

**IN GROUPS, WE HAVE  
STRENGTH: WHY GROUPS ARE  
IMPORTANT IN TIST**

TIST encourages farmers to form groups and to get to know their group members well before they register as TIST members. Small Groups are so important to TIST that they are even part of our name: The International Small Group and Tree Planting Program. Groups have a lot of benefits:

- Share knowledge about tree planting. We all know different things, and can learn from each other. In Small Groups, we discuss factors like where to plant, benefits of different tree species, when to plant, when to prune, and when to thin.
- Learn improved farming methods. In Small Groups, we can learn, discuss and share improved farming methods like conservation farming.
- Share challenges met and solutions: In groups, we share challenges we met in tree planting like pests and animals that destroy trees and crops, and suggest ways to overcome them.
- Working together as a team: In groups, we develop a spirit of working together. Cooperation makes farm work easier. Some groups

choose to work together to help prepare Conservation Farming holes for each Small Group member, working one day on one farm, and another day on another in turn.

- Improving relationships: In forming groups and working together, we improve our relationships between families and individuals for a better functioning society.
- Sharing farm equipment: Group members come to know and trust each other, and so can share some equipment used in farming such as hoes, pangas, machines used for pruning. Sharing equipment can reduce the cost of each member buying individually.
- Easier, better training and quantification: When groups are formed, it becomes easy for TIST trainers to reach the farmers and for quantifiers to count trees for these farmers in an area. Trees must be quantified for sale of carbon offsets and for farmers to receive a tree payment. It's important that all members of a Small Group live near enough to each other to meet regularly. It's important that they plant their tree groves close together so the Quantifier can easily walk from one to

the next. This helps keep costs lower. When costs are low, we all benefit since TIST Small Groups share 70% of profits from carbon sales.

It is important that we know other members of our Small Groups well because we work together for the long term. When we join TIST as groups, we commit to keep the trees we have planted growing for at least 30 years. We are paid together as groups. We learn from each other and teach each other. For all of these reasons, making sure we form strong groups is important for our success.

By Caleb Kayabuki  
Quantifier Kabale.

**TREE PLANTING: LET OUR EDEN  
START WITH TIST TREES!**

Genesis 2:15 God allowed Adam and Eve to live in Eden where it is described as having all trees necessary for life. The Garden had all the trees needed for the lives of human beings, animals, and of the trees themselves. God put us in our Eden, in our settlements, with spacious trees: Have we preserved these trees? Are we kind to trees?

Is it easy for us to plant and preserve trees?

Let our Eden start with TIST trees!  
Do we have land enough on which to plant trees? Yes. Where?

- Planting groves on big land
- Planting along the paths to water wells, to homes
- Planting around our portions of land
- Planting around our animal farms

- Planting on the compound
- Planting fruit trees in the banana plantations
- Planting indigenous trees in our gardens
- Planting fertilizer trees among crops

#### What are the benefits?

- Trees provide shade and shelter to people, animals and crops
- Trees improve air quality by absorbing carbon dioxide and breathing out oxygen
- Roots help water to enter the soil and improve soil water retention
- Trees reduce rainwater runoff that can cause dangerous floods and landslides
- Trees clean water entering streams and rivers, and can shade the water to keep it cool for fish and other animals that benefit us
- Tree roots hold the soil firm and stop soil erosion
- Trees provide medicine, firewood and food
- Trees act as windbreakers.

When nature trees provide us with:

- Construction materials
- Fiber
- Timber
- Posts.

#### Can we plant fruit trees?

Yes! TIST encourages planting of fruit trees. These fruits add a lot of value for TIST farmers, and may be more than the income from carbon offset sales.

#### How can we preserve our existing trees?

- Encourage our leaders to protect all trees existing now
- Plant more trees to support the ones in place

-Use best cooking methods, which take less firewood such as improved, cook stoves

No trees, no life! Let us all join hands in reviving our destroyed Eden!

By Sarah Nankunda.

#### DO YOU KNOW THIS?

God created the earth, all the creatures and plants in their natural environment.

Man has disturbed nature by destroying forests, killing plants and animals, abusing the land, and not taking good care of the work He created.

Today is the right time to work hard to protect our lands and be good caretakers of God's creation. Today is the right time to work so we will have enough to eat and drink. Otherwise, we will be starving.

Why do I say this?

I ask TIST members to plant trees to enable those coming in future to reap good harvest and to share the benefits of God's creation. Shall we reap benefits without caring for our groves and developing a sense of ownership?

As a Quantifier, I find many people don't care for their groves and do not know that the trees belong to them.

To have good results, planting must be followed by good care. However, many groves are under bush. Remember, tree planting is like planting other crops. If trees are not cared for, they will not grow well.

My advice to SGs is to clear bushes on and around the groves.

Understand that you are the caretakers and stewards of your land and trees and God's creation. When harvest time comes, you will reap much.

Plant trees, and from these trees, you'll get food, medicine, shade, a clean environment and income.

Plant many trees! When harvest time comes, harvest a lot!

By David Murungi.

Quantifier Bushenyi.

#### THE BEST GROVE

TIST S.G members, it's your duty to have make your groves the best they can be. To have the best grove: -

1. **Use proper spacing:** Trees need enough room to grow well, since they need enough light and water to thrive. Plant trees at least 6ft (2m) from one tree to another for trees that don't spread a large canopy, like eucalyptus and more space for trees like mango and acacias that have spreading canopies. This is the minimum spacing, but more space may help some trees grow better.
2. The trees should also be planted **in lines** (rows) to enable Quantifiers and TIST staff to carry out their duties effectively.
3. **Weeding:** Farmers should clear and weed their tree groves to allow them grow well without the competition by other unwanted trees and bushes.
4. **Thinning:** Farmers should remove stunted trees to allow others grow well, or harvest trees when some become too closely spaced.
5. **Fire line:** Farmers should create a fire line around their tree groves and remove dead, dry wood especially

during the dry season to prevent fire spreading in their groves.

6. Farmers should also *fence their groves* where necessary to prevent animals from entering the groves and destroying trees.

Thanks to farmers who have already done the above. Please follow their example and make your grove the best it can be!

**From Tushabemukama Apollo**

### Thinning and pruning your trees for successful growth

by Ben Misleh

In general, the purpose of thinning and pruning trees is to improve individual tree health, as well as overall forest health. This is done by selecting the "best" trees in the forest. For many species, including hardwoods, grevillea, eucalyptus and cypress, these are often the largest trees, each with a single, straight stem. Trees may have different needs for space depending on species, site, planting style (woodlot, incorporated into crop fields, or windbreak), and climate, but some general principles apply.

To grow strong, healthy trees, a spacing of two meters is recommended. This spacing works for many TIST trees (i.e. grevillea, and cypress), but remember some trees require more space (mango and macadamia, for example). Giving trees proper spacing helps them get enough water and nutrients to grow to their full potential. Closer spacing is acceptable when trees are young. As the trees begin to mature, some trees will be larger and more robust than their

neighbors. These are the trees which should be kept. In determining which trees should be removed, look at the best trees and determine if they are appropriately spaced. If they are not, you should remove some nearby trees.

Once you have determined which trees to remove, cut these at the base of the tree. In the weeks and months following cutting, many trees will begin to sprout from the stump. To keep the tree from coming back, cut or break these sprouts off at the base of the tree.

One of the easiest ways to determine if a tree should be taken out is to look at its size relative to nearby trees of the same age and species. Tree growth will vary based on soil, water availability, etc. In general, if all trees of the same species in an area are close to the same age, the larger trees should be chosen to allow to grow. Another good indicator of tree health is the position of the crown of the tree in the canopy. Trees with crowns above the general canopy level can absorb more light than those lower down, and so can grow better. Finally, trees should have a single stem, with no major disease or rot. However, this does not mean that all small trees should be removed! Aim for a two meter by two meter spacing so that the trees are as large and as healthy as possible to maximize carbon capture.

When making thinning choices, remember that growth rate varies greatly by species. If a mango tree is growing near lots of eucalyptus, the mango may be far smaller and

slower growing than the fast-growing eucalyptus, but it certainly should not be cut simply because it is smaller! In fact, a tree like mango is of great importance due to its usefulness in producing fruit for food and sale. Mango also is better for other crops growing in the field. Eucalyptus can make other trees and crops nearby grow poorly. It is important to remember this as you select which trees to thin. There are many uses for trees, depending upon species besides carbon capture. For example, you may want trees for shade. In this case, you should give the tree more room than usual to expose the tree to more sunlight. This will stimulate the tree to produce new branches on the main stem and on larger limbs. If you want to use a row of trees as a windbreak, keep trees in that row spaced closely together, but remove trees to either side in order to increase the "bushiness" of the trees.

### Pruning

In a natural forest, trees naturally self-prune. Branches in the upper canopy shade out lower branches. As leaves on the lower branches begin to die off, so does the branch to which they are attached. Dead and rotted branches naturally fall off or are knocked off. While natural pruning may happen on TIST sites, it may be necessary, or beneficial to prune trees by hand. While each tree species requires a different pruning technique, some general principles apply to all trees as you decide which limbs to remove.

Most tree species should have a single main stem at the ground level. Trees with a single stem generally grow faster and are less prone to split during storms. If a tree with multiple stems is chosen as a crop tree, when choosing which stem to keep, generally choose the largest, but make sure it is healthy, with lots of leaves, free of rot, and relatively straight

Many people think you should cut limbs parallel to the trunk. This is false. Cuts should be made perpendicular to the limb, slightly out from the trunk. This minimizes the amount of exposed wood, and allows the actively dividing cells in the branch collar to grow over the cut over time (see figure 1). This helps the tree to remain healthy and free of rot.

When pruning, don't be overzealous. Tree trimmings are often used for fuel wood or fodder. While this is good, remember that while pruning can improve tree health and increase growth over time, removing leaves will initially reduce the tree's ability to capture sunlight and cause stress to the tree by creating a scar, which it must heal. If you remove too many, the tree will grow slowly or may die. After removing a limb, leave the area cut alone. Do not cover it with tar or any other material, so the tree can expel any toxic material on the wound. This is essentially the same process used by the human body to heal a cut.

Don't forget that trees tend to produce new shoots near cuts from thinning or pruning. Some species do this more than others. Generally, these are very easy to remove during the

first year after cutting by simply snapping off the supple shoots. Shoots will often not grow back.

Some trees, especially fruit trees, produce better yields with multiple stems. These are cut near the base of the stem when they are young in order to stimulate new growth. Once the tree has established these new shoots, they too may be cut in order to produce more growth. This process may be repeated in order to increase the bushiness of the tree, but be sure to allow at least a few months or more between trimmings so the tree can recover from the stress caused by cutting.

Remember that to take part in the carbon market, we have to commit to keep trees for the long term. We should allow trees to grow for at least 30 years, thinning and pruning to produce useful, sustainable forests that provide us benefits for years to come.

Figure 1



**Pruning cuts should be made just outside the branch collar.**



**On a dead branch that has a collar of live wood, the final cut should be made just beyond the outer edge of the collar**