



# TIST HABARI MOTOMOTO DECEMBER 2023

Seed Bed Best Practice, Time for Planting Trees &  
Practicing Conservation Farming

[www.tist.org](http://www.tist.org). Email: [info@tist.org](mailto:info@tist.org) Tel. +255784-537720

---

## Welcome Note

We are very happy for the reviving of the TIST Program in Tanzania. We are also happy to resume producing the TIST HABARI MOTO MOTO Newsletter that will be providing a variety of information, as well as TIST trainings, for Farmers.

Welcome all TIST Farmers, we are happy to continue being with you again! We are excited about the way you continue with various agricultural activities including the preparation of tree nurseries, tree planting and Conservation Farming as well as continuing with the monthly Cluster meetings in Tubugwe, Mpwapwa, Tambi and Vihingo. Congratulations!



*Photo 1: Upendo wa Agape Group nursery tree. Mwanakianga Mpwapwa*

Congratulations also to all the TIST Wawezeshaji for continuing to work hard to make the activities of the TIST Program successful.

In this newsletter, we are going to have three articles (i) The TIST Best Practice of preparing raised seedbeds (ii) Time for planting trees (iii) Practicing Conservation Farming.

### **(1) The TIST Best Practice of Preparing Raised Seedbeds**

We are encouraging TIST Small Group farmers to try raised beds because they improve the survival of the trees. Traditional systems of arranging pots on the ground can produce few seedlings with weak roots. This is because the roots coil up and at transplanting, because of roots being weak may not establish well in the ground. To avoid this, it is recommended to establish seedlings in open bottom tubes placed on raised beds.

A raised bed can easily be made from a wooden frame and wire mesh (see photo) or wooden slats. These allow automatic root pruning because when the roots get to the container bottom, they naturally drop off (called air root pruning). This means that roots do not get injured through normal root pruning methods. The roots then tend to strengthen without growing further.

This produces a healthy root system, and the seedling has higher chances to establish faster in the field. It also eliminates the need for labour to do root pruning, a practice that is often forgotten or done too late, causing serious damage to the roots. Weed control under the raised beds is also easier, and the raised beds have excellent drainage, so roots are less likely to be damaged by heavy rain. Seedlings grown in raised beds may be fragile in transport, so be careful when moving seedlings for transplanting.

Try raised beds today, and share your results with your Cluster members and other TIST Farmers!



**Photo 2:** An example of a Raised Seedbed. Best Practice from one of the groups in Kenya.



**Photo 3:** Tradition system of arranging seedlings on the ground. Amani, Jitegeme and Thenashara Groups. Bumila - Mpwapwa.

### (2) It is now the time for planting more trees

Farmers need to prepare seedlings for transplanting (Hardening Off). Now that the rains have come, seedlings need to be planted out. It is important this rainy season to make sure that seedlings will be ready to be moved from the nursery and planted in the field.

Seedlings first need to be prepared for the harsher conditions of the field. If seedlings have been properly looked after in a nursery, they may have received more water and shade than they will have once they have been planted. Gradually reduce the watering and expose the seedlings to full sunlight to make this transition successful.

#### Characteristics of good seedlings

- As a general guide (remember different species have different characteristics) good seedling for planting out have the following characteristics:
- The shoot should be twice the length of the roots or the pot.
- The stem should be strong and woody.
- The seedlings should have many thin roots in addition to the main roots.

Many seedlings will achieve these characteristics two months after germinating.

#### Transplanting

- Transport the seedlings in an upright position.
- Mark out a circle with a diameter of 30cm in the field.
- Remove the topsoil and place in a pile.
- Remove the next soil layer to a depth of 30cm and place in a separate pile.
- Put in a 5cm layer of grass (dry grass in rainy season, fresh grass in dry season, called mulching). Some groups add manure as well.

- Remove the seedling from the polythene bag. Do not break the earth-balls around the roots.
- Place the seedling in the hole.
- Replace the topsoil first, then the second soil layer.
- Some groups do not fill the hole completely, but leave a gap of a few cm. This helps the rainwater enter the hole and infiltrate the soil. This can be especially helpful in dry areas.
- Any remaining soil can be placed in a mound on the downhill side of the seedling. This will help trap any rainwater and divert it into the hole.
- Water the seedling. Also remember that to give your seedlings the best chance of survival; you should plant them 3m - 4m apart. If you plant them closer together then the seedlings will not get all the water and soil nutrients they need because there is much competition. They will become weak and may die, so follow the Best Practice of a spacing of 2.5 - 3m.

#### **The Rains Have Come – Time to Plant Many More Trees**



*Photo 4: Imani Group nursery tree. Lumma village*

### (3) Time for practicing Conservation Farming

Practicing Conservation Farming produces a greater harvest more reliably than traditional farming, especially when the rain is scarce. The holes help catch whatever rain falls and make it available to the crop.

Following these Best Practices can help you get better yields this coming season.

Prepare the land: Prepare your land before the rains. Clear your plot of weeds and bushes. Do not plough.

Prepare your holes oblong (rectangle) shape: They should each be 15 cm wide, 35 cm long and 15 cm deep. Space holes at least 75 cm apart. Take some manure or compost manure and good topsoil and mix it together. Fill the hole with the mixture up to 5 cm below the surface.

Planting: When you plant maize seeds (1 -2 days before rains start), plant 4 seeds in the soil across the hole. If you are planting sorghum, plant 5-6 seeds at each end of the planting hole after a good shower of rain.

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

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

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

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

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

Do not graze cattle in the plot. Please remember, we will be glad to celebrate your successful harvest and learn from Best Practices in your area through this newsletter as well during your Cluster meeting.

### Start working now!



*Photo 5: Conservation Farming holes from Harambee Group, Mpwapwa*



*Photo 6: Maize growing under Conservation Farming*

## TIST HABARI MOTO MOTO

---

### What do we create?

- 1) We create teamwork - by doing things this way; we end up working as a team.
- 2) We create capacity-we create organization, strength, and a system that is strong.
- 3) We create enjoyment - we see results, we accomplish big things that we enjoy.
- 4) We create Big Results - Big results in planting trees, in Conservation Farming and from other projects and business that we do.
- 5) We create Low Budget/Cost, yet we achieve big results.

### TIST VALUES

- 1) We are Honest.
- 2) We are Accurate.
- 3) We are Transparent
- 4) We are Servants to each other.
- 5) We are Mutually Accountable to Each Other.
- 6) Low Budget, Big Results

### What do we do?

- 1) We plant different species of trees for long-term.
- 2) We find ways to improve our health.
- 3) We practice Conservation Farming.
- 4) We do other projects and businesses (sustainable agriculture, nurseries, citrus growing, dairy goats and farming, chickens, bee keeping, fishponds and fish keeping, silkworm farming etc.)
- 5) We sell carbon credits.

### INTRODUCTION OF CLUSTER SERVANT

We are introducing to you **Cluster Servant GLADIS RICHARD NJANJI** from Vighawe Mpwapwa district. She is a farmer from Harambee Group TIST number 2022TZ2.

She joined TIST in the year 2021. Gladis serves two Clusters: Kanisa Kuu and Iloilo Clusters. Experienced in farming, quantification (tree counting) and recruitment of new Small Groups. She provides TIST seminars to the Small Groups across the whole TIST Program in Tanzania.

If you have any questions, or you need help on how to join the TIST Program, you may contact her through 0685-029-141.



*Photo 7: Gladis Richard Njanji, a Cluster Servant Kanisa Kuu and Iloilo Clusters - Mpwapwa*



## TIST HABARI MOTOMOTO DISEMBA 2023

Mbinu Bora ya TIST ya kuandaa Vichanja vya kupanda mbegu, Muda wa kupanda miti na Kufanya Kilimo Hai.

[www.tist.org](http://www.tist.org). Email: [info@tist.org](mailto:info@tist.org) Tel. +255784-537720

---

### Ujumbe wa Ukaribisho

Tunayo furaha kubwa kwa kufufua Mpango wa TIST nchini Tanzania. Pia tunafurahi kuanza tena kutoa Jarida la TIST HABARI MOTOMOTO litakalokuwa likitoa taarifa mbalimbali, pamoja na mafunzo ya TIST kwa Wakulima.

Karibuni Wakulimawote wa TIST, tuna furaha kuendelea kuwa nanyi tena! Tumefurahishwa na namna mnavyoendelea na shughuli mbalimbali za kilimo ikiwa ni pamoja na maandalizi ya Vitalu vya Miti, Upandaji Miti na Kilimo Hai pamoja na kuendelea na mikutano ya Klasta ya kila mwezi kwa Klasta za Tubugwe, Mpwapwa, Tambi na Vihingo. Hongera!



**Picha 1:** Kitalu cha miti, Kikundi cha Upendo wa Agape. Mwanakianga Mpwapwa

Pia niwapongeze Wawezeshaji wote wa TIST kwa kuendelea kufanya kazi kwa bidii ili kufanikisha shughuli za Mpango wa TIST.

Katika jarida hili, tutakuwa na vifungu vitatu: (i) Mbinu Bora ya TIST ya kuandaa vichanja vya kupanda mbegu (ii) Muda wa kupanda miti (iii) Kufanya Kilimo Hai.

### (1) Mbinu Bora ya TIST ya Kutayarisha Vichanja vya Mbegu vilivyoinuka

Tunawahimiza Wakulimawa Vikundi Vidogo Vidogo vya TIST kujaribu kutumia vichanja vilivyoinuliwa kwa sababu vinaboresha maisha ya miche. Utaratibu wa kuotesha miche kwa kupanga makopo au viriba chini inaweza kutoa matokeo ya miche michache na yenye mizizi dhaifu. Hii ni kwa sababu mizizi hujikunja wakati wa kupandikiza, kwa sababu ya mizizi kuwa dhaifu hivyo inaweza isisitawi vizuri ardhini. Ili kuepuka hili, inashauriwa kuanzisha miche kwenye viriba vilivyo wazi chini vilivyowekwa kwenye vichanja vilivyoinuliwa.

Kichanja kilichoinuliwa kinaweza kutengenezwa kwa urahisi kwa kutumia mbao na waya (tazama picha). Kitendo hiki cha kuweka miche kwenye kichanja huruhusu upogoaji wa mizizi wa moja kwa moja kwa sababu mizizi inapofika chini ya viriba hutokeza (hii inaitwa upogoaji wa hewani). Hii ina maana kwamba mizizi haijeruhiwi kwa njia ya kawaida ya kupogoa mizizi. Kisha mizizi huwa inaimarika bila kurefuka zaidi.

Kitendo hiki hufanya mfumo wa mizizi kuwa wenye afya, na miche inakuwa na nafasi kubwa ya kustawi vizuri shambani. Pia huondoa usumbufu wa kupogoa mizizi, kazi ambayo mara nyingi husahaulika au hufanywa kwa kuchelewa, na kusababisha uharibifu mkubwa kwa mizizi. Udhhibiti wa magugu chini ya vichanja vilivyoinuliwa pia ni rahisi, na vichanja vilivyoinuliwa vinapitisha maji kwa urahisi, hivyo kuna uwezekano mdogo wa mizizi kuharibiwa na mvua kubwa. Miche iliyopandwa kwenye vichanja vilivyoinuliwa inahitaji uangalifu wakati wa usafirishaji, hivyo uwe mwangalifu wakati wa kuhamisha miche kwa ajili ya kupandikiza.

Jaribu kutumia vichanja vilivyoinuliwa na uwashirikishe Wakulima wengine wa TIST matokeo yake wakati wa mikutano ya Klasta!



**Picha 2:** Mfano wa Kichanja kilichoinuliwa. Mbinu Bora kutoka kwa moja ya Vikundi nchini Kenya.



**Picha 3:** Utamaduni wa jadi wa kupanga miche chini. Vikundi vya Amani, Jitegemee and Thenashara. Bumila - Mpwapwa

### (2) Sasa ni wakati wa kupanda miti zaidi

Wakulima wanatakiwa kuandaa miche kwa ajili ya kupandikiza. Kwa kuwa mvua imeanza miche inahitaji kupandwa shambani. Ni muhimu msimu huu wa mvua kuhakikisha kwamba miche inakuwa tayari kuhamishwa kutoka kwenye kitalu na kupandwa shambani.

Kwanza miche inahitaji kutayarishwa kwa ajili ya kukabiliana na hali ngumu zaidi ya shambani. Ikiwa miche imetunzwa ipasavyo kwenye kitalu, inaweza kuwa imepata maji na kivuli zaidi kuliko itakavyokuwa ikipandwa. Punguza kumwagilia hatua kwa hatua na anza kuweka miche kwenye mwanga wa jua ili kufanikisha mabadiliko haya ya mpito.

### Tabia za miche mizuri

- Kama mwongozo wa jumla (kumbuka aina mbalimbali za miche zina sifa tofauti tofauti) miche mizuri ya kupandwa ina sifa zifuatazo:
- Chipukizi liwe mara mbili ya urefu wa mizizi au kiriba.
- Shina liwe la mche liwe imara.
- Miche iwe na mizizi mingi myembamba pamoja na mizizi mikuu.

Miche mingi itafikia sifa hizi miezi miwili baada ya kuota.

### Kupandikiza

- Safirisha miche katika mkao ulio wima.
- Weka alama kwenye mduara wenye kipenyo cha sentimita 30 shambani.
- Ondoa udongo wa juu na uweke kwenye rundo.
- Ondoa safu inayofuata ya udongo kwa kina cha cm 30 na uweke kwenye rundo tofauti.

- Weka safu ya cm 5 ya nyasi (nyasi kavu msimu wa mvua, nyasi mbichi wakati wa kiangazi, inayoitwa matandazo). Vikundi vingine huongeza samadi pia.
- Ondoa mche kwenye kiriba. Usikunje kiriba ili kuondoa mche, kata kwa kutumia kisu au mkasi.
- Weka mche kwenye shimo.
- Rudishia udongo wa juu kwanza, kisha safu ya pili ya udongo.
- Vikundi vingine havijazi shimo kabisa, lakini huacha nafasi ya sentimita chache. Hii husaidia maji ya mvua kuingia kwenye shimo na kuingia kwenye udongo. Hii inaweza kusaidia hasa katika maeneo ya ukame.
- Udongo wowote uliobaki unaweza kuwekwa kwenye tuta upande wa mteremko wa mche. Hii itasaidia kuingia maji yoyote ya mvua na kuyaelekeza kwenye shimo lenye mti.
- Mwagilia miche. Pia kumbuka kwamba ili kuipa miche yako nafasi nzuri zaidi ya kuishi, unapaswa kuipanda kwa umbali wa m3 - 4. Ukipanda kwa ukaribu basi miche haitapata maji na rutuba yote ya udongo inayohitaji kwa sababu kutakuwa na ushindani mkubwa. Itakuwa dhaifu na inaweza kufa, kwa hivyo fuata Mbinu Bora ya umbali wa m 2.5 - 3.



**Picha 4:** Kitalu cha Miti Kikundi cha Imani. Kijiji cha Lumma



## TIST HABARI MOTO MOTO

### (3) Muda wa kufanya Kilimo Hai

Kufanya Kilimo Hai hutoa mavuno mengi na kwa uhakika zaidi kuliko kilimo cha jadi, hasa kwenye maeneo yenye mvua chache. Mashimo husaidia kupata na kuhifadhi kila tone la mvua yoyote inayonyesha kwa ajili ya mazao.

Kufuata Mbinu hizi Bora kunaweza kukusaidia kupata mavuno mazuri msimu huu.

**Kutayarisha shamba:** Tayarisha shamba lako kabla ya mvua kunyesha. Safisha shamba lako kuondoa magugu na vichaka. Usitifuie ardhi yote kwa plau.

**Andaa mashimo yako umbo la (mstatili):** Kila moja liwe na upana wa sm 15, urefu wa sm 35 na kina cha sm 15. Umbali wa nafasi ya mashimo angalau sm 75. Chukua samadi au mboji changanya pamoja na udongo uliotoka kwenye sehemu ya juu wakati wa kuchimba shimo. Jaza shimo na mchanganyiko huo hadi sm 5 chini.

**Kupanda:** Unapopanda mbegu za mahindi (siku chache kabla ya mvua kuanza), panda mbegu 4 kwenye shimo. Ikiwa unapanda mtama, panda mbegu 5-6 ukizitawanya kila kona ya shimo baada ya mvua kunyesha.

Funika mbegu kwa sentimita 2.5 ya mdongo wenye rutuba na mchanganyiko wa samadi. Baada ya hayo udongo kwenye shimo unapaswa kuacha nafasi ya sentimeta 2.5 kutoka usawa wa ardhi.

Nafasi iliyo juu ya shimo huwezesha maji kufika kwenye mimea wakati mvua zinaponyesha. Huhitaji kutumia mbolea ya kemikali kwenye shamba la Kilimo Hai. Mazao yako bado yatafanya vizuri zaidi bila mbolea ya kemikali ikiwa utaweka samadi ya kutosha.

**Palizi:** Palilia kuzunguka mashimo mara kwa mara. Usipalilie shamba zima kabisa. Nje ya mashimo la mimea unaweza kuweka kingo kwa udongo ili kuweka ubaridi na kuuepusha mmomonyoko wakati wa mvua na upepo. Palilia tu ndani na karibu na mashimo.

Tumia panga kupunguza magugu kati ya mistari au nafasi kutoka shimo moja hadi jingine. Palilia mara kwa mara ili kuzuia magugu kwenda kwenye mimea na kuenea kwenye mashimo.

Acha mabaki ya magugu kwenye shamba ili yaoze. Hii itasaidia kuongeza rutuba ya udongo kwenye shamba lako.

**Mbinu za baada ya kuvuna:** Usichome moto mabaki kwenye shamba. Acha mabaki ili yafanye udongo kuwa na rutuba zaidi. Mabaki ya mazao yanaweza pia kutumika kwa mbolea ya mboji.

Usichunge mifugo kwenye shamba la mimea. Tafadhali kumbuka, tutafurahi kusherehekea mafanikio yako ya mavuno na kujifunza kutokana na Mbinu Bora uliyotumia katika eneo lako kupitia Habari Moto Moto na pia wakati wa mkutano wako wa Klasta.

Anza kufanya kazi sasa!



*Picha 5: Mashimo ya Kilimo Hai, Kikundi cha Harambee, Mpwapwa*



*Picha 6: Mahindi yaliyolimwa kwa kutumia Kilimo Hai*

## TIST HABARI MOTO MOTO

### Tunaunda nini?

- 1) Tunaunda kazi ya timu—kwa kufanya mambo kwa kufanya kazi kama timu.
- 2) Tunajenga Uwezo-tunaunda shirika, nguvu, na mfumo ambao ni imara.
- 3) Tunafanya mambo yanayotufurahisha-tunaona matokeo, tunatimiza mambo makubwa ambayo tunafurahia
- 4) Tunafanya mambo yanayoleta matokeo makubwa-matokeo makubwa ya upandaji miti. matokeo makubwa katika Kilimo Hai na matokeo makubwa kutokana na miradi na biashara zingine tunazofanya.
- 5) Tunatumia gharama ndogo za Utawala, lakini tunapata matokeo makubwa

### MAADILI YA TIST

- 1) **Sisi ni Waaminifu**
- 2) **Sisi Tunatoa Taarifa Sahihi**
- 3) **Sisi ni Wawazi**
- 4) **Sisi Tunatumikiana**
- 5) **Sisi ni Wawajibikaji**
- 6) **Bajeti Ndogo, Matokeo Makubwa**

### Tunafanya Nini?

- 1) Tunapanda aina mbalimbali za miti itakayodumu kwa muda mrefu.
- 2) Tunafanya mambo kuboresha afya zetu.
- 3) Tunafanya Kilimo Hai.
- 4) Tunafanya miradi na biashara zingine.
- 5) Tunafanya biashara ya hewa ya kaboni.

### UTAMBULISHO WA MTUMISHI WA KLASTA (CLUSTER SERVANT)

Tunawatambulisha kwenu **GLADIS RICHARD NJANJI Mtumishi wa Klasta** kutoka Vighawe wilaya ya Mpwapwa. Yeye ni mkulima kutoka Kikundi cha Harambee chenye namba ya TIST 2022TZ2.

Alijiunga na TIST mwaka wa 2021. Gladis anatumikia Klasta mbili: Kanisa Kuu na Ilolo. Ana Uzoefu wa kilimo, Upimaji (kuhesabu miti) na Kuingiza Vikundi Vidogo Vidogo vipya kwenye Mpango wa TIST. Anatoa semina za TIST kwa Vikundi Vidogo Vidogo katika Mpango mzima wa TIST nchini Tanzania.

Ikiwa una maswali yoyote, au unahitaji usaidizi jinsi ya kujiunga na Mpango wa TIST, unaweza kuwasiliana naye kupitia 0685-029-141.



*Picha 7: Gladis Richard Njanji, Mtumishi wa Klasta Kanisa Kuu na Ilolo - Mpwapwa*