



## Mazingira Bora August 2006

Welcome to the August edition of Mazingira Bora! Inside this newsletter you will find

- The latest exciting news from TIST Kenya
- Important training notes for small groups
- Articles written by small groups for small groups



This month the Meru best small groups have been sharing their accomplishments over the past 40 days. The Nanyuki groups are meeting in Nyeri from 20<sup>th</sup> – 24<sup>th</sup> August. More updates will appear in the September newsletter. Here is some of the news from the Meru seminar to date:

### **Important Extracts from the follow up BSG Seminar, Gitoro Conference Centre, 13-17 August, 2006**

#### **40 DAY PLAN REPORT BEST IDEAS**

**Here are the best ideas that were identified by the seminar participants from the reports given by the Best Small Groups on their work over the last 40 days:**

1. Training people about nurseries
2. Training the youth about TIST
3. Networking with the local government and other people about tree planting
4. Demonstration on CF and nursery preparation
5. Having plays on HIV/AIDS

Best Small Groups discussing TIST best practices during the seminar



6. Borrowing public land for planting
7. Small groups having their own nurseries and selling the seedlings to other people
8. Invention of a better seedling bags other than the polythene bags. This new bag uses banana leaves to keep the seedlings from drying up.
9. Training on benefits of trees e.g. medicine, animal feeds, timber, source of fuel
10. Reporting to the chief, and the foresters so as to be allowed to hold meetings and get to the forest to search for seeds.
11. The BSG split into two for easier training and recruitment of many other small groups
12. They collect seeds for other small groups
13. They borrow public land for planting trees

**ADDITIONAL INCOME GENERATION POTENTIAL THROUGH OTHER BENEFITS OF THE TIST PROGRAM: IDENTIFIED AT THE BSG SEMINAR**

- 1) Raising and selling seedlings – 2000 seedlings a year per group @ Ksh 5 per seedling = Ksh 10,000 per year per group
- 2) Medicines from trees – Mutero & Mwiria trees Ksh 5,000 – 8,000 per year per group. Neem trees Ksh. 6,000 to 10,000 per year per group.
- 3) Fodder from trees – 500 seedlings per year per group @ Ksh 10 per seedling = Ksh 5,000
- 4) Making compost and selling – 100 bags per group per year @ Ksh 40 = Ksh 4,000 per year per group
- 5) Nuts - 20 trees x 30 kgs per tree per year per member x 2 harvests/yr x 6members x Ksh 30 = Ksh 216,000 per year per group
- 6) Conservation farming –increased yield of 10 bags for half an acre (from 5 bags to 15 bags). Therefore 20 bags per acre of increased yield of maize.
  - a. 20 bags per acre X 2 acres per group of CF X Ksh. 1,000 per bag = Ksh. 40,000 per year per group
- 7) Fruits and selling the products e.g. jam, juice etc. Mangoes Ksh. 300 per crate X 6 crates of good quality mango per group per year = Ksh. 1,800 per year per group. Papaw = 10 papaws per member x 10 Ksh per papaw x 6 members = Ksh. 600 per year per group
- 8) Reduced Firewood purchase through use of Jikos and Selling of excess firewood. Average fuel cost per year of Ksh. 2,000 per member X 6 members X 30% savings from Jiko = Ksh. 3,600 per year per group
- 9) Timber based on Agroforestry per TIST best practices: 50 Ksh. per foot X 7 feet X 80 pieces (7-foot pieces) per year per member x 6 members = Ksh. 168,000 per year per group

- 10) Furniture
- 11) Bee keeping and selling honey
- 12) Tree park/ arboretum
- 13) Carvings
- 14) Enzymes and catalyst for beers
- 15) Flowers
- 16) Grafting to produce hybrids and sell
- 17) Selling sawdust for jikos
- 18) Oils – castor seeds
- 19) Soaps making from avocado
- 20) Thatches for roofing the houses
- 21) Charcoal
- 22) Fibers
- 23) Toothbrush
- 24) Dried vegetables
- 25) Candles making from bee wax
- 26) Walking sticks for old people. There are lots of old people in our areas.
- 27) Tie and dye

BSGs in the seminar agreed to continue to think about other income generation potential identified to come up with estimates for each of those. **Total income generation potential identified so far is: Ksh. 460,000 per year per group.**

**TOP TEN LONG-TERM TREE SPECIES IDENTIFIED AT THE SEMINAR BY BSGS**

1. Mukima
2. Muuru
3. Mutuntu
4. Mutero
5. Muraana
6. Muringa
7. Jakaranda
8. Muembe
9. Mukandamia
10. Mwiri

**CURRENT STATUS OF TIST GROUPS IN KENYA BY FIELD OFFICE**

OFFICE	REGISTERED GROUPS	GROUPS WITH SIGNED GHG	GROUPS QUANTIFIED	QUANTIFIED TREES
Central Meru	189	94	88	96,923
Chugu	419	311	214	159,977
Kinyaritha	370	169	211	160,897
Lamuria	106	75	18	14,412
Naro moru	294	216	157	179,631
Ntugi	306	112	162	99,823

**Important Extracts from the follow up BSG Seminar, Mathari Pastoral  
Centre , 20<sup>TH</sup> - 24<sup>TH</sup> August, 2006.**

**WHAT A SUCCESSFUL TIST PROGRAMME IS:**

1. Recruitment of many groups
2. All groups trained on rotational leadership and practise it.
3. Planting many trees
4. Improved environment
5. Training Small groups on HIV/AIDS concepts
6. Training and practicing Conservation Farming to all small groups
7. Full involvement of all parties involved in TIST programme i.e SG, Field offices, Tist staff and stakeholders
8. Reduce scattering i.e by having many clusters
9. Reduce program costs by opening more field office closer to small groups. This reduces traveling costs
10. SG to be trained on TIST program for them to own it up and feel part and parcel of the program i.e. not a foreign program.
11. Train SG about the construction and use of energy saving jiko.
12. Train people on the best tree species to plant depending on there areas, and plant them.
13. Training Small groups through dramas, concerts, practicals and demonstrations.
14. TIST will be successful if it can only collaborate / partner with other stakeholders to achieve the international required forest cover of 10%.
15. Regular and timely payment of small groups.
16. All Small groups should have tree nurseries
17. The BSG and also individuals should get incentives, meals and allowances
18. TIS field day - Small groups from different TIST project areas exchange ideas and create awareness e.g. through rotational visits.
19. The best small groups get all the required forms from the field offices.
20. Small groups to support the program by growing more trees, and the CAAC to sell the GHG for the Small groups aggressively - Ramesh and Ben should not sleep.
21. Provide tree seeds to the small groups to establish tree nurseries. Some of the small groups come from very dry areas where seeds are hard to get.
22. Motivating trainers by TIST program e.g. T-shirts, badges and caps with TIST logo. This enhances identity while creating awareness.
23. Regular node meetings and should be attended by all small groups
24. Involve the young generation / youth in the TIST program for continuity of the program (above 14 years)

## **Best Ideas from The 40 Day Action Plans**

1. Good cooperation between groups and field office
2. Using chief's office and church
3. Networking with the local government and other people about tree planting
4. Registering many groups
5. Registered groups started nurseries very fast
6. Using drama to demonstrate TIST activities
7. Small groups were encouraged to Practise conservation farming

### **Why it is useful to attend Field office meetings?**

- Learn from different groups
- Keeping the TIST office updated on what is happening on the ground
- Follow up / check up on small group
- Competition between Best small group
- Groups get registered
- Encouragement for new groups
- Opportunity to meet other stakeholders
- Unity between mentor groups and BSG
- Newsletter and BSG payments
- Remind the quantifiers to come and count trees
- Get reports to take back to small groups.

## **ADDITIONAL INCOME GENERATED THROUGH OTHER TIST ACTIVITIES**

- 1) Fruits  
**1,000 fruits per year per SG x Ksh 5per fruit=Ksh 5,000**
- 2) Firewood /Charcoal – Sell and use  
2 Carts per harvest  
1 Cart = Ksh 1,500  
2 harvest per year  
1 cart is sold  
1 Cart is used by SG. This displaces purchase  
  
Total income = 2 carts/harvest x 2 harvest x Kh1500/Cart  
  
**= Ksh 6,000/yr//GP**
- 3) Timber  
40pcs/member/tree/yr x 7 feet x Ksh 20/ft x 6 feet x 2 trees

$$= \text{Ksh } 5600 \times 6 \text{ members} \times 2$$
$$= \text{Ksh } 67,200$$

Off cut firewood

$$50 \text{ pcs offcuts/tree} \times \text{Ksh } 50 \times 6 \text{ members} \times 2 \text{ trees/member}$$

$$\frac{\text{Ksh } 30,000 / \text{group}}{\text{Ksh } 97,200 / \text{group}} =$$

- 4) Bee keeping  
1 hive/member x 6 members x 1 harvest/yr x 5kgs/harvest x Ksh 300/kg x 710  
= **Ksh 9,000/ SG**
- 5) Tourism
- 6) Energy saving jiko
- 7) Conservation farming  
6 members x ½ acre/member x 5 bag extra/ ½ acre x Ksh 1,400/Baag of maize  
= **Ksh 42,000 / group/year**
- 8) Medicine  
6 members x candle stick Japan pine neem x 20 ltrs of medicine/month x 12 months x Ksh 40/ltr = **Ksh 57600/yr/group**
- 9) Compost manure
- 10) Carvings
- 11) Birds Keeping
- 12) Soil fertility
- 13) Toothpicks & Match sticks
- 14) Selling seedlings  
**6 members x 1,000 seedlings/member/yr x Ksh 5 = Ksh 30,000/yr/group**
- 15) Glue
- 16) Biodiesel e.g. Mukinduri seeds,
- 17) Fodder

## **TOP TEN TREES IDENTIFIED IN MATAHRI SEMINAR**

1. Mutero
2. Muiri
3. Muringa
4. Mugaita
5. Mutarakwa
6. Mukurwe
7. Murera
8. Mukinduri
9. Mugumo
10. Muthiga

## **Field Office Reports**

### **Lamuria Office From June 30<sup>th</sup> to 30<sup>th</sup> July:**

Since we left Nanyuki seminar, both old trainers and new BSG groups to have more groups and fill the gaps. Currently we have total number of 115 groups that are already registered.

Result: We have greatly impacted areas like Mirera and Sweet Waters where we have registered 35 new groups. In Ngoro Theru we have 29 new groups and we hope to open new areas like Ndaiga border of Timau where we are sure the impact will be high.

Stove Jikos: This technology is very appropriate in this area where we have few trees. It will help make the people of this area to stop deforesting so much. Because it is economical communities have accepted it as another best practice of the TIST program.

Conservation farming: People are happy with this technology, which will reduce poverty and improve produce in this area. Groups are preparing land and digging holes waiting for rainfall in month of September.



### **KABENDERA GROUP**

Kabendera group consists of 5 men and 1 woman. Our group have unanimously agreed to work together as a team and managed to recruit new small groups. We had been practicing TIST value and its practices. Our main view for joining TIST was to practice reforestation where deforestation have occurred and more. Also to make our country and area healthier and better place for the coming generation. In addition CF “KILIMO HAI” holes are already dug for the coming long rain.

Lastly one of our group member and a trainer known as Mzee Kiahara always quote that “MITI NI MALI” as he trains. We would like to encourage different group from different places to keep up the good spirit for making our country a better place.



As promised, this month we are publishing the details for conservation farming. Try out this technique and see the effects it can have for your group:

## **Conservation Farming**

### **CONSERVATION FARMING (C.F): Why Use C.F?**

- ◆ Small groups that use conservation farming best practices always seem get some harvest, even in the very worst years when rainfall is little and unreliable.
- ◆ In good years the harvest can be spectacular! Small groups who use conservation farming are seeing a huge difference in their crop yields. Some groups in Tanzania have reported 5-10 times improvement in their crop yields.

Below is a picture of a TIST Small Group in Chugu that practiced CF and observed increase in yield



- ◆ Farmers who use traditional farming methods cannot always be certain that he or she will get any harvest. Most years the harvest is small, and sometimes there is no harvest.
- ◆ Conservation farming works by digging the holes for the crops and filling the holes half full with good soil and manure or compost. The seeds therefore get many more nutrients than if they were planted in normal soil.
- ◆ The extra nutrients help the seeds to grow into stronger plants with greater yields. The holes protect the seeds and you can weed around the holes without hurting the germinating plants.

◆ The holes are very important. When the rains come instead of washing the good soil and the seeds away, the water goes into the holes and helps the seeds grow more. 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 take all the water away as fast.

### **Preparation of C.F holes**

- After harvest do not burn the crop residues but leave them on the ground. The more residues remaining on the ground the better because they enrich the soil, making it more fertile. Remember that crop remainders can also be used for compost manure.
- Try to stop animals from grazing on the area. If they graze there will be less crop remainders left covering the ground.
- Conservation farming holes have to be dug before the rains come. It is important that all holes should be finished one month before the rains come. This is so that when the rains come you only have to plant the seeds and you will not miss the benefits of the rains. It is therefore vital to start digging the holes early.
- Mark out where you are going to dig your holes. Get a long piece of rope or string and squeeze bottle tops on to it 70cm apart. Stretch the rope across the width of your field. Each bottle top marks the centre of a hole and it makes sure that the holes are correctly spaced out. Mark out the rows of holes using a hoe. Each row should be 90cm apart. Just mark out the rows and holes you think can be completed that day.
- On the same day as you mark a block of holes, dig the holes. The holes need to be oblong. They should be between 15cm wide, 35cm long and 15cm deep.
- When you are ready to plant the grain it is important to put some very fertile soil into the holes to help the crop to be stronger. Take some manure and good topsoil and mix it together, or use compost manure. Fill the hole with the mixture up to 5cm from the surface.
- If you are planting maize, soak the seeds in some water for 6-7 hours before planting them. This speeds up germination and means that more will survive. When you plant the seeds, plant 4 seeds in the soil across the hole. Cover them with 2.5cm of the rich soil and manure mixture. After this the soil in the hole should be about 2.5cm below the surface of the field. It should never be more than this. Clods (big lumps of soil) should always be broken up so that the soil makes good contact with the seed.
- 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.
- The space at the top of the hole enables water to get to the plants when the rains come. Without this space the rain will just run off the land, taking a lot of the soil nutrients with it.
- Weed around the holes regularly. Each year there will be few and fewer weeds.

- Don't be discouraged! Digging the holes now will mean they are ready for this year and you will not have to dig them next year.



### Expert Views

#### **Some Notes extract from by Jonathan Muriuki, ICRAF – Suggestions where to plant trees on you farm**

1. In and around the farmyard
2. In fields between crops
3. Along the edges of fields, or in and around grass fields
4. In blocks on agricultural land
5. On fallow land
6. In areas of natural woodland
7. On terraces or ridges, along contours on steep slopes
8. Along paths or tracks, on common ground
9. Along ditches, canals or rivers
10. In erosion gully

#### ***The disadvantages of eucalyptus (TIST discussion and Dr. Chin Ong, ICRAF)***

##### *1. What are the disadvantages of eucalyptus?*

Eucalyptus trees require a lot of water. They survive even in dry areas because their roots can go very deep looking for water. The trees can reduce the water level in an area, making it drier. The water does get released to the atmosphere again, but this water may then fall somewhere completely different as rain. The trees can also consume many useful soil nutrients that make the land unsuitable for agriculture later. Once planted, eucalyptus trees are difficult to remove as they sprout new shoots once cut.

##### *2. When researchers recommended eucalyptus in the past, didn't they know eucalyptus could harm the environment?*

Answer: When researchers went to Australia, they found out that the trees there were growing very slowly and assumed that they did not take up too much water. Certain types of eucalyptus were fast growing and drought resistant and were therefore recommended elsewhere. However, in Africa the eucalyptus trees grew much faster and consumed more water and nutrients than was expected.

##### *3. Why did TIST say farmers could plant any tree species but then later ask farmers not to plant eucalyptus?*

Answer: TIST relies continually learning best practices from people. Since the time TIST came to Kenya more and more research has been done on the disadvantages of some species of eucalyptus. TIST decided it was better if farmers avoided the risk of suffering adverse environmental effects if they planted too many eucalyptus trees. TIST best practices are continually evolving over time as we share our knowledge and experiences.

4. Some farmers have already planted so many eucalyptus trees. What can they do?

- (i) Plant different species so the percentage of eucalyptus is lower.
- (ii) Gradually cut your eucalyptus and replace with a better species.

**Our New Staff Member.**



**DoraCynthia Muthoni** has joined us as our Finance and Administration Officer. One of her main jobs is to serve the TIST offices by giving accounting training and follow-up on the Online accounting, TIST staff billing and Weekly Field office Accounting.



Thank you for your continued work!