana situ na syawa ila ikoka. Kwandaia kunia Jeniffer Kithure kwa uvoo iulu wa miti ya kiene nambani ino 0726 319539



Kwanangwa kwa mititu na kwanangika kwa itheka sya mititu ni withiitwe wi thina munene. Nata tutonya kwika?

Mititu yanangawa yila miti yatemwa na ikuthu ila ivwikite kisio kiu kuvetwa.

Mititu niwikite kisio kya ta imwe iulu wa itatu kya nthi yothe. Mititu niyietae uvinduku wa nzeve, ikasuvia w'umo wa kiw'u, ikatune mosyao mayo ta ngu, mbwau, matunda, ndawa na angi maingi maundu aya ni malato munene na nitetheesya mithemba ya miti na nyamu kwithiwa/kwikala. Indi niendee na ngwanangwa kwa kilungu kinene kya milioni miongo ili kwa kila eka umwe kila mwaka. Nyusu ya ekali manthi metethasya kwisila mitituni ino ta kwa mwaki/ngu, navaili oou andu ta milioni iana yimwe mena uvungulu wa mwaki/ngu wa kutuma meka maundu maniini ala maile ika.

Ni itumi syiva ietae Thina wa Mititu munamuno:

- Mititu yanangawa yila andu meenga mayenda kuima, kuithya, na kutumia ngu, kuvivya mavali/matuvuli, kutoeesya makuyu, kuthia mbaki, kumya maiani, kwaka na mbwau.
- Kwanangika kwa mititu kwithiawa yila mutitu wavutha na weethia ndutonya kwikala nundu wa kutumiwa nai na vate muvango. Ngelekany'o yila miti mikuu yatemwa na vaitiwa ikuthu syoka, kana yila muthemba muna wa muti niw'o ukutemwa na kuvetwa, kana yila mutitu usu waithw'a muno uteunewa nzeve ukeyaka, na yila mutitu uteuekwa miti ikeana kuvwika kilio kya ila mikw'u.
- Kwanangika kwa mititu na itheka syayo kuetawe ni unyivu wa umanyi iulu wa vata na vaita wa mititu/miti.
- Kundu kungi vata wa mititu nowithiwe wisikie indi nundu wa thina andu mayona titave nzia ingi ya kwikala andu maitema miti na kwananga mititu.
Mathina ala maumanaa na kwanangwa kwa mititu Kukuwa kwa muthanga:- Yila vate kindu kiwikite muthanga muthanga niwithiawa ute mulumu na kwoou kukuwa ni mituki.

Kwaa kwa maueti ma mititu:- Yila miti/mititu yeethiwa itevo vethiawa vate wikalo wa syindu ila syaile ithiwa vo nundu vayithiawa liu, ndawa, naindi kulimana kuyingiva na thoowa wa syindu ta ngu nakila kingi kikwatikanaa mitituni uyithiwa wi iulu muno.

Kwaa kwa vaita ingi sya miti thini wa mawithyululuko:- Miti nisuviaa kiseve kikanange, nitumaa kimeu kikala, niseuvasya seve ya andu kutumia, niyongelaa unou muthangani. Indi vate miti withiaa nzeve ya kisio niyavinduka na kweethiwa na munyao ingi kukethiwa na muthanga kukuwa ni nzeve kana kiw'u, unou wa muthanga kuoleka na nzeve ntheu ya kuveva.

Tutonya kwika ata indi kusiiia kwanangika kwa mititu na itheka syayo?

- Kuseuvya ivuio na kunengane ka kuteea atui na mbaitu miti ino ya kuvanda.
- Kutumia maiko ma usuvia mwaki/ngu ala mendaa makaa kana ngu nini.
- Kutumia nzia ingi sya mwaki (ta kutumia sua, makavo, nyeki, yiia, kyaa kya indo, makoloso)
- Kuvanda miti na kutwika umwe wa nduika sya TIST. kuthuthya atui na anyanya malike ngwatanioni na ikundini sya TIST.
- Ndukaima nguumoni sya mbusi kana vala ve ndia. Eka miti na ikuthu imee isuvie kiw'u kiu.
- Ithiwa wi metho ndukaithye kitheka kikauke vyu. Siia indo kuthi vala ve miti minini iendee kwiana (nundu indo niisaa mithya na kutuma ieka kwiana) nikana yithiwe itonya kuseuvya mutitu.
- Thuthya andu kuvanda miti ona miundani kana kuvanda miti mithei kisioni kinini kithekani kwoo/kwaku. Kwithiwa na miti kithekani kyaku kwiutetheesya we kwithiwa utonya ukwata syindu syothe utonya kwithiwa uyenda kuma mutituni na kwoou usuvia ula mutitu wivakubi naku.

Mazingira Bora



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Tiletab ketik ak wechetab imbarenikab osnet ko uinwek che echen. Nee ne kimuche ke yai? Page 6



TIST: Boisien kimnotenguny.

Brtangung koboisien mwanik kou karit baten ibekasrta kewal koik kinotet ne imuchi koboisien borto, kararan mising ininyoru omitwokik en kasrta nekoisibigei en betut kobo komonut; mat igech omitwokik ketegei en abogora omitwokik chetinye keret ako igochin kimnotet kobwotutikyok kogochin korotik kobwat nguony anan agoba barak, kiit neigochin korotik koteben kwenet koinyuru omitwokik en kasarta agetugul, asi menyuru siyoroto ko engasartab omoitwokik imuchi iyam kou logoiya kebeberiat komuche kotoretin sugaruk en bortangung, bakach tuguk chetinye sugaruk, yon anyun kagobor borto kole moche sugaruk ko en choginet komuche konyor borto tugul kou, bisgut anan ko tugul chegonu kimnotet en choginet, ingandan omitwokik chenchon kotereti borto en kasarta neming missing amun motinye tegsetab borto anan kogimit konu koyamagen en kesarta nenuach, konam anyun kobwa nguony korotik agotestai ametab amitwogichuton. en amitwogik chebo abogora komoche komi kou (nchuguk , mayaiyat ne kagio, indiziot ak mukelo)koyonose chuton, en boisionik chekiyoe en obogora kogochin borto konyon kimnodet en ortinuwek chechang. netai kogochin korotikkoba agoi, gundi ak kebeberuek cheter en borto, igochin mugulelndo ak bowonik konyor kimnotet ak kotes kowek konyikisitun, konech kobosok miondob sugaruk yon konginyoru yaetab boisionik en abogora ak miondob melik en boruwekiok, igimitech keyai boisiet ak mising koisto ruwonik, yon keyai boisiyo en bet kogoni iru komiye en kemoi kara inyuru ruwondo en bet yon keyomise ak imisi loboiyet agetugul ak igochigei ruwondo nebo tagigosiek che ngerin (15-20) nito kogonin kobuwa kobuwotitik che kororon

En tiony agetugul ne iye nesobe kotinye kebebertab 90% en ruwondo en bet anan kogemo, inetgei inyuru ruwondo en betu tagetugul, omituwogik che kagam koba borto ko en let anyun komondo ago moimungose agot komomite beek

asi kogochi komanta ye kiweche omituwogik koik kimnodet, en betu agetugul inye beek chechang asi kotoret omituwogik, kawek anan ko chaik kogochin komanda en choginet, en betu yon keyam kerichek koisto ruwonik agot ichome mising kerichek iye en betut knyil angenge anan ko oe'ng amat iye, kemoi kawek ak chaik kogochin borto komanda beek en abogora niton kogochin borto konyoru yamet, karan mising itesi iye beek en abogora iye ketikab kaa amun motinye beek chemondo chechang, miten chemwoe kole biik chetinye kenyisiek (40) en murenik ak kwonyik komuche konyor (1-2 en betut koe maiwek) imuchi kotoret anan kobos miondob muguleldo en kasarta negoi, ye iboisien kosir mising kemwoe kele soisere, maiwek ko angenge en choyoe sugaruk en korotik koba karak, nito asinyoru en koron kotinye nyalulnated en borto, chechang en borto konyoru kayam ak kogochia koet kochoriren maiwek chechang en borto konyoru miondob koet anan ko lubaniat anan konyor muguleto kaimet, bos eetab maiwek

Biik chechang kobortos en ngecherok ko koingurugi metit nguony nito kogochin borto komotebot komie mwoe chi negiguren richard casebow, edinburgh lewen ngecheret ne kararan negimuchi kosibto asi inyuru otebet ne mie asi konyoru keliek tononet ne kararan, kabuwatet komuchi kotinye kimnotet neo mising kowalech en konetisiet ne kitinye, momiten kiit ne imuchi komuwech kot magimuch keboisien anan kegos kogaginget komo giboisie, en ninam ketinye wolutik chegimuchi kisib echeget asi kimuchi kiterter kit ne makararan ne koginyoru yon konyochi ninto ko mat init kobwatutikuk ibuwotingei kobwotutik ile oitinin kot onyuru en boibointo, baibaitun en kasarta age tugul

Tugukalak cheuwen komoyo ki amun miten tugu chegemoginigei ketesen tai miten biik chegingongei konyoiso asi koyor borto koboisi ak koteb komie koyor kimnotet, temik kas tist kochome tililindo.



Beek chenjobirotin: Amune sikibwat ak kiyoene?

Agot konyor biik beek chemuren ago nyobirotin konyoruren miondo, oginet biik en tuiyetab kilasta ak en kokwet konai kole tinye ngoyondi beek cheu chuton ak kotilil asi kotebi en tilindo.

Ole bunu beechuton muren:

1. Yobu factorisiek ak ole kiyumchin beek cheyachen en town.
2. Wagetab biik che moribe ole miten (silongo, oinosiek ak keringonik).
3. Beek che itentechin oinet ana gobeeek chetonontos beek cheyob imbarenik chetinye kerichek.
4. Kemuwetigei anan kemuwet igoroik en oinet.
5. Kemetechegei kotametutab beek.
6. Yon kobutok silanget anan ko keringetab beek.
7. Yon motinye biik korik chemengechen.
8. Ikwageten tuga ole miten kotametut.

Beechuton kogonu koimutik

1. Beechuton muren kogochin kobar tongik ak ngetik, weche beechuto korisuwek che miten beek, cheboisien biik ak tongik.
2. Inomdo biik mionuwek kou komanda moet, makargarek ak magatet.

3. beek chmuren ingeboisien en kasarta koweche boruwekiok en echeck ak logogiyok

Kiyonee akobo nyabiret?

1. Ogemwochin biik mat kowech anan kowirchi saratik oinosiek.
2. Ogemin ketik ingegusiekab oinosiek amun ketichon koune beek ago tere ngungunyek komaba oinet.
3. Mat kegole imbarenik korita oinesiek asi maba kerichek (fertilizer).
4. Mat kotech biik kori en ole negit oinet.
5. Kerib olemiten beek komiye.
6. Kengot kotametutab beek asi mowech tuga.
7. Mat kemwetegei yenegit beek.
8. Mat korik korikchemengechen oinet, keban ngeringet ak kinde koik asi koba beechuton
9. Kerib silangot komobutok.
10. Kiiyo beek ak keboisien en bet .



February – March ko kasarta ne karan en chobetabgei ichobo imbarengung nebo.

Tinye muwaet temik chechang chebo tist kole nyorunet kelchin neo mising en cf agot igomomiten robta neo, mwoe kurubisiek chemenye ole momiten robta kole nyorunen borto.

kitesin kotondoleiwek keringonik ak ye igech rurutik ingonget saratik en imbar asi moigochin

ibetab ngungunyek nyorunen kelchin kesuot nebo omtuogik ak kogimit ak kosich chechang.

keringoni chuton kogochin kotach beek yon korobon konyoru kesuot kochok, ago mosib koyome en choginet, kيسمبر keringet orit asi kinemchi timto, saratik chegonget kogochin imbare konyor ogoindo ago en abogora kotuwonegit ngungunyek.

Ketikab kipkaa: Oichon, ago amunee asi kobo komonut?

En temikab tist ko chechang ko kigomin ketigab kipkaa cheterchin ak cheterchin kou logoek , chebo tuga, chetoret ngungunyek ak chegitile bogoinik, chechang en temik koleweni chemoche asi konyorunen kelchin.

Ketibo kigaa ko nee?

Asigemwa kouniton koamun kiginyorto komiten yoto ago en kasarta negoi kogigonoiyo age yet, moketitugul che kigenaite ko kipkaa, chechang kogigiibu en komosuwek cheloen ago ter, en emenyor bo keneya kotinye terchinosiekab ketik

800 che bo kipkaa.

Amunee asi gobo komonut?

En amunee kogigotebi en kasarta ne goi mising en yoto miten kigonaita tiongik ak anak chemenye yoton rutu komotinye koimut agetugul ago mogitesin kou kotondoleiwek anan konyor koimutik kou susurik, mokingei rebet ne mingin, wole imbarenikyok ak koter komabwa susurik kowech imbarenik, nyo runen omituwogik.

Tiongikab timin ak kenyorunen kelchin kou logoek, bokoinik, bogek ak kerichek anage chemoba



kipkaa kenyoru nen agiche kelchin, ye kirib ak ketim
 ketichuton en chongindo kotoretech asi tun konyor
 ibinda ne nyone ak kerib emonyon bo kenya,
 oginetgei agobo ketikapkaa amun tinye kotoretech
 en tugul chechang.

En tist anyun temik chetinye kipkaa
 konyorunen chepkontet nemi barak, kergei ak chito
 ne negit oinet, ak kurubisiek chememenye ole negit
 timto nebo emet kotinye chomchinet komin enyet
 ketik iyanat niton en cfa, en ngalekab mungaret
 kotesat nusut (I shilingi) en ketitage tugul ne gemin,
 ybu anyun toretton asaid, en kenyit agenge.

En kinyingonye 2013 kogonyor biik teset ago
 kitesetai kechenge toretet nebo kasarta ne mitentai.

Oichon ketik kipkaa?

Chang mising kipkaa chemiten kenya ago tugul
 Kotinye kelunet ne gararan
 Miten korogunet kou;
 Meru oak(vitex kenie nsis)
 Mungumo, miruba (ficus thonningii)

Tenduwet (prunus africana)
 Podo, muthengera (podocarpus falcatus)
 Silibwet (dombeya rotundifolia)
 Murubati, muuti (erythrina abyssinica)
 Sesibania (sesbania sesban)
 Muuku (terminalia brownii)
 Mikogora (acacia albida)
 Mihogoro (acacia abyssinica)
 Mogoiwet (ficus sur)
 Lamaiyat (syzgium/ guneense)
 Mutereriet (ocetea / kenensis)

Miten ketik chechang kenya ago mobo
 kipkaa kou; maembe, macadaimia, chesarur,
 sebesebe, bottlebrush ak mexican green ash,
 chegingei igole ketikap kipkaa en imbreguk, cheng
 ketik chegororon chemiten yeimenye anan ole negit
 timto, otebengei en tuiyet ketik che ochome ago
 tinye kelut en inye, ye kiyai en kibangenge konyoru
 ibinda ne nyone borotet en echeck.



Tiletab ketik ak wechetab imbarenikab osnet ko uinwek che echen. Nee ne kimuche ke yai?

Niton kotiletab ketik eng osnet ak bukonok si ketemis.

Osnosiek ak bukonok koityin agenge eng somok nebo ngwonydet.terei walutikab barakak,ribei ainosiek ak ko konu (pakoinik,kerichek,logoek ak alak) che konu bilionishek ak kotoreti milionishekab ketik ak tiong'ik. ako any weketab chutan komi barak nebo milionisyek tiptem eng kila kenyit.Nusu chebo bik eng ngwony kotiengei eng kwenik,ako bik che negit millionisiek 100 ko ma tinyei ot kwenik tuten che boisen.

Taunetab tiletab ketik:

- Tiletab ketik koname yon kagiisto ketik asi keyai boisionik che bo temisiet anan ko ribsetab kiyagik ak en boisionik che u kwenik, chopetab matubaruk, koyoetab nchirenik, kayamsetb tomatet, kayamsetab majanik, tekset ak bakoinik.
- We getab osnosiek ko yon kainaam osnet ko metinyei ketik ak boisiet ne mie koyob boisiet ne ya ak ribset (ko u yon kakitil ketik tugul che bo kenya ak kebakach osnosiek che mengechen anan yon kagitil ketik che eechen keboisien anan yon kaagiboisien osnet en kayagisiet, ago ma imuche kobwa ketik che lelach ne kata che kibek.
- Che chang en tiletab ketik wechetab osnet ko itu yon mamiten naet agobo miendaab osnet.
- En olda age, miendaab ketik ko naat ngandan bananda ak ngalek kele momiten bik che ribe koyaei bik kotil ketik.

Kareunetab tiletab ketik

- **Ibetab ng'ung'unyek:** yon mamitei ketik che terei ak korat ng'ung'yek kokonu ibetab ng'ung'unyek

- **Rarunetab borotetab osnet:** Istoetab ketik koweche oleu osnet ak korar karorindap osnet, Istoi amitwokik ak kerichek ak kotes magetab tuguk che kiteksen. Bik kobendi olelo ko cheng kwenik, ak ngot kialdoi tugukab osnet ,kobendi barak beit
- **Rarunetab baratetab ketik:** ketik koterei koristo ak koititietab osnet ak kotes koristo ak kotes toldolindap ng'ung'unyek ako yan mamitenketik koyame oleu emet ak komuche kotesak maranet, ibetab ng'ung'unyek koyop koristo, bosetab toltolindap ng'ung'unyek ak wechetab koristo.

Nee ne kimuche keyai kebos tiletab ketik ak wechetab ketik:

Kinam kabetishekab ketik ak kepcheite ketichoton anan kialdechi biikab kokwet.

Boisien jikosiekap ribetap kwenik anan ko makaa.

- Boisien oratinwek che imuche korib mat anan ko kwenik(kou iyoo bek ibaisien asista ,murek,kawek,ak suswek,katukanikap minutik)
- Kinam minsetab ketik, keik chito ne borot en kurupitab TIST, igimit choronok ak bikab kokwet ak choronokuk kochut TIST akichek.
- Matitem olerupegei ak ainet, pakach ketik si korip beek.
- Keer ile machanga kiyagik en olndo agenge. Rib kiyagik komawech kabetisiek che katarutu kogeny sikomawech ketik che katarutu en osnet
- Kigimi minsetab ketik ak amitwogik en imbarenik: Yan itinyei ketik eng imbarenikngu . Imuche inyoru tuguk che katebeichengei en osnet ne negitchin ak kerib osnet.