



Kenya Forestry Research Institute

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# Main Survey Report for Training Impact Evaluation (Kitui Centre)

Presented by  
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for Training Sub-Committee (TSC).

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## Introduction:

Implementation of Training Courses by the Kenya/Japan Social Forestry Training Project at its two Centres namely Muguga and Kitui started in August and December 1988 respectively. This was in response to the need for development of capability in Social Forestry training in Kenya in the short run, while promoting self reliant tree planting activities by the rural populace to alleviate fuelwood crisis, environmental degradation and loss of forests and other natural resources, in the long run. Following this understanding, Surveys were conducted generally in five Provinces in the Country and specifically in the arid & semi arid Districts of Eastern Province to ascertain the actual training needs of these localities.

On the basis of data accruing from these surveys therefore, suitable Social Forestry curricular were developed to fit the various trainee categories identified during the Surveys. Development and administration of such curricular is charged to the Training Sub-Committee (TSC). The said curricular have been administered to course participants since then to date quite successfully, at both Centres.

Knowing that mounting of courses like the project does is quite expensive and therefore in a bid to justify the expenditure thereof in addition to the need to improve the curricular to address the intended objectives, Surveys to determine impact of training are undertaken. Two forms of Surveys, namely Pre-course and Post course (Main Survey) are done for every type of training course. Pre-surveys are intended to provide baseline information about trainees with regard to level of forestry knowledge, education, socio-economic standing and level of forestry activities achieved to hence form a basis for comparison with main Survey. Pre-Course Surveys' questionnaires are served to trainees as they report for training.

On the other hand, post course surveys (main surveys) are conducted one year or more after training at the Centre. This is understood to be time long enough for anything initiated by a participant to be seen or felt. The effect or impact of training is therefore arrived at by comparing results of the Pre-survey and main Survey.

The main Survey under report was undertaken from 24th May to 8th July 1993. The Survey covered participants of eight (8) courses, namely three for farmers, three for field technical assistants staff and two for teachers. All these courses were implemented at Kitui Centre in the period April 1991 to March 1992, after a lapse period of about two (2) years relative to the date of Survey. Since it was not possible to follow-up every participant because of costs and other logistics, sampling was used to isolate those surveyed in all but the teachers course.

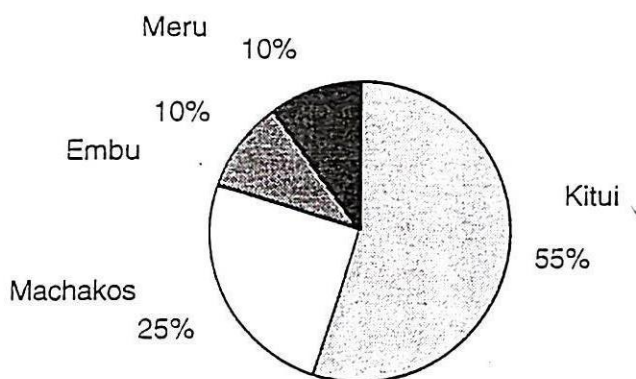


## 1.0 FARMERS

Farmers form an important category of trainees in the Regional Social Forestry Centre programme. These are the owners of land and have the discretion to plant trees or not. In essence, they are the direct implimentors of Social Forestry ideas at farm level. Their training at the Centre therefore aims at equipping them with the necessary know-how in this regard thus giving them the impetus they require. In the training period April 1991 to March 1992, 3 farmers' courses were implemented, realizing a total of 65 participants, including 3 who did not present their pre-survey questionnaires.

### 1.1 Sample selection

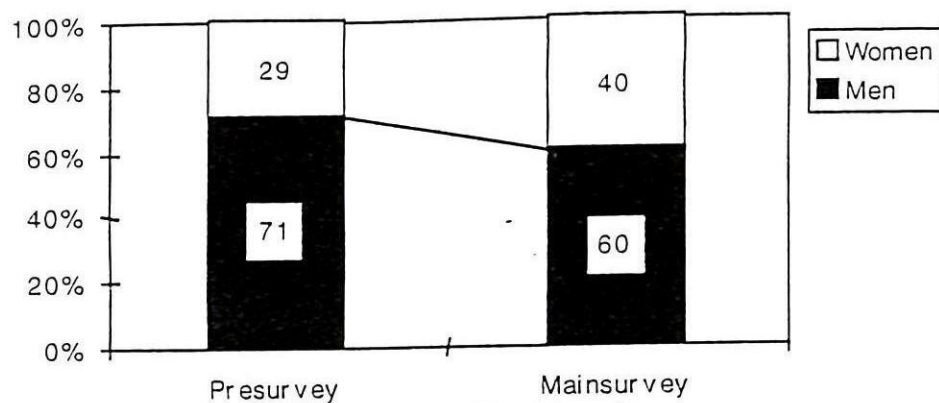
Given that the former participants of our training courses are distributed within the Project's nominating area of Eastern Province, coupled with limitations in aspects of costs, time and other logistics, only 30% (20 out of 62) graduands randomly selected from four Districts within the Province were surveyed. However the data from pre-survey used in this report cover all the 62 farmers. Those who responded to items of the main survey questionnaire and analysis of their responses is the subject of this paper. Figure 1.1, illustrates the sampling distribution pattern of the sample survey.



**Fig. 1.1 Distribution of sampling**

### 1.2 Sex distinction

Figure 1.2 shows the man and woman ratio of the investigated persons. In pre-survey though it was 71% man and 29% woman, in main-survey as they were chosen in consideration of the dispersion, it became 60% man and 40% woman. Since women are important executive persons of social forestry through the women's group in the rural areas, women's course was introduced from the beginning of the 2nd Phase of the project.

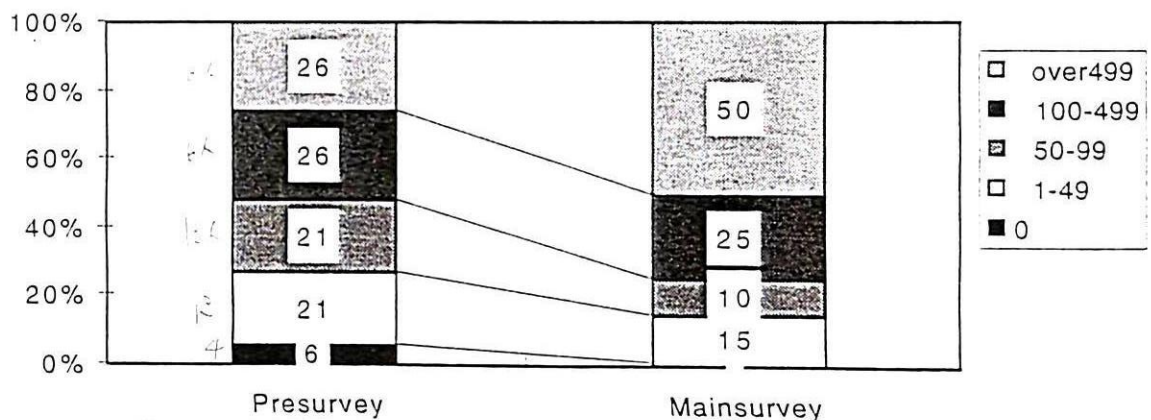


**Fig. 1.2 Sex distinction**

### 1.3 Tree planting activities

#### 1.3.1 Number of trees planted to date

The main survey indicates that 85% of the farmers interviewed (50%+25%+10%) planted so far more than 50 trees as compared to 73% (26%+26%+21%) reported in pre survey (Figure 1.3.1). Therefore the number of trees planted has been on the increase. Particularly the farmers who plantd 500 trees or more significantly increased from 26% to 50%. This means that the training was a good incentive for the farmers to further extend their tree planting activities.



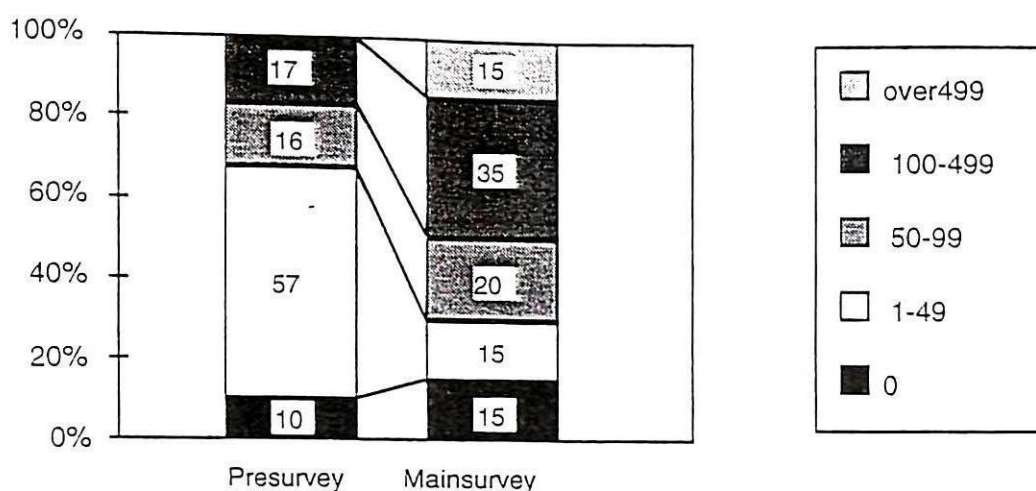
**Fig. 1.3.1 Number of trees planted to date**

#### 1.3.2 Number of seedlings planted within last one year

Figure 1.3.2 shows the number of seedlings that the farmers planted within the last one year proceeding the each survey.

Comparing between pre-survey and main-survey, it shows that there was an increase in the number of farmers who planted 50 or more seedlings a year from 53% to 70%. Although the percentage of those who haven't planted any seedlings is shown as 15%, the proportion of those who planted 50 seedlings and over has been significantly increased.

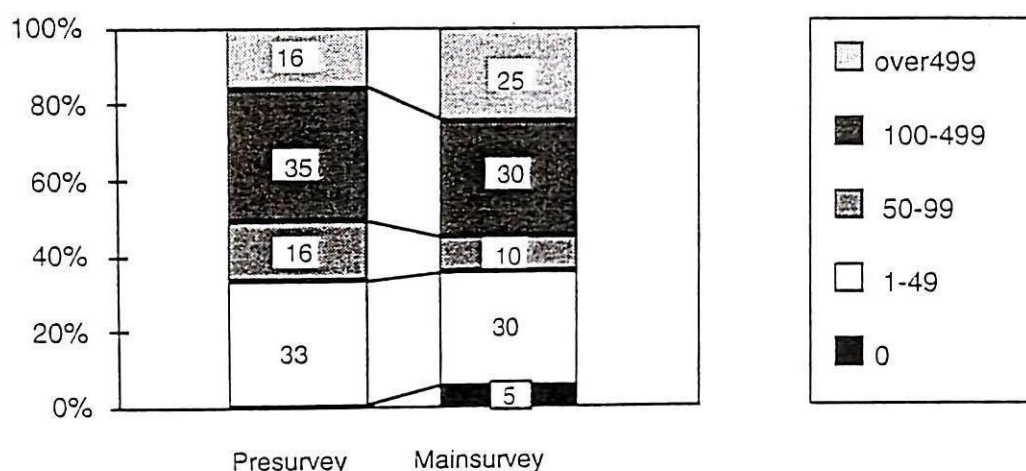




**Fig. 1.3.2 Planted seedlings a year**

### 1.3.3 Number of seedlings surviving

Figure 1.3.3 compares number of seedlings surviving during the pre-survey and main survey respectively. Although we can not reach a definite conclusion from these data alone as they do not show the survival rate and, therefore, the relation between the number of planted and surviving is not very clear, it suggests at least a general tendency of increasing number of surviving seedlings which indicate the technical impacts of the farmers' course on general tree planting activities and management in the covered region.

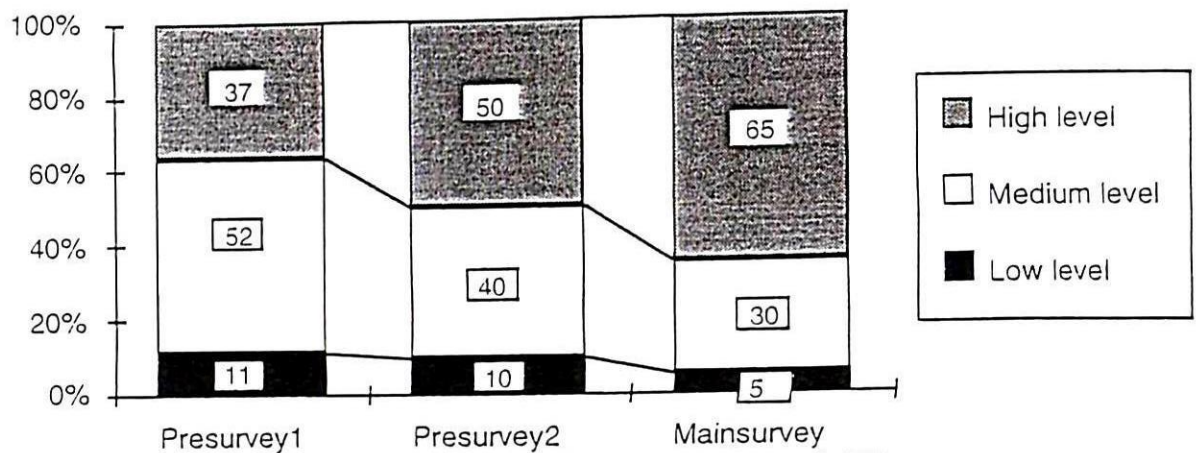


**Fig. 1.3.3 Comparison of surviving seedlings**

### 1.3.4 Level of technical skills

Figure 1.3.4 shows the level of farmers technical skills according to Dr.Iida's criteria of assessment. It is indicated by measuring activeness of tree planting; number of trees planted to date, planted seedlings a year, and surviving seedlings. Points are given 0, 1, 2, 3, 4, 5 according number of trees. If total points are more than 11, it is ranked in high level, 6 to 10 points in medium level, and 5 points or less in low level. If high level farmers become majority on training, the content of training should be modified to high level one or recruiting system must be changed so that we are able to get participants of low level in technique. For that it should be analyzed on presurvey which is to be

conducted before training. Figure 1.3.4 indicates a steady increase of "high level" category from 37% to 50% and 65% in each survey, while "medium level" decreased from 52% to 40% and 30%. This obvious improvement in technical level of the farmers shows positive effects on knowledge and techniques obtained at the training course which were later reflected to their field activities.



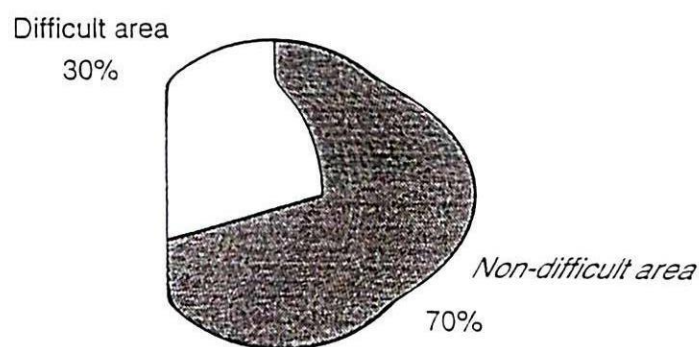
**Fig. 1.3.4 Level of technical skills**

c.f. Presurvey 1: All of trained farmers(62)

Presurvey 2: Trained farmers same as mainsurvey(20)

### 1.3.5 Area description

Figure 1.3.5. shows the type of planted area evaluated by the farmers. 70 % of the farmers think that they planted in non-difficult area and 30% in difficult area. Difficult area implies that even if the farmer was equipped with all knowledge and techniques achieved through the farmers course, severe environmental condition in his/her farm would make it difficult to carry out tree planting activities and to raise their survival rate. It is hoped that development of new techniques by this project will improve the growth and survival of trees not only in the non-difficult area but also this difficult area as well. The newly developed techniques and innovations could be communicated through fora like follow-up workshops, and on-field seminar, among others.



**Fig.1.3.5 Evaluation of area**



1.4 Places and species planted

1.4.1 Compound

Most of the farmers planted *Grevillea robusta* (40%), *Cassia siamea* (35%), *Leucaena leucocephala* (35%) in the compound. Average number of trees planted by farmer was 118 (*Grevillea robusta*), 11 (*Melia volkensii*) 7 (*Croton megalocarpus*).. These trees seem to serve as ornamentals as well as providing shade. Then *Cassia siamea* *Leucaena leucocephala*, *Jacaranda mimosifolia* were also planted.

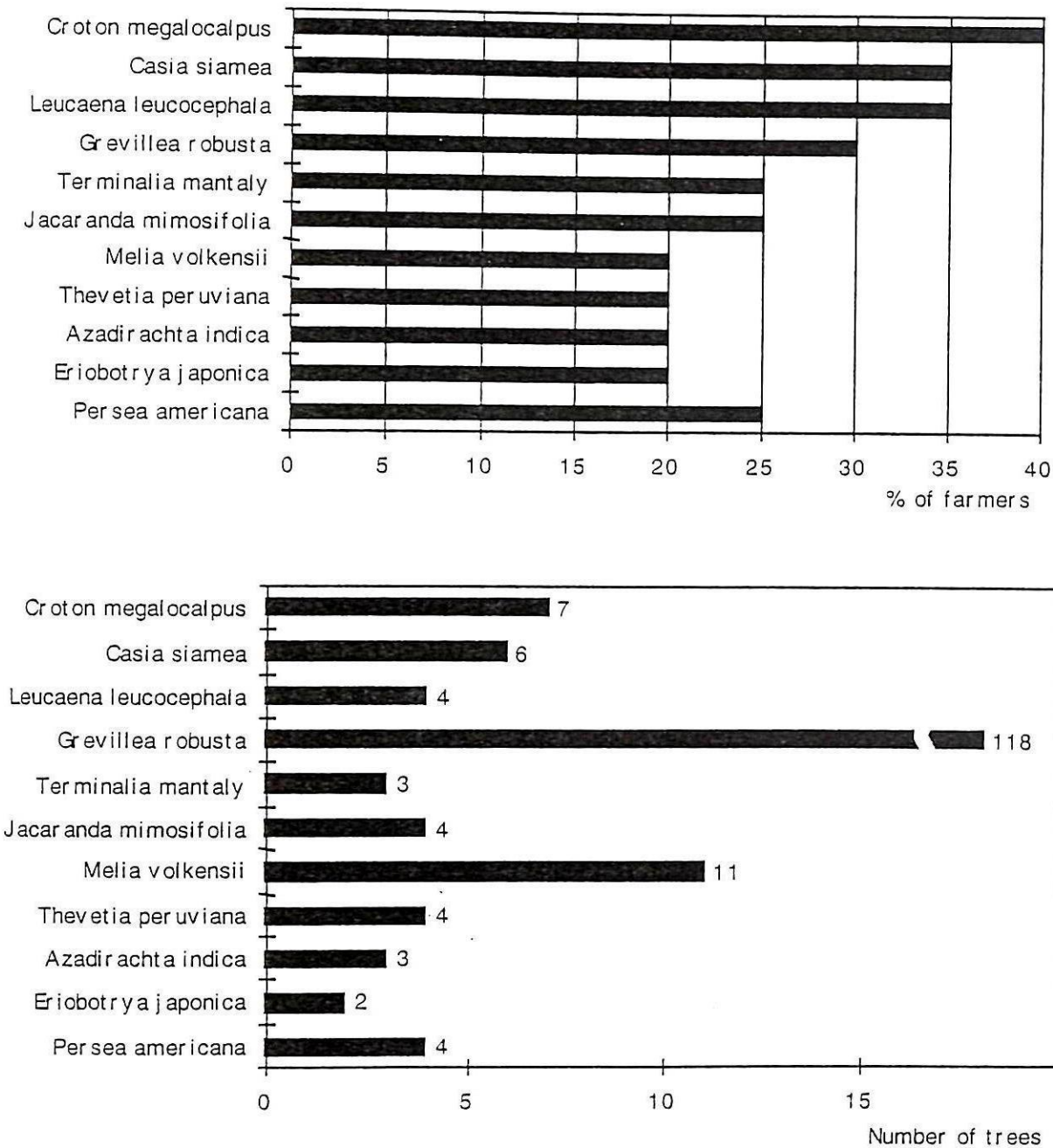
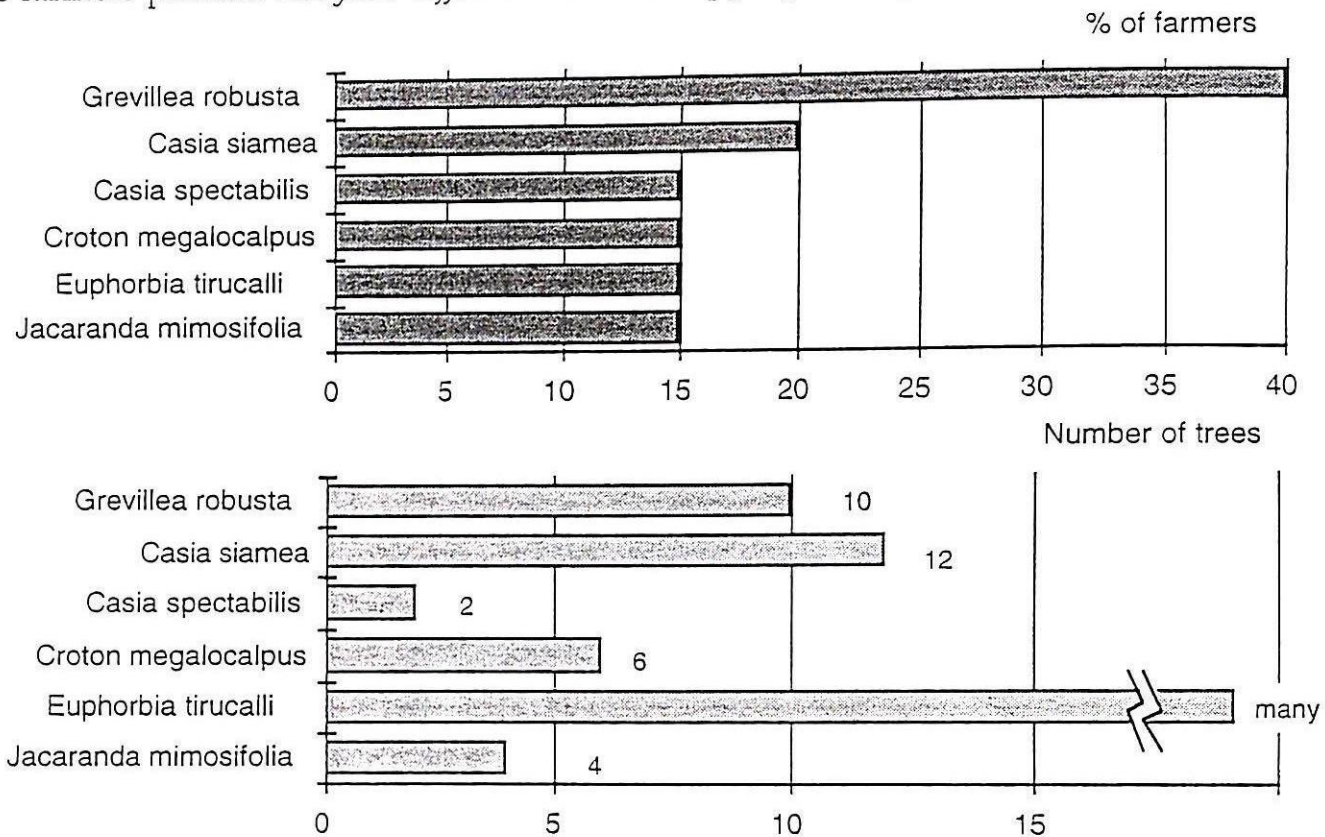


Fig. 1.4.1 Planted trees in their compound

### 1.4.2 Boundary of compound

40% of the farmers planted *Grevillea robusta* (10 trees per person), and 20% of the farmers planted *Cassia siamea* (12 trees per person), then 15% of the farmers planted *Euphorbia tirucalli* (many trees per person) at the boundary of compound and others included *Cassia spectabilis*, *Croton megalocalpus*, and *Jacaranda mimosifolia* etc.. One of the farmers planted *Dovyalis caffra* which is an appropriate species for fencing purposes.

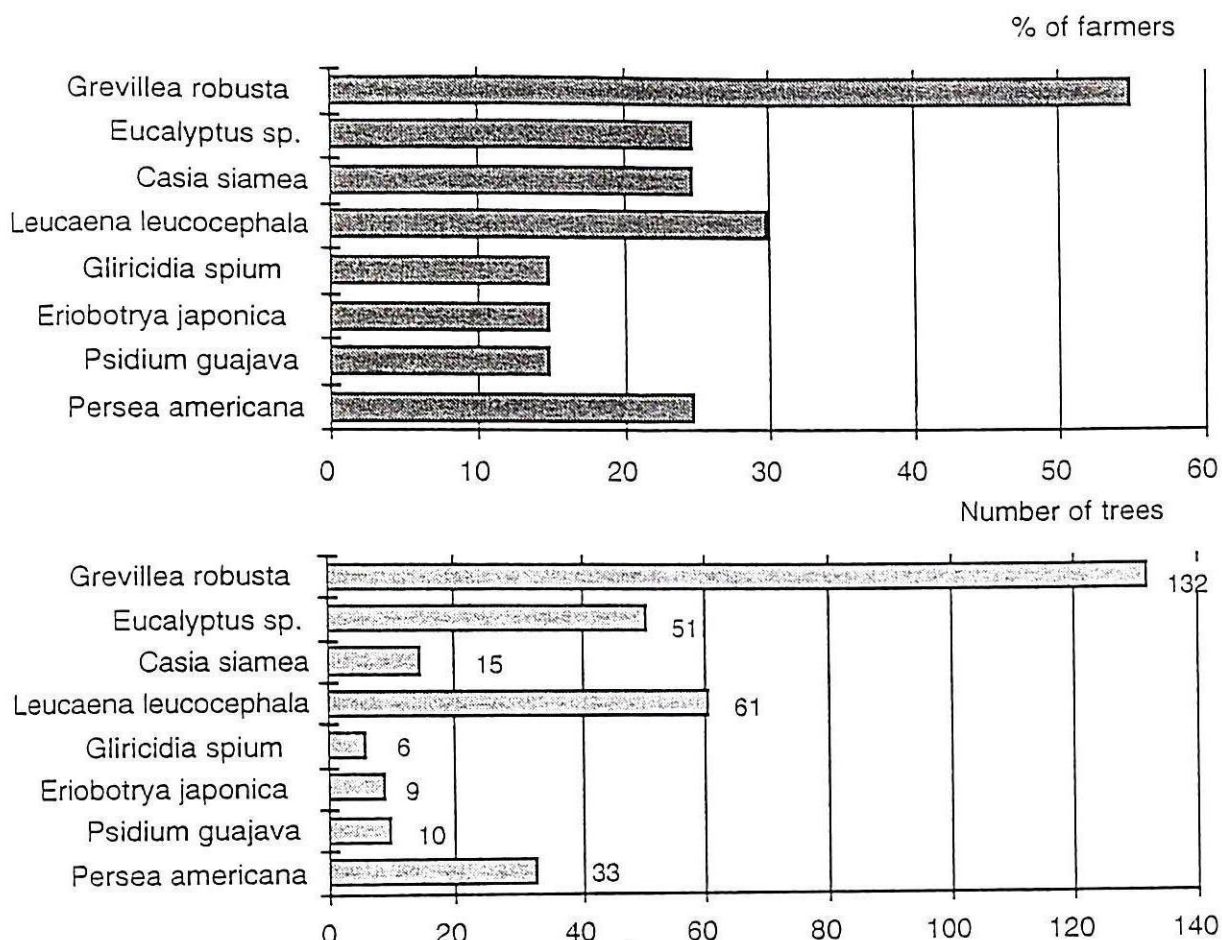


**Fig. 1.4.2 Planted trees in the boundary of compound**

### 1.4.3 Shamba

55% of the farmers planted *Grevillea robusta* (132 trees per person), and 30% of the farmers planted *Leucaena leucocephala* (61 trees per person), and then 25% of the farmers planted *Eucalyptus* sp. (51 trees per person), *Cassia siamea* (15 trees per person) in their shambas. Most of the farmers also planted fruit trees such as *Persia americana* (Avacado), *Carica papaya*, Lemon, Mango, Orange, Guava, etc.

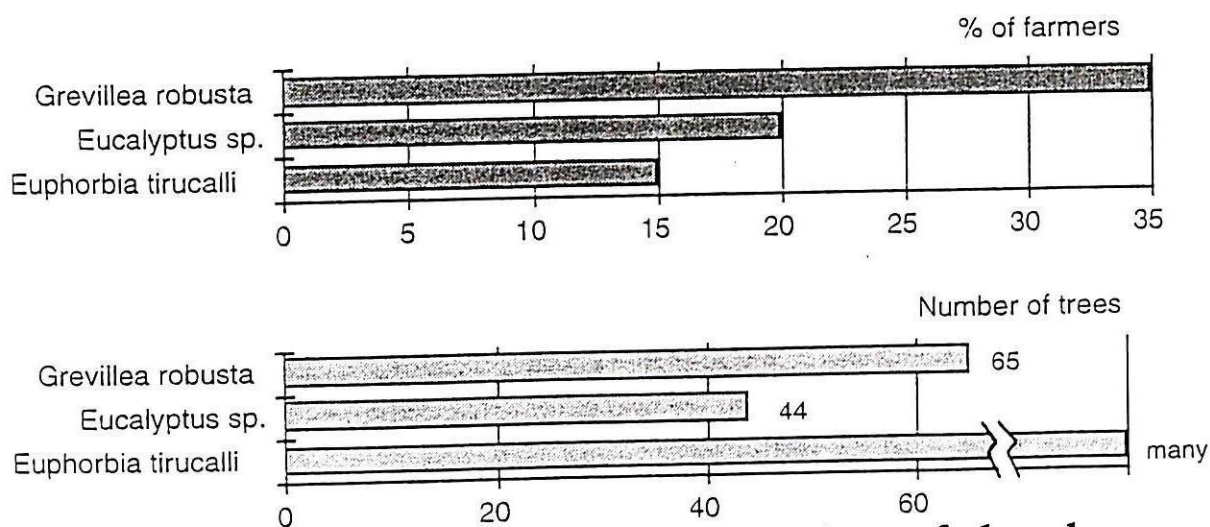




**Fig. 1.4.3 Planted trees in shamba**

#### 1.4.4 Boundary of shamba

35% of farmers planted *Grevillea robusta* (65 trees per person), 20% of the farmers planted *Eucalyptus* Sp., (44 trees per person), 15% of the farmers planted *Euphorbia tirucalli* (very many trees) in their shamba fences.



**Fig. 1.4.4 Planted trees in the boundary of shamba**

### 1.4.5 Grazing land

Only 5 farmers planted trees in grazing land, mainly *Leucaena leucocephala*, *Eucalyptus Sp.*, *Grevillea robusta*, probably for fodder.

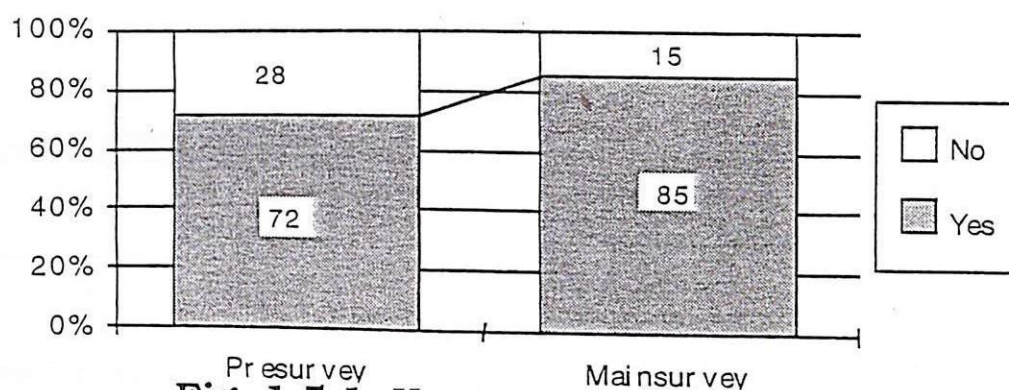
### 1-4-6 Others

Generally, many farmers planted *Grevillea robusta*, *Eucalyptus Sp.*, and *Leucaena leucocephala* as wood lot or services in market place. These species are multi-purpose trees, thus can supply fuelwood, stock feed, etc. Therefore, good management through thinning, pruning, pollarding, lopping, etc. can't make tree resource decrease in the farmland. It can sustainably produce the above products and poles for sale thus providing alternative avenue for farmers to generate income. 59% of the interviewed farmers planted medicinal trees; for example 5 farmers planted *Azadirachta indica* for treating Malaria and other were *Euphorbia tirucalli*, *Terminaria brownii*, *Croton megalocarpus*. Most farmers planted *Carica papaya* of which roots are used for treating venereal diseases. Medicinal plant/trees are one of the subjects newly introduced under the phase II of the project. It is hoped that in the future many farmers will plant more medicinal trees and shrubs to enhance their conservation in addition to utilization.

## 1.5 Nursery works

### 1.5.1 Nursery establishment

85% of the farmers surveyed had established nurseries, either singly as individuals or collectively in groups. Figure 1.5.1 below depicts the situation. Compared with pre-survey report, nursery for raising trees therefore showed an increase from 72% to 85%. For those respondents who had not started a tree nursery they planned to start one in the future. However, many farmers in this category cited water shortage as their main handicap.

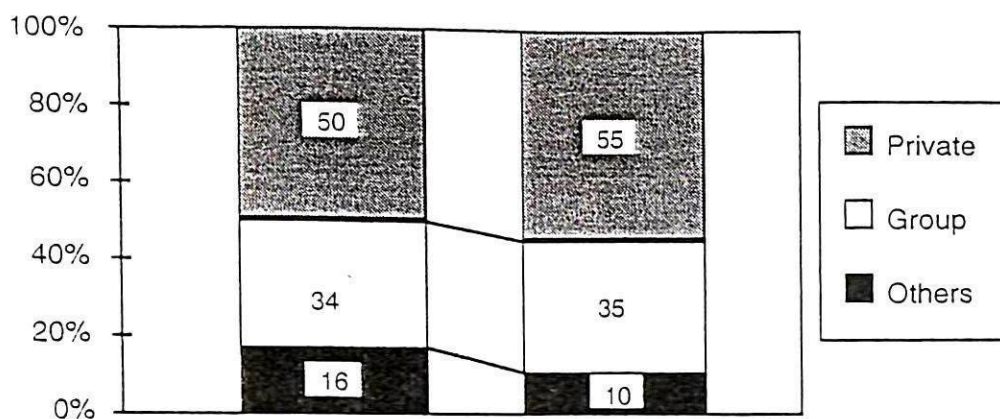


**Fig. 1.5.1 Nursery establishment**

### 1.5.2 Form of nursery and number of seedlings

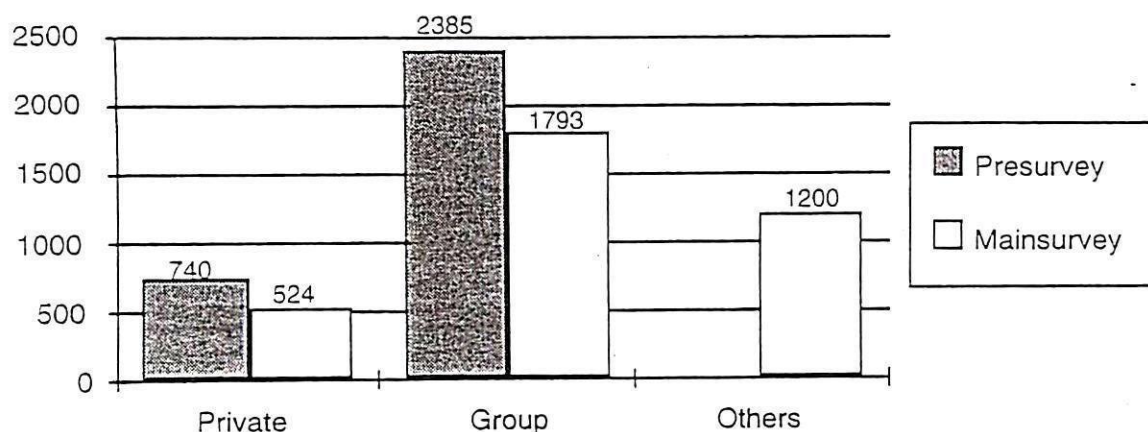
The main-survey shows that 55% of the farmers who had established nurseries among interviewed had private nurseries, raising an average of 524 seedlings. The group nurseries showed better performance than the private ones in terms of number of the seedlings produced, raising an average of 1,793 seedlings.





**Fig. 1.5.2.1 Form of nursery**

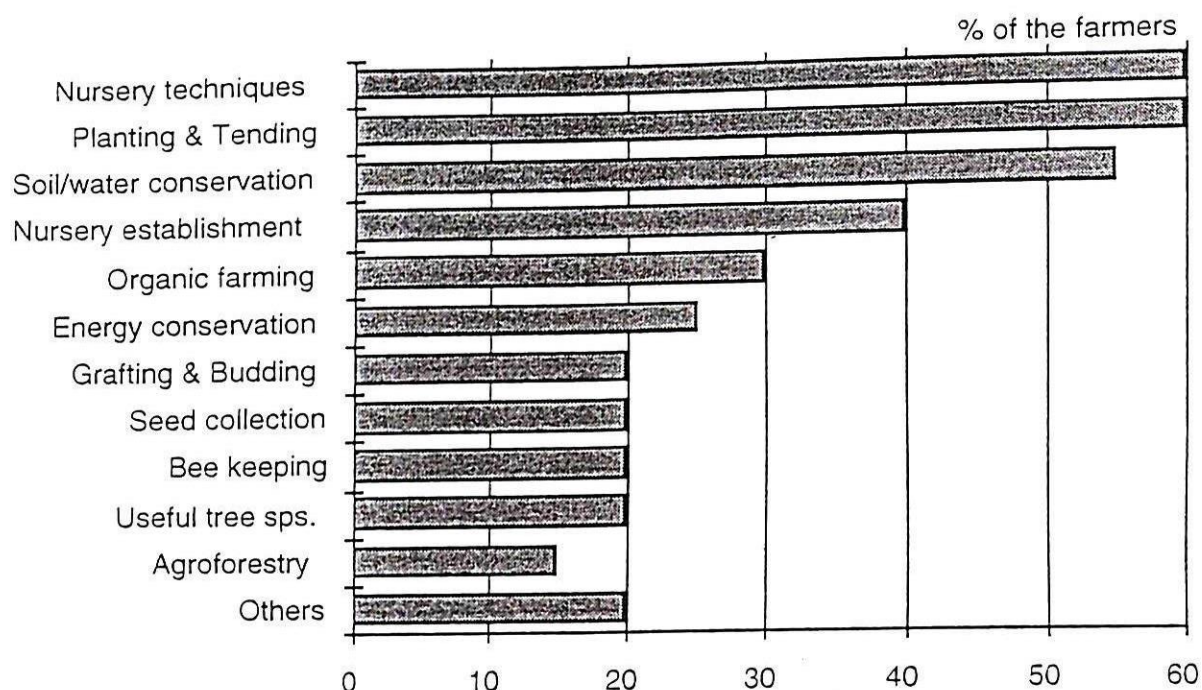
On comparing the presurvey and main survey, number of seedlings decreased over the period (Figure 1.5.2.2). It may be attributed to the fact that many farmers of the surveyed area had problems of water because of long drought at the main survey time, and fluid number of seedlings. 2 farmers responded others nursery, which was their neighbor and family.



**Fig.1.5.2.2 Average number of seedlings produced in one nursery**

## 1.6 New techniques

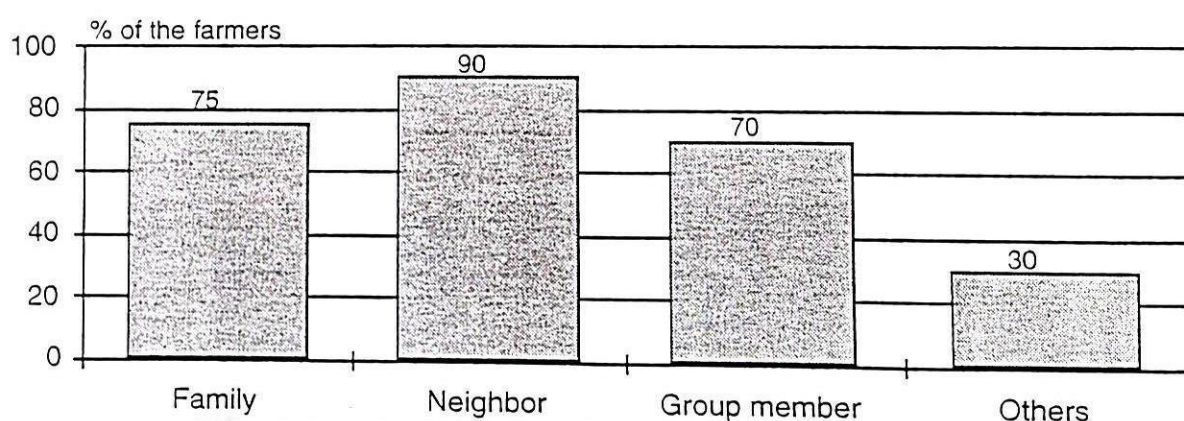
All farmers interviewed used the new social forestry techniques acquired at the Kitui Centre. Among the new techniques tried by farmers in their day-to-day farming activities were nursery techniques, planting and tending, and soil & water conservation (Figure 1.6). Other techniques included medicinal trees, grazingland management, and horticulture practice. The figure directly reflects the training effects and also shows a very positive attitude and willingness of the farmers in adopting new techniques.



**Fig.1.6 New techniques carried out**

## 1.7 Dissemination of techniques

All farmers said that they had shared the newly acquired techniques with other farmers in their area. Figure 1.7 portrays to whom the farmers communicated the social forestry techniques. These are really prosperous and encouraging figures for the course organizers, because the effects of training for 30 farmers are spreading to hundred of farmers under their own initiatives.



**Fig.1.7 Transmission of techniques**

## 1.8 Evaluation by interviewers

Most farmers are still unable to select appropriate tree species to plant according to the prevailing site conditions. For example, selection of species is not appropriate for trees & plants for livestock and agroforestry. Planting for soil & water conservation, construction of trench and harvesting holes are also lacking. Use of local materials is still insufficient, therefore, it is necessary to emphasize this aspect in the course. Finally, most farmers did not yet get to sell and utilize trees as timber, pole, and fuelwood. Many seem



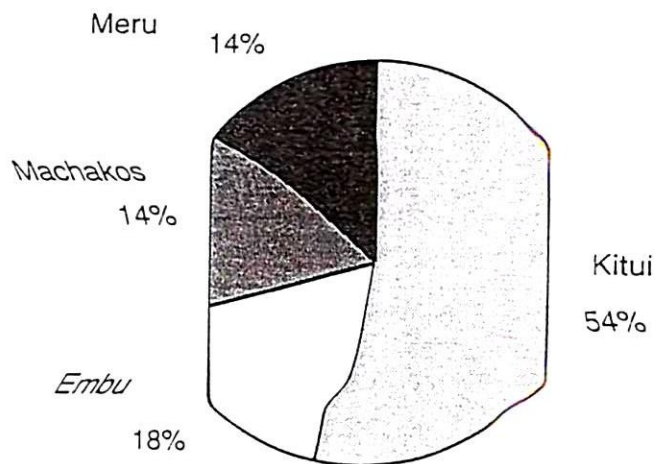
to be happy just seeing their trees grow and grow. In the training course therefore, emphasis should also be laid on utilization of trees planted, otherwise, inspite of the many problems farmers have there, they are putting in good efforts only to green their environment.

## 2.0 Field technical assistant staff(FTA's)

Field technical assistants are deployed at the lowest level of administrative organization and are in constant contact with individual farmers, groups, etc. They are the major organizers of planting activities and often act as consultant/instructors on technical matters related to tree planting in rural areas. In order to effectively address issues hindering tree planting, they ought to be conversant and be given a condition to address such problems. They are also required to execute well-planned systematic extension activities in order to enhance tree planting in their areas of operation.

### 2.1 Selection of samples

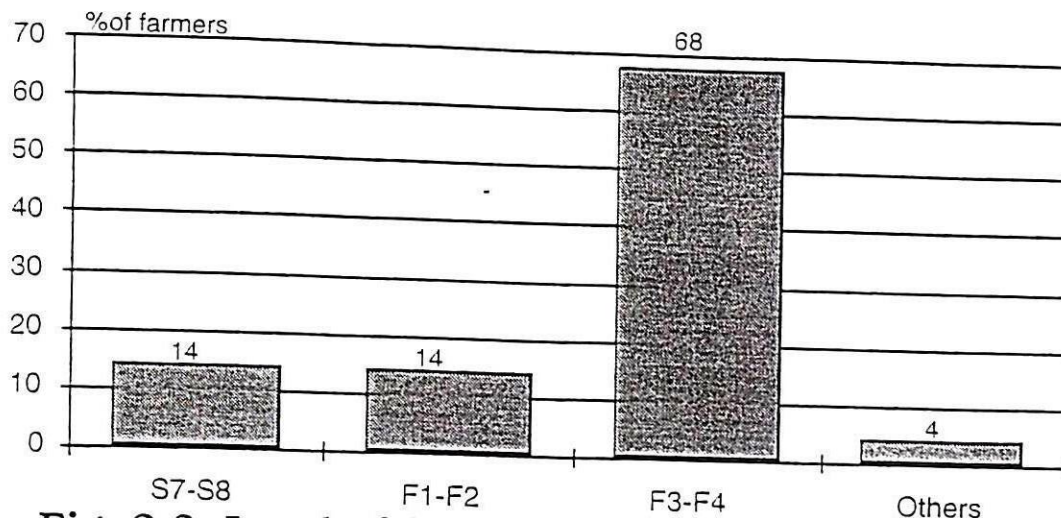
The number of the sampled FTA's for the main survey was 28 out of the total of 78 participants in 3 course. The samples used in the survey were randomly selected from the 4 districts. Their response to the main items of the survey questionnaire and subsequent analysis of the sampling distribution is the contents of the following part of this report. The geographical distribution of the surveyed FTA's is shown in Figure 2.1.



**Fig.2.1 Distribution of sampling**

### 2.2 Level of formal education

According to Figure 2.2, 82% of respondents had enrolled into a secondary school but only 68% out of these advanced to Form 3 or 4 and the rest reached Form 1 or 2.

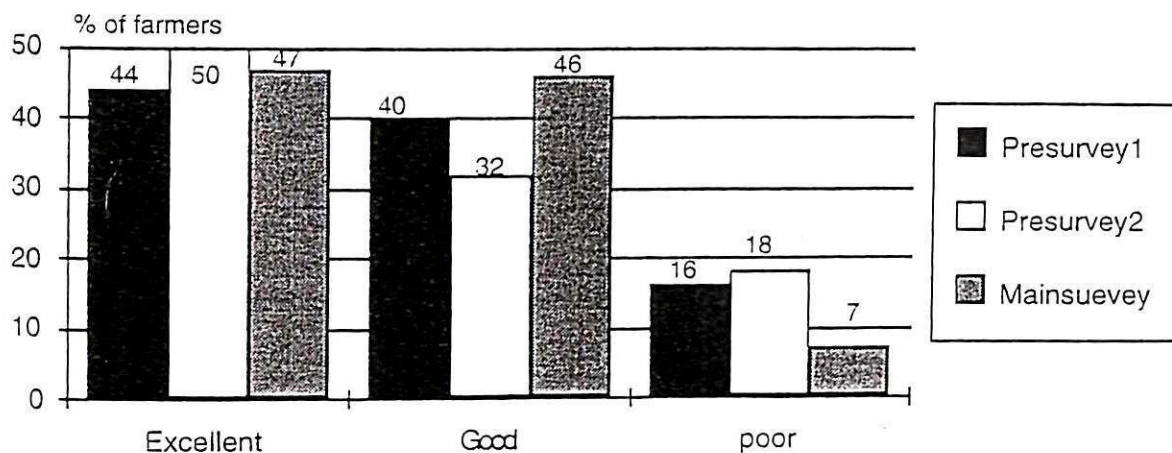


**Fig. 2.2 Level of formal education of the FTAS**

### 2.3 Knowledge of FTA's in tree planting activities in their areas

According to "Evaluation method guidance" made by Dr. LiDA", attempts are hereby made to analyze FTA's knowledge or their ability to grasp major tree planting activities in their respective areas. The evaluation is made from the view-point whether they know or can estimate numerical index on tree planting activities such as average number of seedlings planted by one farmer and number of nurseries. Points are given according to each category and with the total score of 6 points FTA's are grouped into three categories; Excellent (5 - 6 points), Good (3 - 4) and Poor (0 - 2). Figure 2.3 shows the evaluation results.

The results show that, while excellent category remained at same level, Good category increased from 32% (presurvey 2) to 46% and Poor category reduced from 18% to 7%. This indicates some positive effects of the training through raising their awareness on the present status of farmers' tree planting activities, which is very basic data to initiate their extension works.



**Fig. 2.3. Evaluation of abilities to grasp forestry activities**

cf. Presurvey 1.: All of trained FTA's (78)

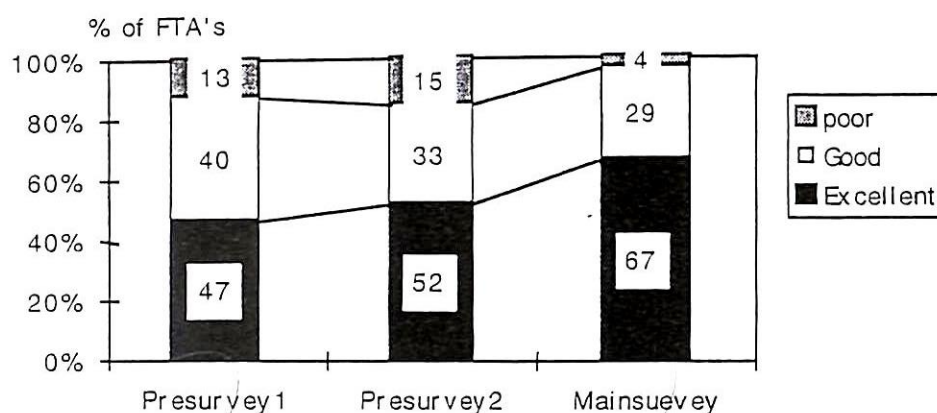
Presurvey 2.: Trained FTA's same as Mainsurvey(28)



## 2.4. Appropriate planning for extension activities

Once the present status on farm forestry is roughly grasped by the FTA's, then appropriate planning is required for systematic extension works considering the above status and available resources etc. The survey covers the area of seed collection, tree planting and size-of target farmers or groups; whether the FTA's have a specific target on these items to be attained through their extension activities. They are grouped into Excellent, Good and Poor according to the points they scored.

Figure 2.4 shows increase of Excellent category from 52% (presurvey 2) to 67% decrease of Poor category only to 4%. It indicates that the training gave some favorable impacts on FTA's in planning process of their extension works.



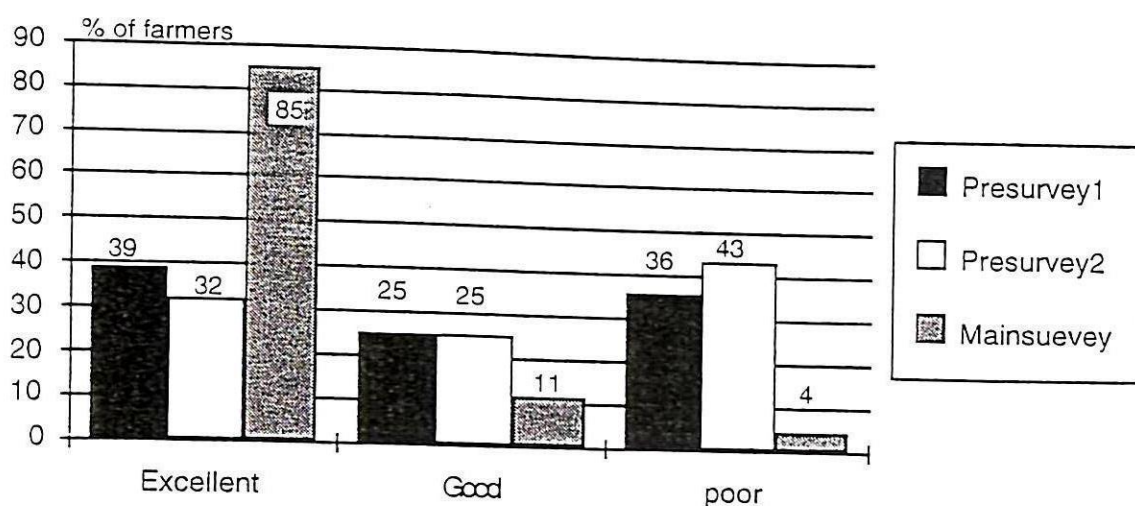
**Fig. 2.4 Evaluation on extension planning**

## 2.5. Implementation of current extension activities

This survey was to evaluate day-to-day extension activities by the FTA's, in other words what kind of extension activities they are currently carried out. The items covered by the survey are reports preparation, advisory services, organizing seminars, material assistance and other activities. Out of the total of 5 points given, they are divided into Excellent (4 - 5 points), Good (3 points) and Poor (0 - 2 points) categories.

According to Figure 2.5 the FTA's in Excellent categories more than doubled to 85% while Poor category significantly decreased to 4%. It shows that the FTA's had diversified their extension activities after they took the training course.

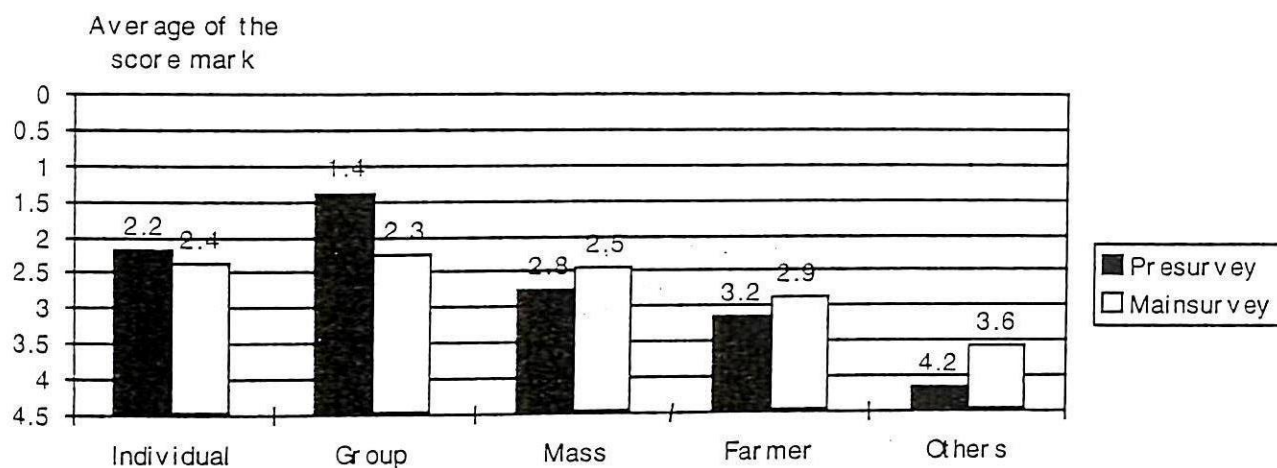




**Fig. 2.5 Evaluation on extension activities**

## 2.6. Extension methods

The FTA's in regard to the question in this section were expected to mark 1, 2, 3, 4, 5 according to importance of the extension methods they have used. The number indicated above are the average of the score mark; the smaller the number is the more important the extension techniques are. The methods evaluated were individual, group, mass media, farmer to farmer. Figure 2.5. shows that Group method was the most popular, followed by Individual, seminar and Baraza. It can be concluded that after the training course FTA's put emphasis on variety of extension methods comparing to presurvey result which would indicate some training impacts.



**Fig. 2.6 Evaluation on extension method**

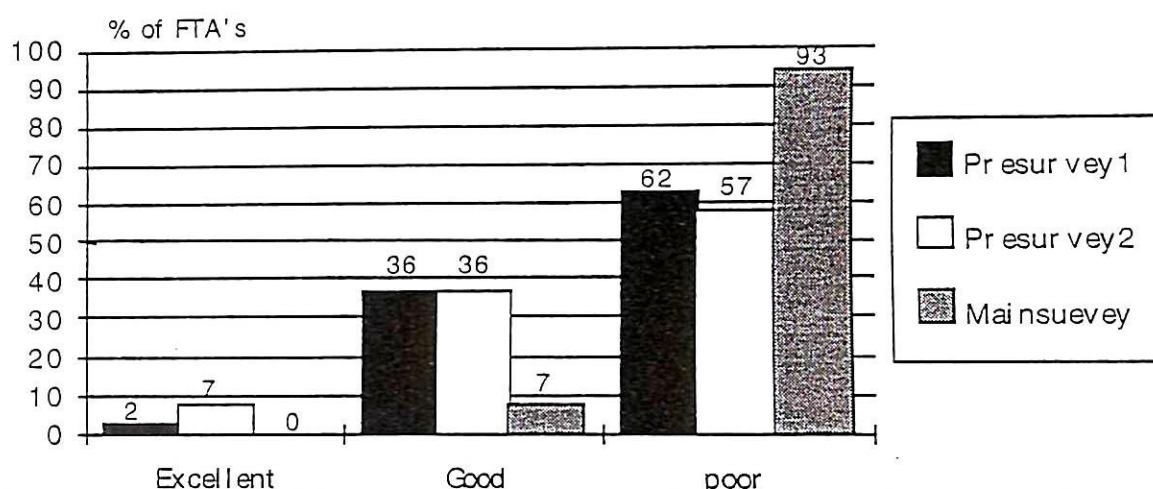
## 2.7. Target groups of extension activities

This survey covered target farmers or groups by the FTA's i.e. how many types of targets such as farmers, women's groups, schools, etc. and number of these targets directly assisted by the FTA's. According to the evaluation criteria the FTA's who cover many

types of groups and assist many individuals or groups can get high score. The Figure 2.7 shows the result.

It shows no FTA's in Excellent category and 93% in Poor category in main survey. This may suggest that the grouping criteria i.e. Excellent, Good and Poor used here should be reconsidered. In order to be in Excellent category one FTA needs to get, for example, about 10 farmers and more than 30 groups in variety of types under their direct assistance. A question is whether or not this target is too much demanding for a normal FTA.

Apart from the above observation the difference between presurvey and main survey indicates general decrease in the number of farmers or groups assisted by one FTA. This could be partly attributed to an overestimate in presurvey, however, we cannot reach a definite conclusion. The result can only suggest difficulties for FTA's to increase their target farmers and groups because of insufficient transportation and communication measures, lack of budget, limited material support, etc.



**Fig. 2.7 Evaluation target groups for extension activities**

## 2.8 Innovativeness and practical application of technology

This survey aimed at evaluating FTA's innovativeness and their ability to apply appropriate techniques which they learnt in the training course. Evaluation is made whether they put into practice variety of techniques against unfavorable circumstances such as water shortage or termite attack. They are grouped, out of total 16 points, into Excellent (11 - 16 points), Good (6 - 10) and Poor (0 - 5). As this survey was not included in presurvey, Figure 2.8 shows the result of main survey only.

The main survey results indicate that the Poor FTA's were only 7% and the rest were able to devise techniques in some ways to cope with the problems using local technologies and materials. For example some FTA's used banana leaves instead of polythene tube in raising tree seedlings. It shows training effects in improving technical capability of FTA's and their flexible application in the field.

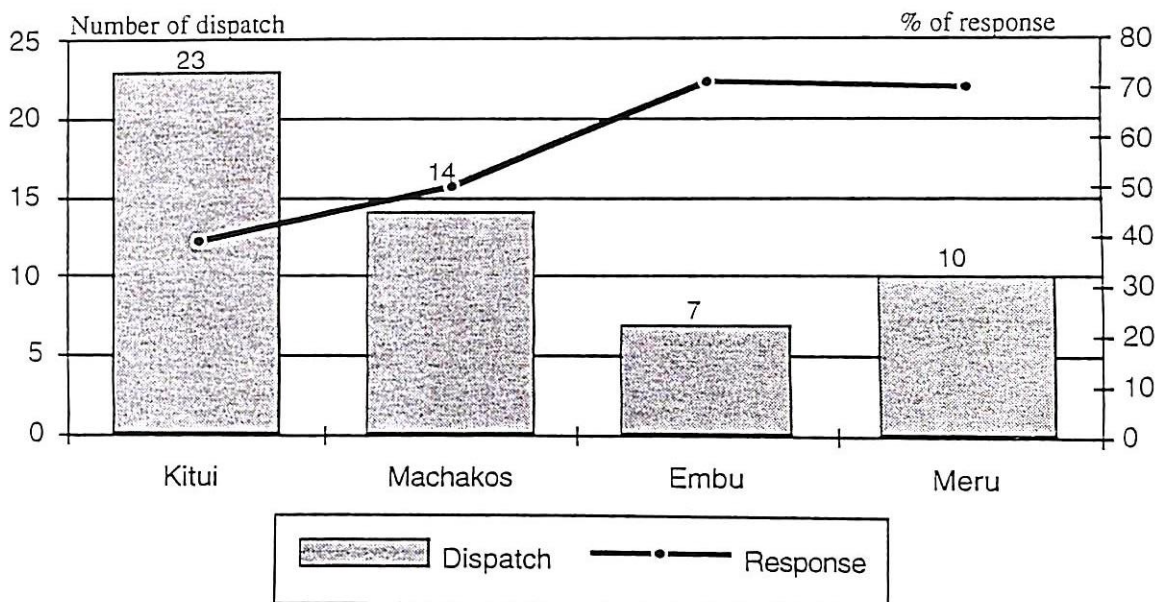


### 3.0 Teachers

Teachers can play an important role in tree planting extension activities i.e. as some kind of extension staff. Schools can be places of demonstrating trees planting activities and are in a position to teach pupils how to plant trees. Teachers are therefore in a better position to execute establishment of tree demonstration and to educate pupils on tree planting and related environmental issues.

#### 3.1 Questionnaire response

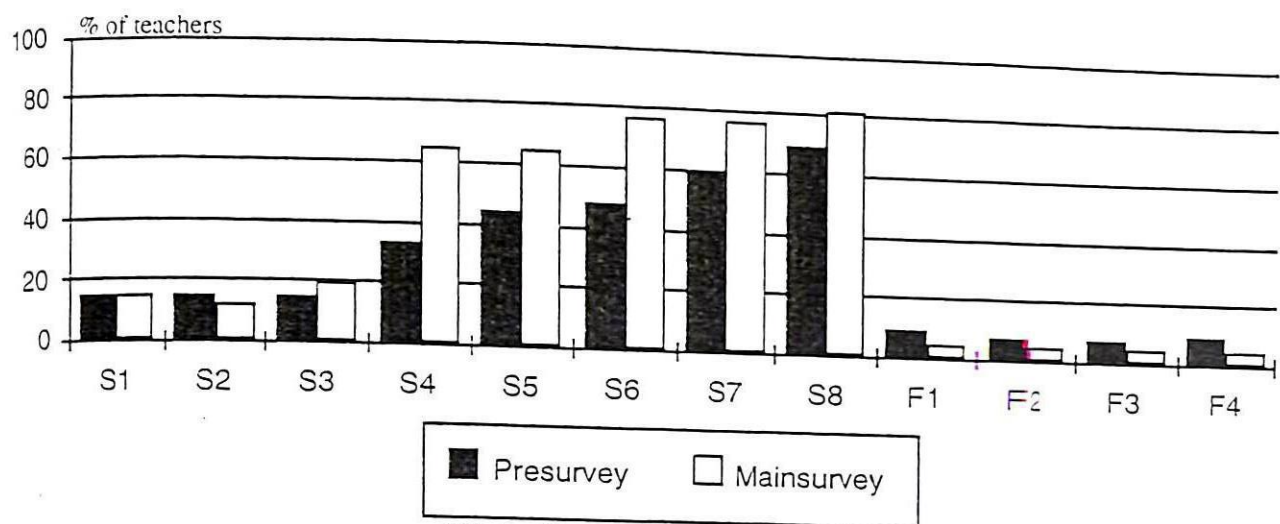
Questionnaire for trained teachers were sent through the District Education Officers of their respective districts. However, only 52% of the teachers responded. Fig.3.1 shows the responses per district. Responses from Embu District were the highest with 71% of teachers filling and returning their forms. Second was Meru District where 70% of the teachers responded. The least was Kitui district which only 39% of the trained teachers responded. The cause of low response is not clear but it is considered to enclose return envelope and stamps in the future with the hope of improving responses.



**Fig. 3.1 The degree of questionnaire's response**

#### 3.2 Teaching level

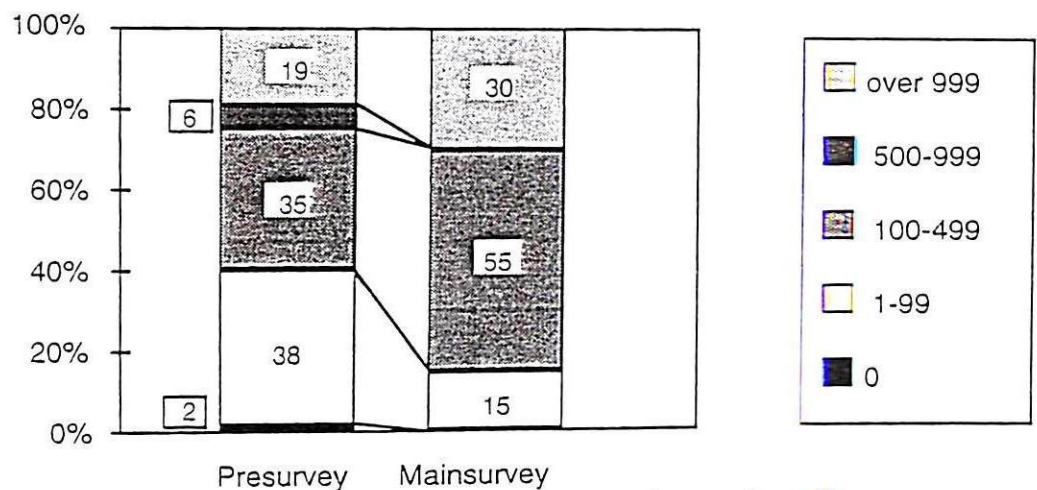
Figure 3.2 shows the main teaching levels of surveyed teachers for both presurvey and mainsurvey. The results indicate no major changes between the two surveys.



**Fig. 3.2 Teaching level**

### 3.3 Planted trees in schools

On the number of trees planted in schools, Figure 3.3 compares the pre-survey and main survey results. For example 60% of teachers planted more than 100 trees at the presurvey time, which improved to 85% at the mainsurvey time. It therefore indicates that the training had some positive impacts on the planting activities.

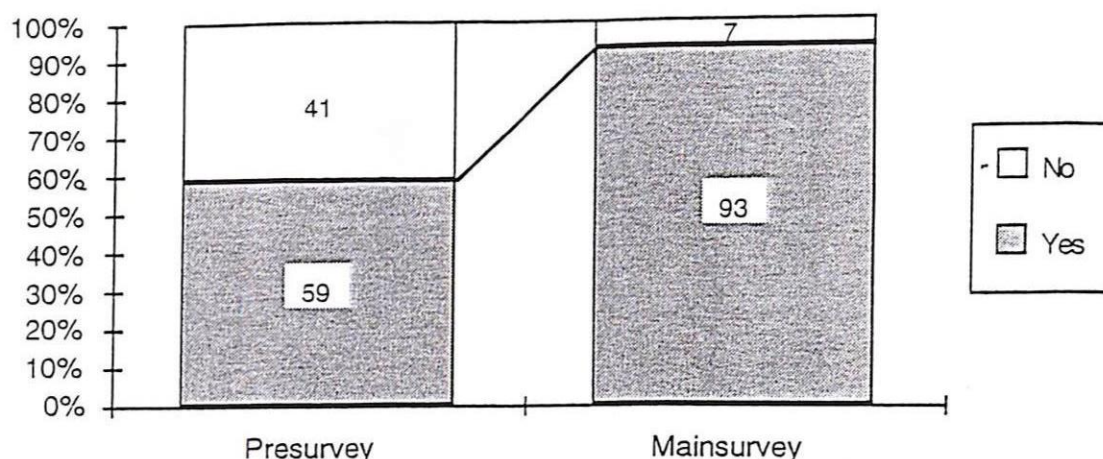


**Fig. 3.3 Planted trees in schools**

### 3.4 Tree nursery

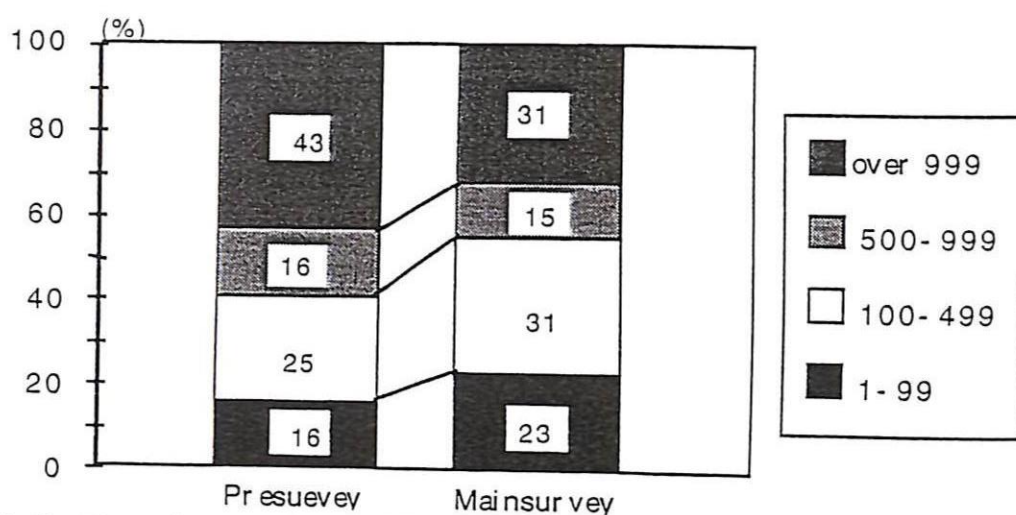
According to the survey results shown in Figure 3.4.1, 93% of the teachers who responded in the main survey had started a tree nursery as compared to 59% in the presurvey. Therefore training had some impacts in the establishment of tree nurseries between the two surveys. 54% of the teachers who had already started their nurseries in the presurvey time expanded their nurseries after they took our training course.





**Fig. 3.4.1 Establishment of nurseries**

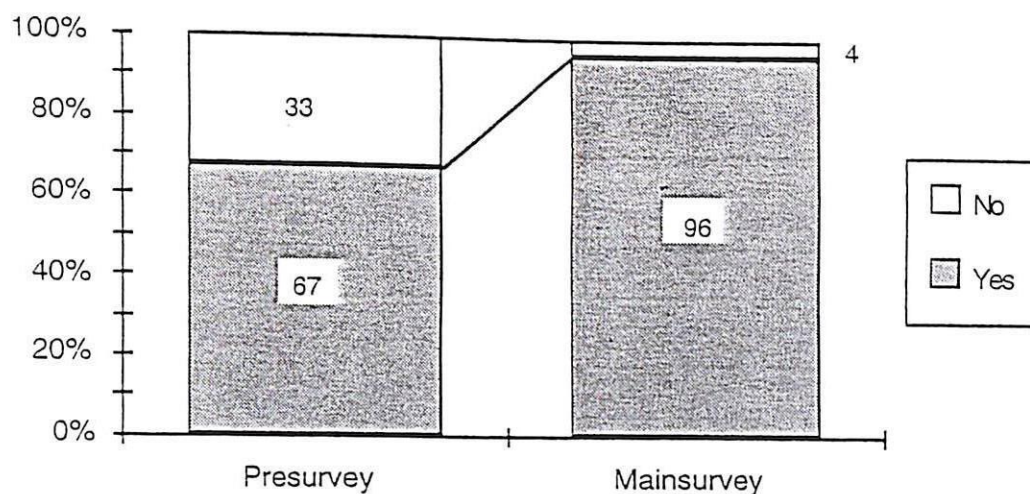
Figure 3.4.2 indicates the number of seedlings raised in school nurseries in the previous one year to each survey. Teachers who organized their schools to raise more than 100 seedlings decreased from 84% to 77%. The change could be attributed to the limitations on the availability of space in schools compounds for planting more tree seedlings. Some schools sold seedlings to their neighbouring farmers who needed for planting in their field/shamba.



**Fig. 3.4.2 Number of seedlings raised for the last one year**

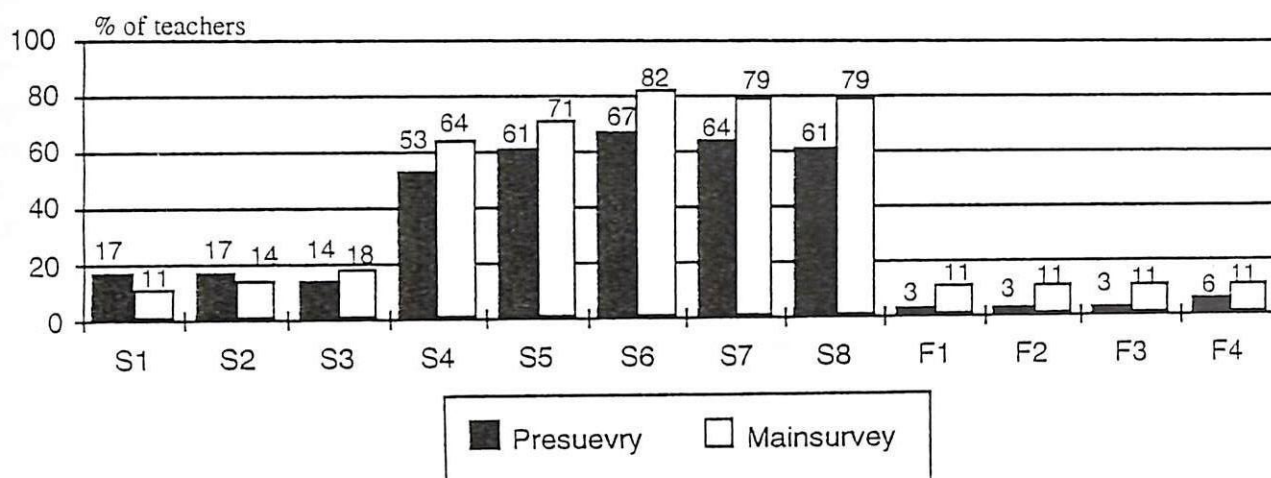
### 3.5 Teaching tree planting activities

Figure 3.5.1 indicates that the number of schools which taught some aspects on tree planting activities increased from 67% to 96%. Some trained teachers shared the knowledge with other teachers and their neighbours. It is therefore assumed that the training had some impacts on tree planting teaching in schools.



**Fig. 3.5.1 Teaching of tree planting activities**

Figure 3.5.2 indicates that the classes which taught tree planting activities concentrated in S4 to S8.

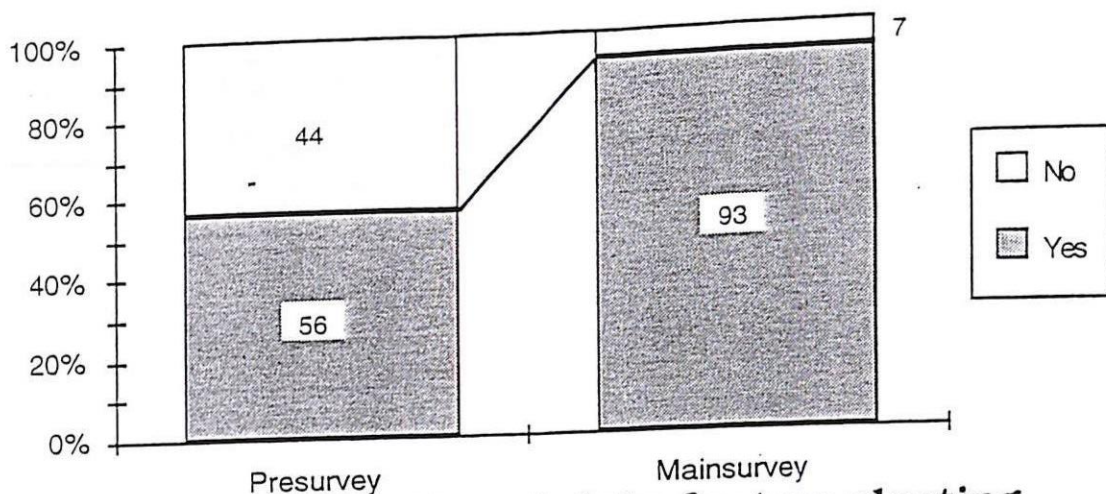


**Fig. 3.5.2 Classes teaching tree planting activities**

### 3.6 Club activities on tree planting

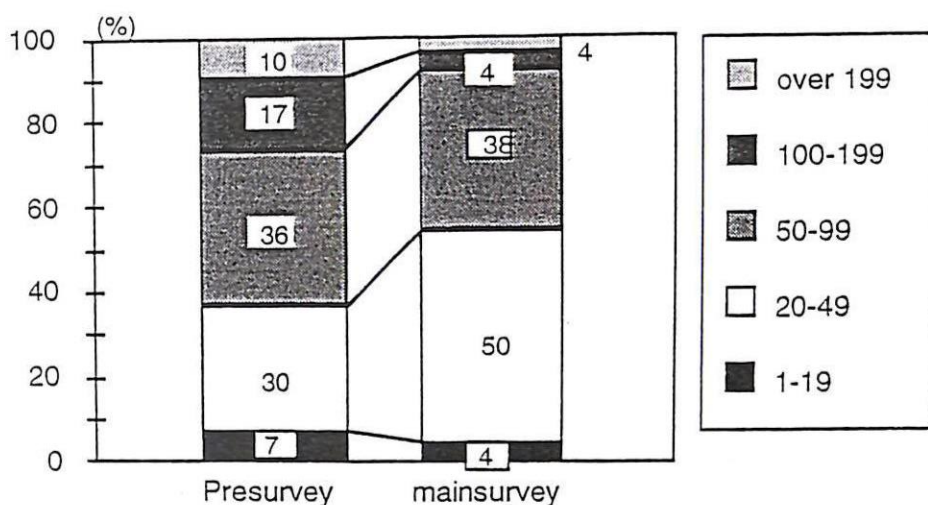
Although 56% of the schools had organized clubs which were active in tree planting activities at the presurvey, it was increased to 93% in the mainsurvey.. (Figure 3.6.1) Some teachers named the clubs "Tree planting club" or "Forestry club" etc..





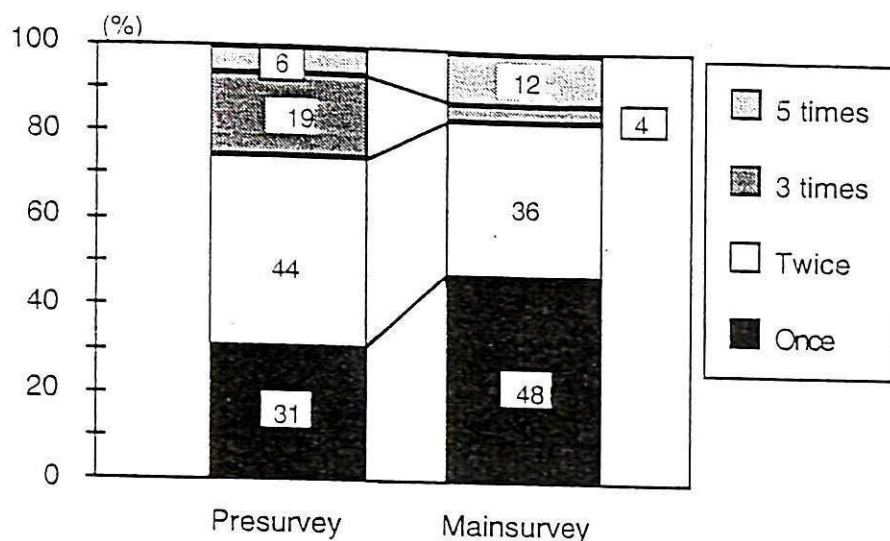
**Fig. 3.6.1 Organization of clubs for tree planting**

Figure 3.6.2 shows the number of pupils that belonged to the clubs. Number of schools which had organized more than 50 pupils decreased from 63% at the presurvey to 46% at the mainsurvey.



**Fig. 3.6.2 Number of pupils that belong to clubs**

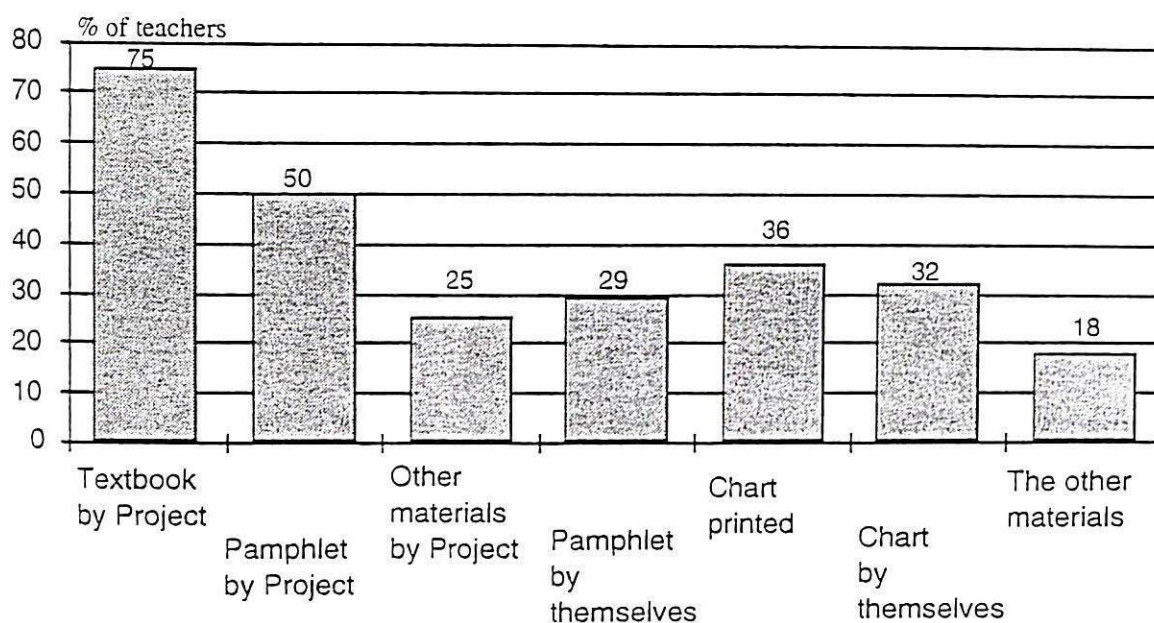
Clubs which had their meetings twice a week or more decreased from 69% to 52% (Figure 3.6.3). This may indicate a tendency of slight decline in their club activities. However another observation would be possible, if considered together with the above Figure 3.6.2, i.e. suggesting establishment of club members and activities after their initial or trial stage. A few months after the initiation of the clubs, the club members who were neither active nor very much interested in tree planting could not remain in the club. Similarly after several trials on nursery establishment and tree planting, the frequency of club meetings would possibly reach a certain adequate level, e.g. once or twice a week. Therefore it cannot be concluded only from the above two figures that the club activities had declined. Once these activities started, the efforts should be made on a continuous and self-supportive basis.



**Fig. 3.6.3 The frequency of the club meeting a week**

### 3.7 Teaching materials

Figure 3.7 shows the types of teaching materials used in the schools for tree planting either supplied by the project or made by the teachers. The most broadly used is the Textbook ("Social Forestry Techniques - part one") and the second is handouts that this project provided. The materials provided by the project were widely used for teaching in schools which has greatly enhanced forestry activities in schools. Most teachers said they were very useful, but some teachers requested more illustrations, colour photo and diagrams as well as more contents to cover especially wider species.



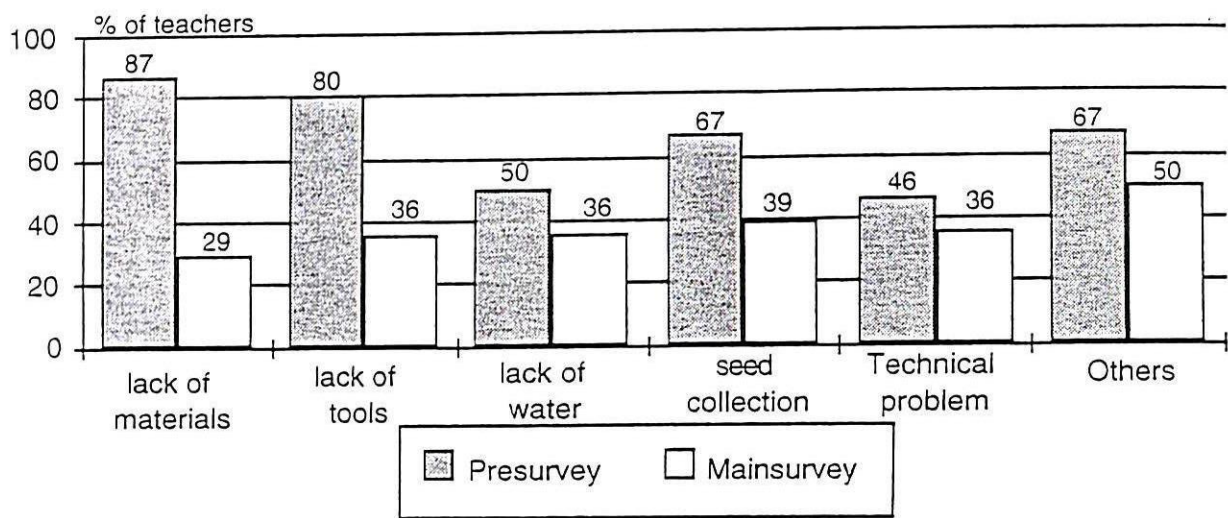
**Fig. 3.7 Teaching materials**

### 3.8 Technical problems

Figure 3.8 shows technical problems facing tree planting in schools. The responses of the main survey were descriptive and therefore many problems were listed. This



brought some significant differences between presurvey and mainsurvey responses. The leading problem in the "Others" category identified in the main survey is animal damage. Most schools are not well fenced and sometimes are part of a free grazing area. This is followed by seed collection, lack of water, etc. It should be also noted that the figure shows a significant decrease between the two surveys in the number of teachers who faced problems in all kinds. This probably indicates favorable training effects in solving problems; at least the teachers did something to solve these problems using their knowledge and techniques gained from the training.



**Fig. 3.8 Technical problems**

## Conclusion

From the foregoing text of this report, enough evidence is provided indicating positive training effect for all the three types of courses described. However, there still exist inadequancies in choice of appropriate species for various sites within the farms, school compounds etc.. Practice of agroforestry by farmers especially from Kitui, Makueni and Mwingi districts is still virtually absent. On the whole, knowledge on trees for fodder has yet to be put to use by the course participants. May be these are pointers that the training should emphasize the above aspects through the review of the curricula concerned. Also what require some focal attentions are usage of local materials in tree propagation and management, utilization of trees and their products among others. The Social Forestry Techniques text book handed out to trainees after training, needs to be reviewed and updated with recent innovations and ideas, taking into account the observation by the FTA's and teachers. Otherwise, in spite of the harsh environmental conditions characterizing the region where the participants came from, most trainees have put a good proportion of the knowledge gained from the training to good use.

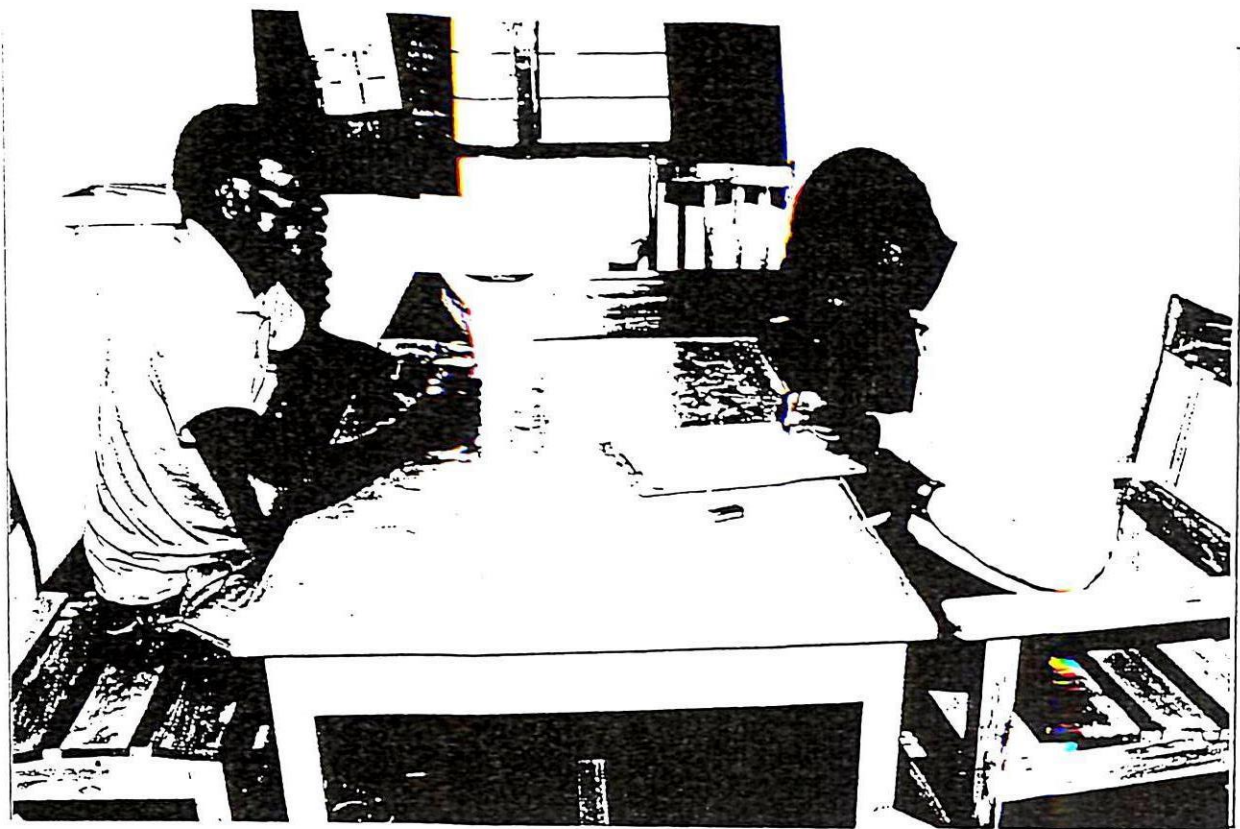




A farmer being interviewed in her nursery

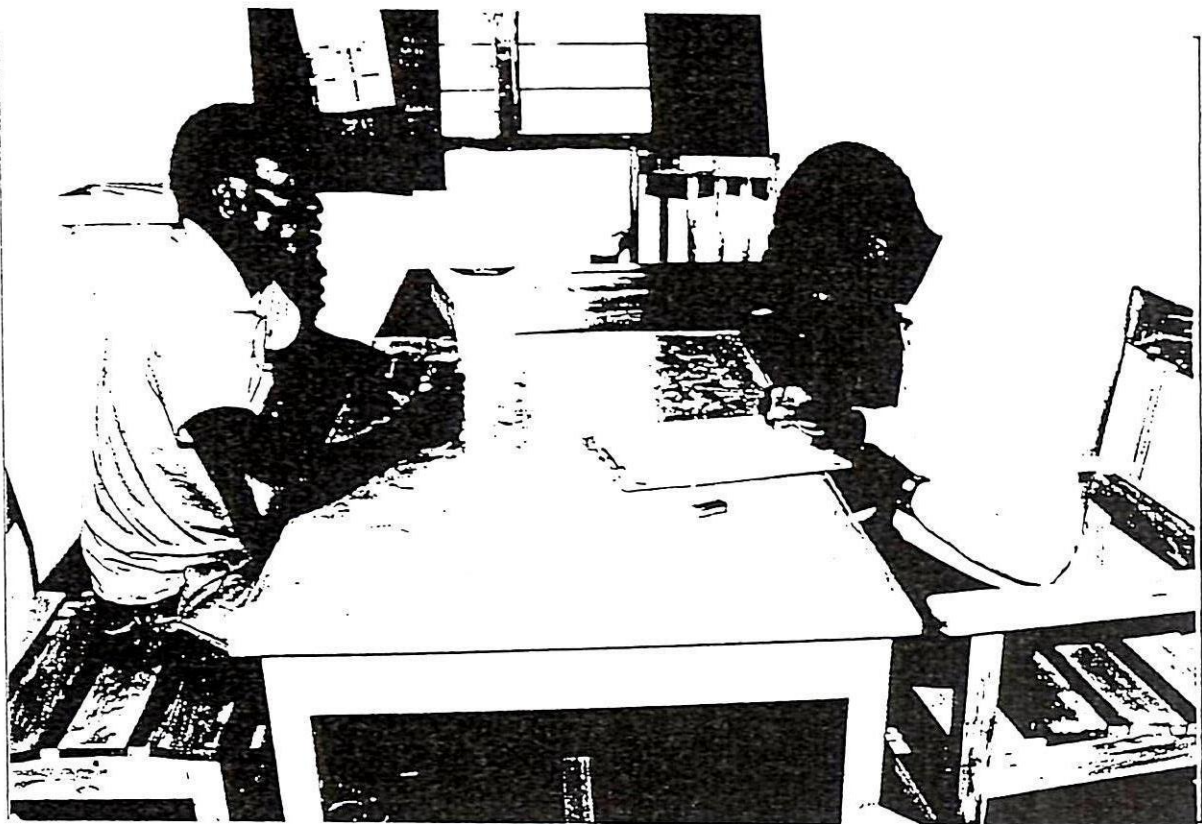


A women's group



A FTA being interviewed by the survey team





A FTA being interviewed by the survey team

## Data of Farmers

	Sex		District				Planted trees so far					No. of seedlings for 1 year					No. of surviving trees					Nursery		Private		Group		Others		New Tech Teach				Whom did you teach ?				Area Eva					Awareness					Level of technical skills				Compound	
	Male	Female	KTl	MKS	EMB	MER	0	-49	-99	-499	500-	0	-49	-99	-499	500-	0	-49	-99	-499	500-	Yes	No	Yes	Number	Yes	Number	Yes	Number	Yes	No	Yes	No	Family	Heighbo	Group	Other	(a)	(b)	(c)	(a)	(b)	(c)	(d)	(e)	sofar	Survive	1 year	Total	Cr/m	C/sp		
1		1	1						1			1							1				1			1	2000			1	1		1	1				1	1					3	3	1	7	2					
2		1	1							1				1								1		1	150	1	1500			1	1			1	1			1	1					4	4	3	11		5				
4		1	1					1						1								1		1	800					1	1		1	1			1	1					2	2	2	6							
6		1	1								1				1							1						1	1000	1	1				1				1				5	4	4	13							
7	1		1						1					1								1		1	1000				1	1			1			1	1							3	2	3	8						
8		1	1							1				1								1		1	116	1	1152			1	1		1	1	1	1		1	1					4	2	2	8						
9		1	1							1					1							1							1	1			1		1	1			1	1					4	5	4	13					
10	1		1					1				1										1		1	?				1	1		1	1	1	1			1	1					2	2	1	5						
11		1	1					1						1								1						1	1400	1	1		1	1	1			1	1					2	2	2	6	6					
12	1		1								1				1							1		1	10				1	1		1	1	1			1	1							5	3	4	12	12				
13	1		1							1				1								1		1	35				1	1		1	1	1	1	1			1	1					4	2	3	9					
14	1			1							1				1							1				1	0		1	1		1	1	1				1	1						5	5	4	14					
15	1			1							1			1								1		1					1	1		1	1				1	1							5	5	3	13	20				
16	1				1						1				1							1		1	1200				1	1		1			1	1			1	1					5	5	5	15					
17	1				1						1	1					1					1		1	330				1	1		1	1		1	1	1	1							5	5	5	15					
18		1				1					1				1							1		1				1	1		1			1	1	1	1							5	5	1	11						
19	1					1					1				1							1		1	400	1	3000			1	1		1	1	1	1		1	1					5	4	5	14	3	1				
20	1			1							1				1							1		1					1	1		1	1			1	1							4	4	4	12						
21	1			1							1				1							1		1					1	1		1	1	1	1			1	1					5	5	4	14	3					
22	1			1							1				1							1		1	1200	1	3400			1	1		1	1	1			1	1					5	4	4	13	2					
	12	8	11	5	2	2	0	3	2	5	10	3	3	4	7	3	1	6	2	6	5	17	3	11	5241	7	12552	2	2400	20	0	20	0	15	18	14	6	14	0	6	17	3	0	0	0					58	6		

c.f. No 3, 5 : Out of object for main-survey



# Data of Farmers

trees planted																													Boundary of compound																			
	C/sl	G/r	T/br	T/m	Th/p	K/a	Az/l	Al/g	Boug	A/se	Euca	E/sa	Jaca	Se/s	M/az	A/nl	Frax	Bosc	Leuc	Casu	Ma/v	Cypr	Cl/ca	Fl/be	A/po	E/tu	Caes	Bottl	Loqu	Guav	Mang	Avoc	Total	C/si	C/sp	Cl/m	E/tu	G/r	Cypr	Jaca	Ma/v	Pa/a	Az/l	Do/c	T/m			
1	3																				1					2							8		2								1					
2				4						1			1						10						1			1				10	5	37	20		2			10		1						
4																											1					2		3														
6																																5	5															
7																																	0															
8			10		10														10		10									10		50																
9																																	0															
10	5																				1											6																
11	4				1		4																	1									16															
12	9	4		2																													27		6	4					6							
13	4				2		5	1											2													14	18	1				2										
14											20																					20																
15			4																													24				15			2									
16				3																			400						1			404					40								1000			
17		150											5						1			20		1					1			178																
18	10	400								5			3	3	2				3	5												435	2				10			3	5		1					
19		50		2			1						1						1	7		2							2			67					1				1					2		
20		1		4	1	2	1		1		1					12		1		1				1					2		1	5	37			1		5		7								
21																	1											1				2	6					4										
22	5	100										5	10						4		30											164																
	40	705	14	15	14	2	11	1	1	1	26	5	20	3	2	12	1	1	31	13	42	22	400	3	1	2	1	1	6	10	13	18	1501	46	7	18	0	78	2	11	5	1	2	1000			2	

c.f.

A/ge Acacia gerrardii  
A/li Acacia holosericea  
A/me Acacia mearsii  
A/m Acacia mellifera  
A/nl Acacia nilotica  
A/p Acacia polyacantha  
A/se Acacia senegal  
A/to Acacia tortilis  
Acro Acrocarpus fraxinifolius  
Al/f Albizia falcataria  
Al/g Albizia gummiifera  
Az/l Azadirachta indica  
Avoc Persea americana  
Baln Balanites aegyptiaca  
Bomb Bombax rhodognaphalon  
Bosc Boscia spp.  
Bottl Callistemon citrinus  
Boug Bougainvillea spp. ?  
Caes Caesalpinia decapetala  
Cl/ca Calliandra calothyrsus  
C/sl Cassia siamea  
C/sp Cassia spectabilis  
Cast Ricinus communis

Casu Casuarina cunninghamiana (high)  
Casuarina equisetifolia (dry)  
Cord Cordia africana  
Cr/m Croton megalocarpus  
Cypr Cypress  
Delon Delonix regia  
Do/c Doryalis calfra  
Eryth Erythrina abyssinica  
Euca Eucalyptus sps  
E/m Eucalyptus maculata  
E/sa Eucalyptus saligna  
E/tu Euphorbia tirucalli  
Fl/be Ficus benjamina  
Frax Fraxinus pennsylvanica  
Garde Gardenia ternifolia  
Guav Psidium guajava  
G/r Grevillea robusta  
G/sp Gliricidia sepium  
Jaca Jacaranda mimosifolia  
K/a Kigelia africana  
Leuc Leucaena leucocephala  
Loqu Eriobotrya japonica  
Mark Markhamia lutea  
Mang Mangifera indica  
M/az Melia azedarach

Me/v Melia volkensii  
Mo/a Morus alba  
Pa/a Parkinsonia aculeata  
Pr/j Prosopis juliflora  
Se/s Sesbania sesban  
Sp/m Spathodea nilotica  
T/in Tamarindus indica  
T/br Terminalia brownii  
T/m Terminalia mantaly  
Th/p Thevetia peruviana  
T/br Terminalia brownii  
Teco Tecoma stans  
Vitex Vitex keniensis

## Data of Farmers

	Shamba																			Boundary of shamba																										
	Crod	Euca	E/sa	Th/p	Casua	Mark	Guav	Mang	Total	Cr/ni	C/si	C/sp	G/sp	Euca	G/r	T/br	Me/v	A/p	Jaca	Th/p	A/me	Leuc	Cl/ca	Se/s	Vitex	Casu	Cast	Loqua	Guav	Mang	Avoc	Total	E/tu	G/r	C/si	A/p	A/me	Se/s	Me/v	Jaca	Euca	E/sa	Vitex	Delon	C/sp	
1									3													40										40	∞	2												
2									33		20		10																			30														
4									0			10		36	30														20			96														
6				6					6						300																	300														
7									0																							0														
8									0	1	1	1					1				1											5														
9									0		1				1		1															3														
10									0																							0														
11									∞													9										9	∞										4	3		
12									16		43			14	20				4	1			6									88		15	12	11					3					
13				1					22		8																					8	∞													
14		8							8					1	20						1					100						122				6					11					
15								4	17	50				200	100	1								1	10					8	6	376														
16									1040						400							300	1000	1								15	1716		300											
17									0				5		150												10			100	90	355		50												
18					10				31				2	3	200							3										208		10							10					
19						3	5		∞						30							5										35		50			5			10			50			
20	1		25						39																				1			1														
21							1		∞						200														5	2		4	211		30								150			
22									∞																			20	8		50	78								120						
	1	8	25	7	10	3	6	4	1223	51	73	11	17	254	1451	1	2	4	1	1	1	363	1000	2	10	100	10	26	30	108	165	3681	∞	457	12	11	6	5	120	10	24	150	50	4	3	



# Data of Farmers

	Cr/m	Mang	Grazing land				Others					
			Total	Leuc	Euca	G/r	Total	G/r	Euca	A/mu	Cypr	Cast
1			∞	70			70					0
2			0				0					0
4			0				0					0
6			0				0					0
7			0				0					0
8			0				0					0
9			0				0					0
10			0				0					0
11			7	6			6					0
12			41				0					0
13			∞				0					0
14			17	∞			∞	∞	∞	∞	∞	∞
15	12	3	15	200			200		300			300
16			300				0	20				10
17			50				0		100			100
18			20			35	35	200				200
19	50		165				0					0
20			0				0					0
21			180				0					0
22			120				0	5				5
	62	3	915	76	∞	35	225	∞	∞	∞	∞	10

c.f. Woodlot No.14, 15, 16, 17, 18  
 Women's group's woodlot No.18  
 Market place No.20

	Level of techniques														
	Course No 22					Course No 23					Course No 28				
	No	1	2	3	Total	No	1	2	3	Total	No	1	2	3	Total
1		5	5	3	13	1	1	1	1	3		4	4	3	11
2		3	3	2	8		4	2	3	9		3	2	2	7
3		4	4	2	10		4	4	2	10		2	2	2	6
4	1	1	1	1	3		5	5	2	12		3	2	2	7
5	1	1	1	1	3		3	3	2	8		4	4	4	12
6		2	2	2	6		3	3	2	8		4	4	2	10
7		3	2	4	9		5	4	4	13		4	4	2	10
8		2	5	3	10		3	2	1	6		5	5	2	12
9		3	3	1	7		5	4	2	11		5	4	4	13
10		3	3	2	8		4	3	2	9		3	2	2	7
11	1	1	1	1	3		5	4	2	11		5	5	2	12
12		3	3	2	8		5	5	3	13		4	4	4	12
13		5	4	4	13		3	2	2	7		4	4	3	11
14	1	1	1	1	3		5	5	1	11		4	4	2	10
15		5	4	4	13		5	5	1	11		2	2	2	6
16		4	4	1	9		5	5	2	12		4	4	4	12
17	1	1	1	1	3		4	4	3	11		2	2	2	6
18		5	2	4	11							4	4	3	11
19		2	2	2	6							4	4	3	11
20		4	3	3	10										
21		2	2	2	6										
22		3	3	2	8										
23		2	2	2	6										
24		2	2	2	6										
25		2	2	2	6										
26		2	2	2	6										
27	1	1	1	1	3										
	6					1					0				

c.f. Bokd&ItaticsPresurvey 2  
 No.1 : Planted trees to date  
 No.2 : Surviving trees  
 No.3 : Planted trees within last 1 year

New techniques		1	2	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	1
Nursery tech.	1	1	1	1			1	1			1	1			1		1	1				1
Energy consev.	1						1				1			1			1					1
Planting/tend	1						1	1	1	1	1	1	1	1	1	1		1				1
Soil/water con.	1					1	1		1	1	1	1	1			1	1	1				1
Bee keeping	1														1		1	1				
Grafting/Bud		1		1													1	1				
Medicinal				1																		
Useful sps.						1					1	1		1								
Nurse establish						1		1		1	1					1	1	1		1		
Organic farm							1		1	1	1						1			1		
Protection								1				1										
Seed collection												1	1					1				1
Agroforestry															1				1		1	
Grazing land																				1		

# Data of FTA's

	District					Sex Dis- tinction		Formal education				Get situation					Plan of work				Who plan				Method of those					Assistance						Skill & Device				Transport								
	KTl	MKE	MKS	EMB	MER	Male	Female	S7-8	F1-2	F3-4	Other	I-1	I-2	I-3	I-4	T	II-1	II-2	II-3	T	a	b	c	d	Act	a	b	c	d	e	III-1	III-2	III-3	III-4	III-5	III-6	T	IV-1	IV-2	IV-3	IV-4	T	a	b	c	d		
1	1					1				1		1	1	2	2	4	2	2	2	6	1	1			4	2	1	3	4	5	1	1					2		4	3	2	3	3	#	1	1		
2	1					1				1		1	1	1	2				2	2	1			5	3	2	5	4	1	3			2		1		6	3	1	2	1	7	1	1				
3	1					1				1		1	1	3	3	5	2	2	2	6	1	1			4	3	4	2	1		1	1	1		1		4	2	2	3	4	#	1		1			
4	1					1				1		1	1	2	4	2	2	2	6	1				4	1	2	3			1	1			1		3	2	1	2	1	6		1	1				
5	1					1		1				1	1	3	4	5	2	2	2	6	1	1		1	4	2	4	3	1		1	1		1	2		5	3	1	1		5	1		1			
6	1					1				1		1	1	3	3	5		2	2	4	1	1			5	2	1	4	3		2	3	2	1	2		10	2	2	4	3	#	1	1				
7	1					1				1		1	1	1	2	3	2	1	2	5	1			4	3	2	1			1	1	1			3	2	2	3	3	#			1		1			
8	1					1				1		1	1	3	3	5	2	2	2	6	1			5	2	1	3	4	5	3	1			1		5	2	2	2	1	7	1	1					
9	1					1				1		1	1	2	4	4	2	2	2	6	1			5	4	1	2	3		1	1	1		1		4	1	2	1		4	1	1	1				
10	1					1		1				1	1	2	3	4	2	2	2	6	1			5	3	2	1		4	3				1		4	2	1	4	2	9	1		1				
11	1					1				1		1	1			2	2		2	4	1			5	1	3	2	4		1					1	3	2	3	3	#	1	1	1					
12	1					1				1		1	1	3	4	5		2	2	4	1			1	3	3	2	4	1		2	1			1		4	2	1	1	2	6	1					
13	1					1				1		1	1	3	3	5	2	2	2	6	1			1	5	1	3	2		2	1				3	2	2	4	1	9		1	1					
14	1					1				1		1	1	2	3	4	2	2	2	6	1	1		4	4	1	2	3		1	1			1		3	3	3	4	2	#	1		1				
15	1					1				1		1	1	1		3	2	2	2	6	1			4	2	3	1		4	1	1			1		3	3	1	2	2	8	1	1					
16						1	1			1		1	1	2	3	4		2	2	4	1			1	4	1	2	3	5	4	3	3		1	1	8	3	1	2	3	9			1				
17						1	1			1		1	1	4	4	6	2	2	2	6	1			4	2	1	3	4	5	3	1			1	1	6	3	3	3	3	#	1	1					
18						1	1			1		1	1	2	3	4		2	2	4	1			3	4	3	1	2		1	1			1	1	4	4	2	1	2	9	1						
19						1	1			1		1	1	1	1	3		2	2	4	1			4	1	5	3	4	2	3	1			1		5	3	2	2	1	8	1						
20						1	1			1		1	1	2	2	4	2	2	2	4	1			4	4	3	1	2		3		2		1	1	7	4	2	2	2	#	1						
21						1	1			1		1	1	1	2	3	2	2	2	6	1	1		4	1	3	2	4		3	1				4	2		3	1	6	1		1					
22						1	1			1		1	1	3	3	5	2	2	2	6	1			4	1	2	4	3		3	1				5	3	2	2	3	#	1							
23						1	1					1	1	3	2	5	2	2	2	6	1			4	2	1	3			1	1	1			3	4	3	1	3	#	1	1						
24						1	1			1		1	1	2	1	4	2	2	2	6	1			4	2	3	1		4	2	1				3	3	1	2	4	#	1	1						
25						1	1			1		1	1	3	4	5		2	2	4	1	1		2	3	4	2	1		1	1	1		1	1	5	3	1	3	1	8	1		1				
26						1	1			1		1	1	3	3	5	2	2	2	6	1			3	3	1	4	2		1	1	1		1		4	2		4	2	8	1						
27						1	1			1		1	1	3	3	5	2	2	2	6	1	1		4	4	1	3	5	2	1	1	1		1		4	4	2	5	3	#	1						
28						1	1			1		1	1	3	3	5	2	2	2	6	1	1		4	4	3	2	1		1	2	1		1		5	3	2	2	2	9	1		1				
15	1	3	5	4	26	2	4	4	19	1													27	9	4			68	64	70	61	36	50	29	14	2	25	5					24	12	12	1		

Situation of Planting and Nursery activities																							
No 21				No 25				No 29															
	1	2	3	T		1	2	3	T		1	2	3	T									
1	1	1	3	5	1	1	3	5	1	1	1			2									
2			2	2	1	1	4	6	1	1	1	1	3										
3	1	1	2	4	1	1	3	5	1	1	2	4											
4	1	1	3	5	1	4		5	1	1	2	4											
5	1			1	1	1	2	4	1	1	3	5											
6	1	1	2	4	1	1	3	5	1	1	3	5											
7	1		2	3	1	1	2	4	1	1	2	4											
8	1	1	3	5	1	1	2	4	1	1	2	4											
9			2	4	1	1	3	5	1	1	4	6											
10			4	4	1	1	2	4	1	1	3	5											
11	1	1	3	5	1	1	3	5	1	1	3	5											
12	1	1		2		1	2	3	1	1	3	5											
13	1	1	2	4	1	1	3	5	1	1	3	5											
14	1	1		2	1	1	2	4	1	1	3	5											
15			2	2	1	1	3	5	1	1	2	4											
16	1	1	2	4	1	1	3	5	1	1	4	6											
17	1	1	2	4	1	1	2	4	1	1	3	5											
18	1	1	2	4	1	1	1	5	1	1	3	5											
19	1			1	1	1	2	4	1	1	1	3											
20	1	1	4	6	1	1	4	6	1	1	3	5											
21	1	1	3	5	1	1	3	5	1	1	2	4											
22	1	1	4	6	1	1	4	6	1	1	3	5											
23	1	1	3	5	1	1	2	4	1	1	2	4											
24			2	2	1	1	2	4															
25	1	1	2	4	1	1	3	5															
26	1	1	2	4	1	1	3	5	1	1				2									
27	1	1	2	4	1	1	4	6															
28	1	1	2	4																			
29			2	2																			



# Data of FTA's

Target of act			
	21	25	29
1	4	4	4
2	4	6	
3	6	6	4
4	6	6	3
5	4	6	
6	6	6	4
7	4	2	
8	2	6	2
9	3	6	5
10	6	6	
11	6	6	
12	6	6	6
13	6	6	6
14	2	2	2
15	6	6	1
16	6	6	8
17	6	6	6
18	4	4	6
19	6	6	
20	6	6	6
21	6	6	6
22	6	6	6
23	6	6	4
24	6		
25	3	6	
26	6	6	
27	5	6	
28	5		
29	2		

Carried act			
	21	25	29
1	1	4	1
2	1	3	1
3	5	4	3
4	3	2	
5	4	3	
6	5	4	4
7	4	4	1
8	1	1	
9	3	2	
10	4	1	
11	4	2	3
12	3	3	4
13	2	4	4
14	3	4	2
15	2	4	
16	3	4	5
17	1	1	3
18	3	2	3
19	3	4	3
20	4	4	2
21	3	3	4
22	3	1	3
23	5	3	2
24	4	4	1
25	5	4	
26	4	3	
27	1	5	
28	5		
29	4		

Extension method														
No 21					No 25					No 29				
a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
1					1	2	3			1	2	3		
2	1				2	1							1	
3	3	1	2	4	2	1				2	1	5	3	4
4					2	1	3			1		2		
5					4	1	3			1	2	3	4	5
6	3	1	2	4	4	1	3	2				1		
7	2	1	3	4	3	1	2	4		1				
8					2	1	2			1		2		
9	1	2	4	3	2	1	4	3		1		2		
10					1	2				4	1	2	3	
11					1	2				3	1	4	2	
12	2	1	3	4	2	1	3			2	1	4	3	
13	2	1	3	4	3	1	4	2	5	1	2	3	4	5
14		1	2	3	2	1	3	4		4	1	5	2	3
15					2	1	3	4	3	3	1	2	4	5
16	2	1	3	4	2	1	4	3		4	1	2	3	
17					1					2	1	3		
18	2	1	4	3	2	1	3			4	1	2	5	3
19	3	1	2	4	1	2	3	4		4	2	1	3	
20	2	1	3	4						3	2	1		
21	3	1	4	2	1	3				3	1	2		
22	2	1	3	4	3	2	1	4	5	2	1	4	3	
23	4	1	2	3	1	2	3			3	1		2	
24	3	2	1		1	2				1	2			
25	2	1	3	4										
26	3	1	4	2	1	2	3	4						
27					2	1	3							
28	2	1	3	4										
29	2	1	3											
43	22	54	60		40	35	48	53	13	43	26	45	56	25

Systematization of extension activities																							
Course no 21						Course no 25						Course no 29											
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	3					3	3	1		1	1	6	3	1		1							5
2		3				3	1		1	1		3	3	1	1		1						6
3				1		1	1	3	1			6	3	1									4
4						1		1	1	1	4	1	1			1							3
5						1						3	3	3	1	2							12
6	3	3	1			8	3	1	1	1		7	3	1	1	1							7
7	3	3	2		1	10	1	3			1	1	6	3	1						1	3	8
8	3	3	3	9	3	16	2	3			1	3	1	1									6
9	3	3	1			8	1	1	1			4	2	1									5
10												3	3	1		1							8
11	3					3						3	3	2	1								7
12	3	3	1			7	1	1	1	1		5	3	1		1							8
13	1	3	3		1	9	3	1	1		1	7	3	2	1		1						8
14	3	3	1		1	8	2					4	2	2									6
15				1		2	3					5	3	3	1		2						9
16	3	3	1			8	3	1			1	3	8	2	3		1						9
17		1	2		1	4	2	2	1	1	2	1	9	3	1	1	1						7
18	3	3	2		1	10						2	1	1									5
19	3	2	1	1		8	3	1			2	6											4
20	3	3	1		1	8	1	1			1	3	3	2	1	1	1						10
21	3	2	1	1	2	9	1	2	1			5											2
22	3	3	2	3	2	14	1	3				6	3	1		1	1						8
23	3	3	3	1	1	11						3	3	1	1		1						6
24						1	3	1															
25	3	3	1		1	8	1	3			1	1	6										
26	3	3				7	3	1				5											
27						2	2	1				4											
28	3	2		1	1	7																	
29	1	3				4																	

## Data of teachers

[illegible]



# Main Survey Form for Farmers' Course

Date: \_\_\_\_\_

Interviewer : \_\_\_\_\_

Interviewee: \_\_\_\_\_

District: \_\_\_\_\_

Division: \_\_\_\_\_

Location: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Date of the training at K.T.C.: \_\_\_\_\_

1. So far how many trees (except fruits) have you planted in your land?  
(a) 0 (b) 1-49 trees (c) 50-99 (d) 100-499 (e) 500 or more
2. How many seedlings (except fruits) did you plant within last one year in your land ?  
(a) 0 (b) 1-49 seedlings (c) 50-99 (d) 100-499 (e) 500 or more
3. So far how many trees planted (except fruits) are surviving in your land ?  
(a) 0 (b) 1-49 trees (c) 50-99 (d) 100-499 (e) 500 or more
4. Are you raising any seedlings in a nursery ?  
(a) Yes (b) No

(If replied "Yes")

- (1) Whose nursery is it ?  
(a) Private nursery / individual  
(b) Group Nursery  
(c) Others (specify): \_\_\_\_\_
- (2) How many seedlings do you have in such a nursery ?  
(a) Private Nursery / Individual \_\_\_\_\_  
(b) Group Nursery \_\_\_\_\_  
(c) Others \_\_\_\_\_

If interviewer can see the nurseries, evaluate the techniques used including comparison of the techniques before and after participation in the training course at Kitui Centre.

\_\_\_\_\_

5. How many trees are surviving at these places and evaluation of techniques by interviewer.

Place planted trees	Number of surviving treesfor each species	Evaluation of Techniques
Compound		
Boundary of Compound		
Shamba		
Boundary of shamba		
Grazing land		
The other place (specify)		

7. Have you carried out new techniques which learnt in the training course at K.T.C ?  
(a) Yes (b) No

(if replied "Yes")

- (1) Which kinds of techniques have you carried out ?

\_\_\_\_\_

(2) Comment by interviewer for above trial:

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8. Have you taught any persons techniques that you learnt in the training course at K.T.C?  
(a) Yes (b) No

(If replied "yes")

- (1) To whom have you taught the techniques?  
(a) To family (b) To neighbour (c) To members of groups (d) To other persons

9. Evaluation by interviewer

(1) Area for tree Planting

- (a) Not difficult, if farmers have knowledge and techniques which they can learn in the training course at K.T.C.  
(b) Area where needs advanced techniques beyond training.  
(c) difficult because of severe environment, even if farmers have every knowledge and techniques for tree planting.

(2) Conscious of the trainee for tree planting

- (a) High motivation and success tree planting.  
(b) High motivation but tree planting activities are not carried out continuously. (For example, exercised before and under preparation or nothing presently).  
(Reasons) \_\_\_\_\_

- (c) High motivation but fail to plant trees (many seedlings died)  
(Reasons) \_\_\_\_\_

- (d) Trainee want to try tree planting but never planted.  
(Reasons) \_\_\_\_\_

- (e) Low motivation  
(Reasons) \_\_\_\_\_

(3) Items which the interviewer suggested to improve techniques of trainee.

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(4) Points that were obtained to improve the training course in this interview.

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10.

If there are useless techniques and knowledge for your field in the textbook and/or handout which the project gave you please describe it in details and concretely.

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# Mainsurvey form for Field Technical Assistant Course

Interviewer : \_\_\_\_\_ Date : \_\_\_\_\_

Interviewee : \_\_\_\_\_

District : \_\_\_\_\_

Division : \_\_\_\_\_

Location : \_\_\_\_\_

Mailing Address : \_\_\_\_\_

Date of the Training at KTC : \_\_\_\_\_

Educational level : (a) S1-S4 (b) S5-S6 (c) S7-8 (d) F1-F2 (e) F3-F4

## I Data of farmers and forestry in your area

### 1. What percentage of farmers have planted trees in your area ?

- (a) less than 25% (b) 25-49% (c) 50-74% (d) 75% or more (e) can't estimate

### 2. How many seedlings have on the average been planted by one farmer in your area ?

- (a) less than 50 trees (b) 50-99 (c) 100-499 (d) 500 or more (e) can't estimate

### 3. Can you estimate number of groups, schools or any other bodies that have established nurseries in your area ?

(a) Women's group : \_\_\_\_\_ (b) Schoos : \_\_\_\_\_

(c) Churches : \_\_\_\_\_ (d) Any other bodies : \_\_\_\_\_

(e) Total : \_\_\_\_\_

### 4. Can you estimate the number of seedlings raised in your area ?

(a) Chief's nursery	about	1000/yr
(b) Women's group	about	1000/yr
(c) Churches	about	1000/yr
(d) Schools	about	1000/yr
(e) The other producers	about	1000/yr
(f) Total	about	1000/yr

## II. Plan of work for extension in your area

### 1. Do you have the following targets to promote tree planting and tending in your area ?

#### i) Quantity of seeds collected

- a) yes ; Which kind of seeds ( )  
b) No ; explain why ( )

#### ii) Number of seedlings planted

- a) Yes ; How many seedlings ( 0  
b) No ; explain why ( )

#### iii) Number of groups assisted

- a) How many groups ( )  
b) No ; explain why ( )

### 2. Who plans ?

- (a) Yourself (b) DFEO(DFO) (c) Chief of location (d) Other persons(bodies)

## III Current extension activities

### 1. What kind of activities do you carry out in one year ?

- (a) Preparation of reports  
(b) Advisory services to farmers, groups and/or any bodies  
(c) Organize tree planting seminar at chief's baraza  
(d) Assist farmers or the other bodies to get some tools, tubes, seeds, seedligs and/or something  
(e) Other activities

- (        )        (c) Mass media method (seminar at the cheif's baraza)  
 (        )        (d) farmer to farmer method  
 (        )        (e) Other method

3. How many farmers, groups or any other bodies do you assist (or contact) now ?

- (1) Farmers                (a) None    (b) 1-5    (c) 6-10    (d) More than 10  
 (2) Women's groups      (a) None    (b) 1-5    (c) 6-10    (d) More than 10  
 (3) Self help groups      (a) None    (b) 1-5    (c) 6-10    (d) More than 10  
 (4) Churches              (a) None    (b) 1-5    (c) 6-10    (d) More than 10  
 (5) Schools                (a) None    (b) 1-5    (c) 6-10    (d) More than 10  
 (6) any other bodies      (a) None    (b) 1-5    (c) 6-10    (d) More than 10

IV What alternatives have you used or advised in the undermentioned situations ?

1. In case of shortage of tubes

- (a) Used milk packs    (b) Used small tins    (c) Made seedlings without tubes  
 (d) Used other method : \_\_\_\_\_ (e) Nothing

2. In case of shortage of water, how have you managed the nursery work ?

- (a) Made a shde    (b) Moved seedlings near the water point  
 (d) Used other method : \_\_\_\_\_ (e) Nothing

3. In case of termite attack on the seedlings.

- (a) Used ash    (b) Used chemical    (c) Used oil    (d) Removed the queen  
 (e) Transferred the seedlings    (f) Nothing

4. In case of seedlings mortality

- (a) Watered by bottle    (b) Dug big hole    (c) Made microcatchment  
 (d) Other traial : \_\_\_\_\_ (e) Nothing

5. What transport means do you use for extension ?

- (a) On foot    (b) Your bicycle    (c) Bicycle owned by District Forestry  
 (d) Other means : \_\_\_\_\_

V Others

1. Please describe forestry activities that you have newly carried out after training in Kitui Centre if you have done.

\_\_\_\_\_

2. What technical problem on forestry activities have you faced in your field ?

\_\_\_\_\_

3. If there are useless techniques and knowledge for your field in the text book and/or handout which the project gave you, Please describe it in detail and concretely.

\_\_\_\_\_



Mainsurvey form for Teachers' course

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Name of the school: \_\_\_\_\_

Location of school \_\_\_\_\_

District: \_\_\_\_\_

Division: \_\_\_\_\_

Location: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Date of training course at Kitui Training Centre: \_\_\_\_\_

I Data of the school

1. Number of pupils in your school.

(About: \_\_\_\_\_ Pupils)

2. On what kinds of class are you teaching?

S1, S2, S3, S4, S5, S6, S7, S8, F1, F2, F3, F4

3. What kinds of subjects are you teaching?

II. Activities of tree planting

1. How many trees planted are there in your school?

(a) 0 (b) 1-99 (c) 100-499 (d) 500-999 (e) 1,000 or more

2. Is there any tree nursery in your school?

(a) Yes (b) No

(If replied "Yes")

How many seedlings did your school raise last season.

(a) Less than 100 (b) 100-499 (c) 500-999 (e) 1,000 or more.

3. What kinds of activities did your school carry out last year?

- a) Seeds collection
- b) Nursery work
- c) Tree planting in the school
- d) Distribution of seedlings to the pupils
- e) Any other works,

Specify: \_\_\_\_\_

f) Nothing.

III. Teaching of tree planting

1. Are techniques and knowledge on forestry taught in your school except teaching them in club activity?

(a) Yes (b) No.

(If replied "Yes")

To which classes are they taught?

S1, S2, S3, S4, S5, S6, S7, S8, F1, F2, F3, F4

2. Is there any club on tree planting in your school?

(a) Yes (b) No.

(If replied "Yes")

How many pupils belong to the club?

(a) Under 20 (b) 20-49 (c) 50-99 (d) 100-199 (e) 200 or more.

How many times is given to the club activities per week?

(a) 1 (b) 2 (c) 3 (d) 4 (e) 5

3. Please mark materials used in the followings when techniques and knowledge on tree planting are taught in your school ?

- a) Textbooks made by project
- b) Pamphlets made by project
- c) The other materials made by project
- d) Pamphlet made by yourself
- e) Chart printed
- f) Chart made by yourself
- g) The other materials,

Specify : \_\_\_\_\_

IV. Others

1. Please describe forestry activities that you have newly carried out after training in Kitui Centre if you have done.

\_\_\_\_\_  
\_\_\_\_\_

2. What technical problem on forestry activities have you faced in your school ?

\_\_\_\_\_  
\_\_\_\_\_

3. If there are useless techniques and knowledge for your field in the textbook and/or handout which the Project gave you, Please describe it in detail and concretely.

\_\_\_\_\_  
\_\_\_\_\_



