

The International Small Group Tree Planting Program (TIST)

Fact Sheets for TIST Small Groups

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Fact Sheets are based on the collected experience of TIST Small Groups. Content may change as more information is collected from Small Groups in the future.

They are written for Small Groups to use and for local trainers to include in their training.

Each Fact Sheet includes a section, "The Group Decides." This section includes important questions the group members need to discuss and decide for themselves.

The Fact Sheets are to be available for hand-outs as one-page with information printed on the front and back. As these are revised, pictures will be included.

1.0 SMALL GROUP MEETINGS

1.1 DEFINING SMALL GROUPS

A small group is a community of 6-10 but not more than 12 people who have willingly and purposefully gathered together to support one another and perform agreed upon tasks. The group may also agree to grow spiritually and reach out to others.

1.2 GETTING STARTED

- Create a name for the group.
- Create a covenant or agreement for the group that sets the expectations, values and behaviors of the group. Write it down on paper. Everyone in the groups needs to sign the agreement.

1.3 WEEKLY MEETINGS

- Meet weekly at least for 2 hours.
- There should be a leader and a co-leader for every meeting. At each meeting, the leader and co-leader should be different members of the group.
 - Each session's leader is a servant to the group, not the "boss", the "chair" or the "teacher". He or she is there to serve and support the group members as they discuss and agree on tasks. The leader should be humble, accepting, patient, honest, and transparent. The leader of each session should encourage others to talk rather than be the one talking.
 - The co-leader helps the leader by keeping time during the meeting and supports the leader and the group in any other way needed.
- Rotate who leads the meeting every week. This is very important. Rotating leadership gives everyone a chance to be leader and co-leader. Every group member will have a chance to contribute his or her talents to the group, and will gain confidence as a servant leader.
- Have a schedule for each groups meeting.
 - Meetings should begin and end on time. (**NOTE: MAY NOT APPLY EVERYWHERE**)
 - At the beginning of each meeting, the group should re-agree on the tasks for that meeting, and make changes in the schedule if needed.
- Have a time of "building up" at the end of each group meeting.
 - Be sure to schedule time for this.
 - Every person in the group must say one specific, positive statement about what the group leader did at that meeting or how the group leader conducted himself or herself. This is not optional.
 - After that, if he or she wishes, any group member may point out a specific talent that the group leader has and showed during the meeting. This is optional.
 - "Building up" works hand in hand with rotating the leadership of the meetings. It also trains group members to look for the positive, and speak it out. "Building up" also trains the group what that group thinks is important in leading. Each new leader has the benefit of learning from "building up" of previous leaders.
- The leader and co-leader for that week need to set up the space for the group meeting.
 - Sit in a tight circle.
 - Don't have a table in front of leader or co-leader and others. It may seem practical, but is a barrier to communication in the group.
 - Choose a song to sing when the group comes together.

1.4 THE SMALL GROUP DECIDES

- What days will you meet?
- Where will you meet?
- What are the main things you want to get done in your group, beside planting trees?

2.0 SEEDS AND SPECIES

2.1 SELECTING SEEDS

- Pick seeds and species that your group members want to have and that will survive well in your climate. Some species that you can find can:
 - Give shade to your homes or farms
 - Block wind from your homes or farms
 - Make a nice looking fence around your house or farm
 - Give fruits, nuts and oil
 - Give medicines and pesticides
- Select species that are good for your area.
 - Get species that your group members know grows well in your area.
 - Make sure the species grows well without a lot of rain if you are in a dry area.
 - Make sure the trees have grown in your area for a long time. Do not use something new from other countries or lands because it may be not suitable for your environment. You can try some to see if it works. Try a few trees as an experiment.
 - Select fruit and nut trees. You can eat or sell the fruits and nuts.
 - Select trees that have useful bark or limbs for lumber.
 - Select species that are long-living. Your children and grandchildren can enjoy the benefits of your work now! The Forestry Officer can give you advice about species.
- There are three ways to get seeds or seedlings:
 - Pick up mature seeds off the ground around trees that you want to grow. This does not cost money but takes time. Have children help you on this. Show them what to find.
 - Buy seeds from forestry officers and seed companies. Check the expiration date and make sure the seeds will be planted before that date.
 - Buy seedlings from nurseries. Buy seedlings from other small groups. You can buy them already in bags.
- Important: Find out from your local forestry officers which species help crops to grow before you plant trees near your farms. Some species make it so that crops cannot grow around them. Other species can help the crops grow well.

2.2 THE SMALL GROUP DECIDES

- What are the types of trees you want to grow? Which tree types will you grow near crops?
- Who will transport the seedlings?
- What are the best ways to get each type of seed to germinate?
- How will you make sure you get healthy, good seeds or seedlings?

3.0 DEVELOPING AND MAINTAINING NURSERIES

3.1 SITE SELECTION

- Select a nursery site that is outdoors where there is sunlight but is in a shady and cool location. This keeps the seedlings from getting too hot and too much water evaporating.
- The site should be good to take care of and protect many seedlings.
 - Pick sites with a gentle slope that is away from areas with potential for flooding.
 - Pick sites near water such as a river, canal, lake, water pump or tap.
 - Pick sites that are easy to get to.
 - Pick sites that are as close as possible to where the seedlings will be transplanted.
 - Pick sites away from areas which are used by cattle or children.

3.2 SITE PREPARATION AND PLANTING OF SEEDS

- Determine which seeds to grow in plastic bags and which to grow in sand beds. Get help from your local forestry officer.
- Determine whether your seeds need preparation before planting. Get help from your local forestry officer.
 - Leguminous seeds have a hard exterior which makes it difficult for air and water to penetrate to the inner parts of the seed. These seeds need pretreatment such as conditioning with boiling hot water, removing exterior portion using appropriate tools etc.
- Prepare soil by mixing 3 parts of topsoil from forest areas, 2 parts of sand and 1 part of manure. Be sure to make enough.
- Prepare containers for the seeds.
 - Collect old plastic bags and cups from around your house and the village that can be used as containers to plant the seeds. This will also help by removing waste, keeping your village clean.
 - If you have large plastic bags or sheets, cut them into pieces about 24cm long and 13cm wide. Take the side which is 24cm long and fold it in half. Sew up the two sides that are 13cm long. This will make an open cylinder which has a circumference of about 24cm.
- For seeds that need to be planted in bags:
 - Fill the bags with the prepared soil.
 - Put a seed that needs to be in a bag into the soil.
 - Put more soil on top of the seeds up to at least twice the thickness of the seeds.
 - Leave at least 5cm of the bag open at the top to allow watering.
- For seeds which need to be planted in sand beds:
 - Prepare an embankment using bricks or stones with a width of about 1 meter and length depending upon the amount seeds being sown.
 - Fill the embankment at the bottom with a layer of stones about 5 cm thick (or put a layer of nylon material at the bottom) before putting the soil to prevent roots penetration if the type of seedlings has long roots.
 - Follow with a layer of the prepared soil about 10 cm thick.
 - For the top layer, use soft sand from which dust and mud were removed, make this layer about 5 cm thick.
 - The seeds should be planted on the bed with sand on top up to at least twice the thickness of the seeds. Do not fill the embankment to the brim as that will cause sand and seeds to spillover during watering.
- Mark the species planted in the bags and sand beds.
- Count the plantings even before germination and write down the date of sowing.
- Arrange the plastic bags in lines and in groups of 100, 200 or 500, as you choose. Arrange them according to species so that it will be easier for Quantifiers to record data by species.
- Some seeds may fail to germinate and some seedlings can die. Therefore, plan ahead and plant more seedlings than the amount you intend to transplant in to your land.

3.3 NURSERY MAINTENANCE

- Water the seedlings frequently. Be careful not to over water the soil.
- During the rainy season, cover the seedlings using dry grasses or hay. Seedlings should be moved away from under trees so water does not drip into the seedlings.
- Remember that germination time is different from one species to another. Some may germinate in a few days and others may take several weeks.
- If certain seeds do not germinate within the normal duration then re-seed those bags and areas of the sand bed.
- Check for the presence of pests and diseases.
 - Spray natural and native insecticides whenever required.
 - A good example is to use bitter water from boiling Neem leaves as an insecticide.
- Move the plastic bags around from time to time.
- Cut any overgrown roots.
- Fence off the nursery to protect from cattle and playing children.
- Let the seedlings grow to about 30 cm before transplanting. This may take from 1 month to 6 months.

3.4 THE SMALL GROUP DECIDES

- How many nurseries will the group have? Will each member have one, or all members share one, or both?
- Where will nurseries be located?
- How will the Small Group work to water and take care of the seedlings?

4.0 PREPARE LAND FOR TREE PLANTING

4.1 WHERE TO PLANT TREES

- Select places to plant trees where people will enjoy the trees for a long time:
 - Farm borders: use trees to mark the borders of farm lands and protect crops from wind.
 - Paths: Trees can mark paths and give shade
 - Around houses: You can plant to mark paths and give shade.
 - Around crops: Some species can prevent erosion of topsoil. Some species can give good nutrients for the soil to help crops grow.
 - Around schools, places of worship and other public buildings can give shade and make the land beautiful.
- Select land that is accessible.
- Avoid using large groves or plantations.
 - Many plantations only have one or two types of trees: these can be hurt by fire and bugs.
 - Land should have many uses, not just holding trees.
 - Many types of species should be planted to improve the health of the land.
 - Plantations are usually not close to where people live so it is hard to collect branches for firewood, fruits and nuts and bark.
 - Planting too many trees of one species can be hurt by bugs or fire.
 - Some animals may live in groves and become a problem.
 - Village governments may decide to use the groves later for something else, like building a school or a dispensary.
 - Non group members may cut down trees or take wood.
- Some groups plant in groves because:
 - They live in a town and rent houses and have no farm of their own.
 - They want to get many trees into an area and think it is easier to take care of the trees.
- If you plant in a large grove:
 - Plant 10 or more species on large planting areas.
 - Make a firebreak around the grove by digging dirt and removing brush and grass.
 - Plan to plant the trees 12 feet apart. Planting closer than that can lead some trees to die and others to be weak.
 - Plant groves near villages so members can go get firewood, fruits, nuts, and bark.
 - Woodlots can be used to raise trees for sale. Make sure the woodlots are close to where the people can come and buy wood.
- If members do not own the land, be sure to get permission before planting trees.

4.2 PREPARE LAND

- Remove scrub brush and weeds.
- Leave any trees that are strong and healthy.
- Remove rocks from where you will plant.
- At the end of the rainy season, prepare holes to plant trees during the next season. Digging holes in wet ground is easier than in dry ground. The holes may be filled in by the soil before the rains come but it will be easy to redig the soil out of the hole.
 - Dig deep, square holes.
 - Ask the forestry officers and other group members what size holes work best and how far apart. In Mpwapwa, holes are 2 feet wide and 1 ½ feet deep.
 - Space the holes 12 feet apart from each other. If the trees will be used for lumber, the holes can be closer together (about 8-10 feet apart).
 - Do not arrange the holes in straight lines in rows and columns. That can lead to erosion.
 - Try to have each line have the same number of holes so it is easier to count how many trees were planted.

- Separate the topsoil from the panned, gravel soil and the subsoil. Keep the topsoil.
- Be careful that the holes are placed so rainwater will get to them. For example, a very large rock up hill from the tree may block rainwater from running to the hole.
- About 4 to 6 weeks before you plant, prepare the dirt for planting.
 - Mix the topsoil with farmyard manure, or mulch made from weed vegetation (cut and collected ahead of the weeds seeding.)
 - Mix the sub-soil and pan soil with mulch and refill the hole, putting the topsoil/manure mix on top (into which the seedling will be transplanted.)
 - Leave a few centimeters recess at the hole top to allow water collection and harvest.
 - Place a stick in the hole center to mark transplant spot.
 - Pile any remaining dirt on the DOWNHILL side of the holes so rainwater will be able to go in the hole.
- Plan with your group to do this work before it is time to plant the trees! This way the hard work will be spread out.

4.3 THE SMALL GROUP DECIDES

- Who will remove the brush and rocks and weeds? When will this be done?
- Who will dig the holes while the ground is still damp from rains?
- If there is no mulch or manure close, who will supply that?

5.0 TRANSPLANTING SEEDLINGS

5.1 BEFORE TRANSPLANTING

- Healthy seedlings that are 30 cm or more tall are good to be transplanted and should be moved to the planting site.
- Move the seedlings close to the planting site 1-2 weeks BEFORE the rains come if it is possible to water them while waiting for the rain. This makes it easier to transport.
- Plant the seedlings in the holes no more than 2 weeks before or 2 weeks after the rains start to make sure they get the benefit of as much rain as possible.

5.2 TRANSPLANTING

- Soil preparation: make the sure the top soil and pan soil from the holes are separated, mixed with manure, and returned to the hole. Pile any remaining dirt on the DOWNHILL side of the holes so rainwater will be able to go in the hole.
- Remove the bag from the seedling.
 - Carefully loosen the bag so it can be used again.
 - If it must be cut, only cut a small line so it can be unwrapped.
- Pull the soil to the side, place the seedling in the hole.
- Pack dirt around the seedling.
 - If an empty 1 litre water bottle is available, cut off the bottom end, remove the cap, and place it so the top is facing down, toward the roots.
 - Pack dirt around the seedling and water bottle.
- Stamp around the seedling gently 8 or 10 times.
- Water the seedling.

5.3 AFTER TRANSPLANTING

- Put sticks leaning around the seedlings so that people see them and do not step on them.
- Put thorn bush and needle branches around planting areas to keep animals away.
- Remove all weeds around base of trees every 2-3 weeks.
- Water the seedlings once per week if there is no steady rain.

5.4 THE SMALL GROUP DECIDES

- What are the best ways to organize group member's time to water and weed trees?
- How will the group mark the trees and keep the trees protected from animals and people?