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**KENYA/JAPAN SOCIAL FORESTRY TRAINING PROJECT**

*Proceedings of the Third follow-up workshop  
on farmers trained from Meru, Tharaka/Nithi and Nyambene  
Districts between 1991 -Mid 1994.  
at Kitui Regional Training Centre.*

*Held at Meru County Hotel  
14th - 16th June, 1995  
Meru, Kenya.*

**Compiled and edited: by Florah Miwawughanga.**

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## **BACKGROUND**

- The conduction of follow-up workshops is part of the implementation process of the on-going second phase in Kitui centre. Such workshops are held annually. They were decided upon to bring together farmers (ex-participants of the farmers' courses in the centre) from each involved district for three to four days.

This is the third workshop since the organization of such workshops began in 1993. The 1993 one, which was the 1<sup>st</sup>, was held in Machakos to cater for farmers in that district who had been trained in the centre before. The 2<sup>nd</sup> one was held in 1994 in Embu to cater for those farmers trained from that district.

The 3<sup>rd</sup> one was held in 1995 at the county hotel to cater for farmers who had been trained in the centre since 1991 to mid 1994 from the former district. This workshop included farmers from the present Meru, Tharaka/Nithi and Nyambene districts which initially belonged to Meru district.



### **OBJECTIVES AND AIMS**

1. To bring together farmers from Tharaka/Nithi, and Nyambene districts who had been trained in the Kitui Social Forestry Centre between 1991 and mid 1994, in order to share experiences and make recommendations on any new techniques they have tried or any new innovations they have come up with after the training.
2. Enhance their motivation in adopting Agroforestry practices or any other new techniques realized during the workshop.

### **AIMS**

1. Evaluate the training impact of the framers.
2. Identify major constraints in adopting and practising some of the techniques introduced during the training.
3. Identify any new techniques identified by farmers purposely to test them and, if useful, incorporate them in future training programmes.
4. Asses the attitude of farmers in connection with the various techniques introduced to them during the training.

*Photograph 1- The opening ceremony by the D. O. Environment Meru, Mr. Allan Kamau at the conference room at the Meru County hotel. Also in the photograph are the organizers, resource persons and the participants.*

**A BRIEF SPEECH BY  
MR. ALLAN KAMAU, THE DISTRICT ENVIRONMENT OFFICER, MERU  
DURING THE OFFICIAL OPENING OF A FOLLOW-UP WORKSHOP FOR  
FARMERS ON 14<sup>TH</sup> JUNE, 1995 AT THE COUNTY HOTEL, MENU.**

The Project Manager,  
The Training Manager,  
The Course Co-ordinator,  
Other JICA Officials,  
Course - Participants,  
Ladies and Gentlemen,

It is a great privilege on my part to have been accorded this honour to open this Workshop for farmers from our three Menu Districts - Namely Tharaka/Nithi, Menu and Nyambene. I am made to understand that you are excelling well in activities of tree planting on farmland in the rural set-up. The District Commissioner Menu, Mr. Joseph Korir was indeed the one earlier scheduled to perform the official opening but due to other pressing duties was unable to come and thus sent me to represent him. And before I formally declare the workshop officially open, I would like to share a few issues with you.

Poverty, food, employment, energy and environmental conservation have become the most topical development issues in recent years and these are issues requiring the attention of us all. Population growth has put excessive pressure on the natural resources which increased poverty make it difficult to institute corrective measures in environmental protection. This is because very poor people rely directly on the resources available in their immediate surroundings (such as wood and charcoal) and it does not make much sense to try to teach them not to use such materials. Instead they should be encouraged to undertake tree planting in their small farm units.

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It is good to note that our Government has focused strongly on population control and growth rate has now been brought down to around 3.5 percent from 4 per cent a decade ago. But this 3.5 per cent growth is still very high and efforts should be put to bring it down to 3 per cent. Population growth and environmental degradation are closely inter-linked and we have to get involved in the general promotion of population programmes. Similarly much of the increase in agricultural production in the last forty years has resulted from increased acreage that have been created out of former forest land. There is now very little forest cover on private land and pressure has been mounting for excision of gazetted forests.

Deforestation and devegetation leads to many negative effects e.g. loss of biological diversity; disruption of the hydrological cycle; land degradation and loss of habitat for wildlife and birds. The ASAL areas from which most of you come are particularly very vulnerable eco-systems. Of late there has been increased immigration of people into these marginal areas due to increased population pressure in the areas of high and medium potential. This has further strained the limited natural resources of the ASALs due to increased demand for wood products and grazing.

However to curb this trend the Government is doing a lot in form of forestry research and development assisted by some donor agencies. One such donor is JICA which you are by now all familiar with, as they are the sponsors of this workshop and the other training you have attended at Kitui.

The idea is to promote development of social forestry in semi-arid areas through establishment of facilities like tree nurseries focusing on women groups, other organized groups and schools, in order to make communities produce tree products both for their own domestic use and for consumption by the timber industries.

Finally I wish to thank JICA for sponsoring this workshop and to formally announce that this workshop is now officially open.

Thank you.

## **RECENT AGROFORESTRY PRACTICES IN SEMI-ARID LANDS**

Maushe H. Kidundo,  
C/o RRC-Embu,  
P.O. Box 27,  
EMBU.

*Photograph 2- Mr. Maushe Kidundo during the presentation*

### **INTRODUCTION**

Agroforestry has become a very popular concept. There are several definitions given to it. These definitions vary depending on the needs. While the word and optimism associated with it is widely shared, the actual meaning of the word is often misunderstood. Agroforestry as is used in this paper, means all practices that involve a close association of trees or shrubs with crops, animals and/or pasture.

This association should be both ecologically and economically sound. Agroforestry may involve a combination of practices in the same place and at the same time, or practices in the same place at different times (rotational practices). The place may be small or big (Rocheleau et al, 1989).

From the definition, Agroforestry is just a new term for an old practice. Several traditional Agroforestry systems have in fact sustained people for generations in a variety of environments. For example, the Turkanas have been planting the 90 days millet under the *Acacia tortilis* trees for a long time now. The planting of *Cajanas cajan* in alleys while planting other crops within the alleys is widely practiced in many parts of semi-arid areas.

Professional scientists have only contributed to the knowledge and improvement of particular Agroforestry species and techniques. DAREP, through adaptive research, involves the farmers problem identification, through to empowering the farmer to conduct his/her own research as a way of bridging the gap between science and practices in the field.

Agroforestry can contribute significantly to the development of Arid and semi-arid lands (ASALS), which comprise 82 % of Kenya's total land area (or 473, 000 km<sup>2</sup>). Trees and shrubs provide:

- a) Productive roles e.g. human food, soil nutrients, firewood, charcoal, ethanol, oils, poles, timber, fruits, medicines, etc.
- b) Protective role e.g. Soil and water conservation, microclimates, improvement of soil moisture retention, regulation of stream flow, shade, living fences, etc.

This paper looks at some of the Agroforestry practices in the semi-arid lands. The practices are looked at in relation to the current farming systems in the areas. As much as possible a local example is given for each practice for a better understanding. It is beyond the scope of this paper to describe the practices in details

## The Agroforestry practices

### 1. Practices within cropland

#### a) Trees dispersed in cropland

This involves protecting and managing of selected mature trees already on shambas. It may also involve planting of new trees or careful management of selected seedling establishment on site through natural regeneration. In Mbere and to some extent Tharaka, farmers leave *Mellia volkensii*, *Terminalia brownii*, and *Balanites aegyptica* for various uses. Other tree species that can be left or planted on farm include *Zizyphus Mauritania*, *Acacia albida*, etc. These rarely compete with the crops and have other benefits.

#### b) Stabilizing cut-off drains/fanya juus with trees and grasses

Fanya juus or drains are mainly introduced in order to prevent soil erosion on sloping cropland. These soil conservation structures are usually costly and/or labour intensive. By planting trees and/or grasses, their value is increased. The trees can be for timber, fodder, fruits, medicines, etc. The grasses may be used as strategic fodder for animal feeding.

#### c) Alley cropping

This is Planting of hedges of multi-purpose trees in rows between wider strips of annual crops. The hedges are lopped to produce mulch which is applied to cropped areas to produce fertility or cover the soil for moisture conservation or used as fodder. This system has proved to work in high potential areas. In semi-arid areas competition for moisture is evident.

However, DAREP's work on alleys using *Leucaena leucocephala*, *Sena atomaria* and *Griricidia sepium* have shown some positive results with the use of wider alleys.



Also, cowpeas nearer the alleys of *Griricidia sepium* seem to be doing better and less affected by aphids than those away from the alleys. Sampling work is going on to establish these interesting observations.

#### **d) Mulching, Composting, or Mounding**

This practice involves carrying of tree leaves or twigs and use them for mulch, compost or mound to protect and improve the soil and retain moisture to increase crop yields.

##### **Mulching**

Leaves are applied directly to the soil. DAREP Machakos did some research on this. It is a good method if one has enough mulch and labour to do the carrying.

##### **Composting**

Leaves and twigs are combined with manure and processed into an organic fertilizer which is applied later, the constraint is water.

##### **Mounding**

Tree leaves and twigs are combined with grasses and then covered with a layer of soil to make a mound which is then left to decompose. Crops are then planted on the mounds in the next season. It is mainly for fertility improvement.

#### **e) Trees dispersed on cropland**

This is the most widely practised in the semi-arid areas. In this system, trees are usually permanent and may be dispersed singly or in clumps. Trees are mostly selected and left to grow, growth or planting of wildlings is encouraged. Trees selected are usually popular (useful) and slow in growth. The trees left provide other uses and do not compete with crops.

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**f) Contour vegetation strips with multipurpose trees**

This involves the planting of MPTs on contours and often for soil erosion control on sloping croplands. Trees provide other benefits like fodder, timber, forage, medicine, etc. Shrubs and grasses can also be planted within the contours. If shrubs are used the system is called Multi-storey planting.

**g) Fruit trees**

Fruit trees may play a vital role in income generation. These also bring quick returns to the farm. Fruit trees like mangoes, guavas, pawpaw, citrus, etc are common. The demand for seedlings is high and rarely met by the government nurseries. Need to promote on-farm nurseries is vital for its success.

Fruit trees can be planted in association with crops and in rare cases with animals. Most common in ASALs is the planting of fruit trees in home compounds for fear of theft. Indigenous fruits are also to be promoted. These may include *Zizygium guminii*, *Zizyphus mauritiana*, *Hyphaene coriece*, *Vitex gliriciodi*. *Muthwana*, *Muthithi*, *Adansonia digitata*, etc.

**2) In fallow croplands**

Fallows are croplands left without crops for periods ranging from one season to several years. They are mainly done for control of insect pests, weeds and disease from the previous crop. The other objective is to allow land to recover from depleted nutrients.

**a) Natural fallows**

These are croplands abandoned for a period of time. In most cases animals are left to graze.

**b) Improved fallows**

This process aims at shortening the fallow periods. This is done by planting MPTs (fixers), herbaceous plants. In natural fallows, animals can be left to graze. This is only possible when the trees are already established.

**3) On boundary and border space.**

These structures may be designed to prevent wind, work or prevent people or animals out of farms. In addition, trees provide other useful benefits.

**a) Boundary planting**

These are trees planted at certain distances along the borders. Their principle aim is to make boundaries clear. This is also the most convenient site for planting productive trees which do not fit with other systems.

**b) Wind break**

These are often planted on boundaries between properties or fields for protection against wind. They may take different forms, single or double lines. A good wind break is normally multi-storeyed. DAREP has established a wind break demonstration in Isiolo, using *Azadirachta indica*, as the upper storey and *Zizyphus mauritiana* as the understorey. Other species which can be used include *Schinus molle*, *Casuarina equisetifolia*, etc.

**4. In pasture and range lands**

Woody vegetation plays an important role in livestock management in the ASALs. Browse and shrubs provide fodder for livestock. Extensive silvopastoral systems on range lands usually involve the selective protection and management of naturally occurring trees and shrubs of particular value for animal fodder. Trees may also be planted purposely with the existing grasses, either dispersed as individuals or clumps. In addition to high quality fodder, trees may also provide other products like poles, timber, fuelwood, etc.

### **5. In home compounds**

This usually involves the planting of fruit, ornamental, shade and medicinal trees around home compounds. In most cases, these are slowly turned into home gardens by planted understoreys. These may be vegetables, shrubs or herbs.

### **6. In public or community places**

Community planting is encouraged where land is communal or clan land. Planting can also be done on :

- i) Public markets, wells, clinics, churches, mosques. In these places trees play vital roles e.g. provision of firewood, fruits or fodder, oilseeds or religious purposes.
- ii) Community plots for production of poles, fuelwood and timber for the communities.
- iii) Roadside planting. Grasses can also be incorporated along the trees. People can then harvest the products. Cultivation under the trees is also possible.

### **7. Woodlot**

This involves planting of trees close together to form a small forest. They are given different names depending on their objective or end-use.

#### **a) Fodder plots**

Livestock is a major component in Agroforestry systems in the ASALs. Shortage of fodder is experienced during the dry season. Fodder plot planted either on the compounds or farms may be used for strategic feeding of calves, milk goats or drought power animals.

#### **b) On-farm woodlot.**

These are usually planted for poles, timber, tannin, etc. They may be planted on the less productive parts of the farms (Ituru). Species like *Casuarina equisetifolia* can be used to rehabilitate such sites. Grazing of animals is possible when the trees are beyond the reach of animals.

were not enough buyers. Most seedlings still remained in the nursery after the planting season, thus placing more demand on the water resource.

After the visit to Mr. N'Gitonga's farm, there was a discussion to reflect on the importance of some of the activities observed in that farm. The assistant D.F.O Meru, Mr. Joseph Wakiaga and the Forester, Meru Mr. Mwarania shared in the responsibility in facilitating the discussion and also made some recommendations. The discussion touched on the following:

**1. The importance of Alley Cropping**

- They stabilize soils
- Provision of firewood within a convenient distant thus avoiding time wastage.
- Interception of rain and reduction of force of wind.
- Improvement of micro-climate.
- Better use of land.

**2. The important soil conservation techniques observed in Mr. N'Gitonga's farm.**

- Fanya juu terraces.
- General tree planting.
- Cultivation ploughing along the contours.
- Fallowing.
- use of manure.
- Restriction of livestock movement (Zero grazing).
- Wind break.

**3. Silvicultural operation & general care for the trees. Advice by the assistant district forest officer included the following:**

- Good pruning only a small stud (branch piece is left to prevent wounding to help in the production of beautiful, less noted timber.
- Weeding is vital to present competition for the basic resources.

- To prevent termite attack the area around the tree should be maintained clean.
- The farmers suggested use of traditional materials for termite control as an alternative to chemicals.

#### **4. Woodlot development**

- Mainly for fuelwood and income.
- Also as source of seeds, timber, posts poles.
- Right species are vital to avoid failure.

#### **5. Nursery practices**

All the farmers were impressed by the portable nursery shades for prevention of too much water loss.

Besides having large nurseries, the farmers could also have small nurseries e.g. hanging nurseries of plastic basins which would prevent destruction of the seedlings by livestock.

Concerning the water problem some farmers advised others to try and make use of all the dirty water available from household use with caution on the use of hot water and that with detergents.

#### **6. Wind Break**

- To reduce the force of wind
- It is vital to plant different species at different levels to form a multi-storey structure for effectiveness in reduction of force of wind.
- Also helps reduce water loss and prevents damage of crops & property.

### **7. Tree planting techniques**

- The farmer said the bottle feeding method was not good for his area due to overheating of the water. He used tin can watering, with tins covered at the top to prevent overheating & evaporation. Another farmer from a different area, however, said that the bottle feeding method was working very well.
- The farmer also recommended a small hole because soils in the area were loose and bigger pits meant spread of water out into a large area thus facilitating more evaporation, thus availability of less water to the plant.

### **8. Bee keeping**

- The farmer harvested honey after 3 - 5 months.
- He said it was less labour intensive.
- For greater attraction, use of some perfume was recommended.



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*Photograph 3 - A visit to Mr. N'Gitonga's tree nursery*

*Photograph 4 - Mr. N'Gitonga demonstrating how he uses the portable nursery shades*

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*Photograph 6- Mulching and Line planting using G. robusta in Mr. N'Gitonga's farm*

*Photograph 7- A visit to one of Mr. N'Gitonga's woodlots*

### **GROUP DISCUSSION SESSION**

The discussion session was based on guiding topical questions that concerned what the farmers had done since they last attended the course in Kitui Centre, any new innovations of their own they had come up with, problems they might be facing and solutions if any know to them.

The discussion and presentation session provided an opportunity for the farmers to share their experiences with each other and the organizers of the workshop. The sessions were facilitated by the organizers of the workshop, the assistant DFO Meru, Mr. J. Wakiaga and the forester, Mr. J. Mwarania.

The discussion was done as follows:-

**Group discussion**

**Group one members**

1. Mr. George Gitonga
2. Mrs. Elizabeth Mitheu- Rapporteur
3. Mr. Julius Rimbera
4. Mr. Kaaria Cypriano
5. Mr. Julius Njogoo
6. Mrs. Florence Gakii
7. Mr. William Kirema
8. Ms. Flora Mwawughanga - Training Manager SFTP, Kitui.
9. Mr. J. Mwarania - Resource person (Forester Meru).

*Photograph 8- Group one members*

**Topic 1**

**Which practices and techniques have you carried out since you last attended the course at Kitui?**

- Intercropping - Maize & beans intercropped with various Agroforestry tree species.
- Line planting
- Fodder trees & crops
- Woodlot establishment
- Planting of windbreak tree species
- Bee keeping

**Topic 2**

**Which technical problems are you faced with in carrying out the above practices?**

- Budding techniques
- Protection from pests & Diseases.
- Tree seed germination
- Seed pre-treatment e.g. *Mellia volkensii*
- Appropriate tree species identification for different places.

**Topic 3**

**How have you been trying to solve the above problems?**

- Consulting the relevant experts.
- Farmers own initiatives.
- Buying budded seedlings from farmers who are conversant with budding techniques.
- Learning from others and also attending training courses & seminars.

- Use of other propagated alternatives e.g. roots and stems.
- Alternative termite control - using other chemicals.

#### Topic 4

**Which new techniques have you found out which can improve our courses at Kitui?**

- Use of portable nursery shades.
- Tin & bottle watering methods for some areas, not all.
- Hole sizes vary according to the area and season of planting.
- Spacing of tree should not be standardized and that it differs depending on the area.
- Termite control alternatives - using chicken droppings, *Cassia siamea* leaves and bark, ash, pepper, *Azadirachta indica* leaves etc.



*Group two*

**Members**

1. Mr. Joseph Mpekethu
2. Mr. Stanely Araigua - Rapporteur
3. Mr. Zakayo Mbaabu
4. Ms. Jacinta Kiara
5. Mr. Joseph M'chabari
6. Mr. Fredrick Magiri
7. Mr. M'Kiunga Mwambia
8. Mr. Otieno M. J. - Training Staff SFTP, Kitui.

*Photograph 9- Group 2 members*

**Topic 1**

**Which practices and techniques have you carried out since you last attended the course at Kitui?**

- Intercropping - crops associated with trees e.g. *Grevillea robusta* and *Leucaena leucocephala*.
- Crop rotation - rotation of various crops e.g. Maize, Beans, Bananas intercropped with agroforestry trees.
- Grass strips and soil conservation structures.
- Appropriate agroforestry tree species.
- Organic farming involving composting and double digging.
- Nursery establishment techniques and management.
- Farmers trained act as models to others by establishing demonstration plots, model farms and educating the community on agroforestry practices.

**Topic 2**

**Which Technical problems are you faced with in carrying out the above practices?**

- Water problem.
- Tree protection from pests and diseases
- Natural trees are decreasing rapidly, exotic ones are not tolerant to pests and diseases.
- Lack of seeds of certain tree species
- Seed collection and pre-treatment techniques.

**Topic 3**

**How have you been trying to solve the above problems?**

- Water problem - working together in groups.
- Advising the community to conserve & manage indigenous tree species.
- Planting trees tolerant to pests & diseases.

- Getting technical assistance about seed collection & pre-treatment techniques from extension officers.

**Topic 4**

**Which new techniques have you found out which can improve our courses at Kitui?**

- Early preparation of holes before start of rains to be encouraged.
- Emphasis on pit depth according to the climatic conditions of a place.
- Controlling pests and diseases using a mixture of herbs from various tree species.

**Group Three**

Members

1. Mr. M'Ikiara M'Mbogori
2. Mr. Daniel Kiambati - Rapporteur
3. Mr. Daniel Kiao
4. Mr. Silas Burugu
5. Mrs. Josephine N. Peter
6. Mr. John Mbaabu
7. Ms. Sabinah Buntai
8. Mr. Joseph Wakiaga - Resource person (Asst. DFO., Meru).
9. Mr. Lucas Rateng - Training Officer - SFTP, Kitui.

*Photograph 10- Group three members*

Topic 1

**Which practices and techniques have you carried out since you last attended the course at Kitui?**

- Nursery establishment.
- Organic farming involving kitchen gardening.
- Intercropping.
- Seed collection.
- Bee keeping.

Topic 2

**Which Technical problems are you faced with in carrying out the above practices?**

- Lack of water.
- Seed collection techniques & tools.
- Nursery protection - pests & diseases.
- Appropriate agroforestry tree species for some areas.
- Lack of tree harvesting techniques.

Topic 3

**How have you been trying to solve the above problems?**

- Water problem - Using a cow-cart for collecting water.
- Establishing tree nurseries near the home compounds.
- Looking for naturally germinated tree seedlings.
- Application of ash, chicken waste and chemicals.
- Planting agroforestry tree species learnt at Kitui centre.
- Visiting other farmers and acquiring more from them.
- Making local tools for seed collection - using a rope and pole.

Topic 4

**Which new techniques have you found out which can improve our courses at Kitui?**

- More emphasis on fruit and forest trees intercropping.
- Use of local materials for seed collection.
- Participants should be encouraged to re-use polypots after planting.
- All participants should be taught various techniques and extension methods of promoting Social Forestry activities in their rural areas.
- After the discussion session, there was a presentation session whereby a member of every group presented what the group had discussed. Below is a photograph of one of group one members making a presentation.

*Photograph 11 - Presentation by a group one member*

## REMARKS AND RECOMMENDATIONS

- ◆ The pre-workshop arrangements were not well done since by the last week some of the farmers had not received communication from D.F.O.'s and the D.A.O's in the district. As such we had to travel to some of those areas to locate the farmers. It is hoped that communication next time will be better.
- ◆ What emanated from the discussion was that most farmers had practised what they had learnt at Kitui Regional Training Centre before majority of the farmers established and managed their own nurseries, did inter-cropping of the species with food crops for various reasons, practised bee keeping; line planting, woodlot establishment; organic farming and planting of wind break.
- ◆ The major technical problems face include:
  - ◆ The water scarcity problem.
  - ◆ Budding - Lack sufficient technical know how.
  - ◆ Pest and diseases, termite problem being such a menace.
  - ◆ Problems concerning germination especially of species such as *Mellia volkensii*
  - ◆ Expensive nursery materials.
  - ◆ Problems in identification of the right species for the right places.

It was recommended that:-

- ◆ Farmers should try to make use of any available dirty water, except for that which is hot, that with detergents or harmful chemical to try to combat the water scaring problem.
- ◆ The use of portable nursery shades made of local materials was recommended highly for prevention of much water loss.
- ◆ It was recommended that farmers seek technical advice from experts in the appropriate departments in case of problems concerning technical issues such as seed dormancy and budding. Learning from those who know was an alternative recommendation.

- ♦ As for the termite problems farmers recommended the use of some traditional materials such as pounded leaves of *Cassia siamea*, Chicken droppings, burnt pepper etc. which are cheaper.
- ♦ Concerning the nursery it was recommended that cheaper local materials could be used.
- ♦ As a whole the workshop was a success with more than 2/3<sup>rd</sup>s of the participants invited having attend. The aims of the workshop were also met.



## CLOSING SPEECH

### AT THE MERU COUNTY HOTEL BY THE D.F.O. - MERU, MR. OLIECH

The Japanese representative from Muguga Nairobi, the Jica officials from Kitui, the training Manager, the training officials course facilitators, Course participants, ladies and gentlemen.

I take this opportunity to welcome you all on behalf of the Forest Department and the local residents and farmers in Meru District.

I take this chance also to sincerely thank the seminar organizers from JICA Kitui, the resource persons who have facilitated the training, and in particular the participants whose attendance has made this occasion a success.

Organization and undertaking of trainings particularly those which are regional in nature are usually very expensive, time involving and requires dedication. The JICA involvement into this kind of co-operation with the Kenya Government must therefore be appreciated, and be encouraged to continue to benefit the Rural farmers.

Today we are presiding over a conclusion of a follow-up workshop for farmers from Meru, Nyambene and Tharaka/Nithi District who had been trained at the JICA Regional Social Forestry Training Centre - Kitui. Several organizations do train farmers but never bother to undertake follow-ups to evaluate the outcome of the training programmes previously undertaken.

I therefore consider this meeting to be a session where trainees and the trainers share on the kind of progress and experiences they have gained since the trainees were last trained.

It is also important to take note that training sessions are not always organized for participants "just" to be trained and share experiences, but also to get to know one another, occasions for re-union and to remind yourselves of issues affecting you as a farmer.

I therefore hope that you have made use of the time you have been away from your busy schedules at home.

With those few remarks, I therefore declare this seminar officially closed.

Thanks.

*Photograph 12 - Closing ceremony by the D.F.O , Mr. Oliech*

**LIST OF MATERIALS & EQUIPMENTS**

1. Note books.
2. Document wallets
3. Biro (bic) pens.
4. Name tags for participants, resource personnel and organizers.
5. Writing pads.
6. Stickers - Miti ni Mali
7. Pamphlets - How to plant trees (Swahili version)
8. Time-table (Workshop programme).
9. Flip charts and two stands.
10. Manila paper.
11. Mark pens - Small, Medium & big - different colours.
12. Empty tape cassettes for recording proceedings
13. Over-head & slide projectors
14. Agroforestry slides & 2 slide trays.
15. Portable screen.
16. White board, markers and eraser.
17. Transparencies & markers.
18. Two extension codes & two plugs (Adaptors).
19. A camera & films.
20. A pair of scissors.
21. Cellotape & glue.
22. Typewriter, typing papers, eraser ribbon and cuborn papers.
23. Certificates of participation.
24. Travelling expenses claiming sheets.
25. Erasers.
26. 1 Metre, 1 square and 3 (12") rulers.

27. Registration forms.
28. Stapler & staples.
29. Social Forestry Techniques part 1 (for resource persons and guests).
30. Video camera and tripod.
31. Project calendars.

**Publication distributed to participants**

1. Kenya/Japan Social Forestry Training Project (Phase II) More Tree Better Life (Miti ni Mali Handbook).
2. KEFRI/JICA - How to plant trees pamphlets written in two languages - English & Swahili.

**LIST OF ORGANIZERS**

**A) Guest(s) of honour**

1. Meru District Commissioner - Opening session (represented by District Environment Officer)
2. Meru District Forest Officer - Closing session.
3. Mr. Shima - Training Leader SFTP Muguga - Closing session.

**B) Resource Persons**

1. Mr. Maushe H. Kidundo DAREP, Embu.
2. Mr. Joseph Wakiaga Assistant D.F.O., Meru.
3. Mr. J. Mwarania - Forester, Meru.

**C) Organizers**

1. Mr. Joshua Cheboiwo - Project Manager SFTP, Kitui.
2. Ms. Florah Mwawughanga - Training Manager.
3. Mr. Nixon Muniafu - Training Officer.
4. Mr. Lucas Rateng - Asst. Training Officer.
5. Mr. Otieno M. J. - Training Staff.
6. Mr. Y. Kubo - Training Expert.
7. Mr. T. Hirota - Training Expert.
8. Mrs. Redemter Mutembei - Typist Training
9. Ms. Rose Mbithi - " "

**D)Drivers**

- |                        |   |                  |
|------------------------|---|------------------|
| 10. Mr. Samuel Oyoo    | - | S.F.T.P., Kitui. |
| 11. Mr. Pythias Kiilu  | - | "                |
| 12. Mr. Peter Njoroge  | - | "                |
| 13. Mr. George Muema   | - | Bus conductor    |
| 14. Mr. Zacharia Kuria | - | S.F.T.P. Muguga  |

