AGROFORESTRY SENSITIZATION WORKSHOPS IN THE EASTERN HIGHLANDS AND LOWLANDS OF UGANDA

WORKSHOP PROCEEDINGS

Compiled
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AGROFORESTRY PROGRAMME
FORESTRY RESOURCES RESEARCH INSTITUTE (FORRI)

2002/2003

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Executive summary

i) Introduction

The agroforestry program of the Forestry Resources Research Institute (FORRI) is mandated to conduct research in forestry related enterprises. With funding from the European Union, the Agroforestry program of FORRI set out to implement agroforestry research and development activities in the eastern lowlands and highlands of Uganda.

The overall goal is to improve livelihoods and the natural resource base with the purpose of improving land productivity, tree products and services. Five main outputs are targeted; i) increasing the capacity of staff and development partners to conduct agroforesty research; ii) developing, testing and validating appropriate agroforestry practices; iii) identifying effective dissemination methodologies; iv) enhancing the capacity of development partners to interface with clients; and v) putting in place effective joint coordination, monitoring and evaluation mechanisms. Initial activities focused on massive sensitization campaigns for subcounty leadership in the districts of Iganga, Tororo, Mbale and Kumi. These were conducted between November and March 2003. The main objectives of the sensitizations were:

1. To create awareness to the sub county leadership of the importance of agroforestry in agricultural development.
2. To solicit support from the sub county leadership for the integration of agroforestry development activities in their sub county development programs in line with the Plan for the modernization of Agriculture (PMA) and National Agricultural Advisory Services (NAADS) programs.
3. To disseminate knowledge of Agroforestry to the sub county leadership

This report is a compilation of the proceedings of the sensitization workshops in the covered sub counties in these districts. Sensitizations were conducted by a team of Trainers of Trainees (TOTs) in each of the districts with close guidance by FORRI staff. It is hoped that the proceedings will serve as reference material for end users of agroforestry technologies. Agroforestry stands out as the only viable option for sustainable management of the natural resource base as well as improving the livelihoods of rural people. It has the potential for income generating through use of appropriate technologies. All these are geared towards poverty eradication and are in line with the government's Plan for the Modernization of Agriculture.

ii) Structure and lay out of the report

The proceedings have been organized into chapters; each district forming a chapter on its own. The sub counties in the district so far sensitized are indicated as well as the various papers presented. In all the districts, the same group of people carried out the sensitization. As such the package for all the sub counties sensitized in a district was similar. All questions and discussions emanating from the presentations are presented at the end of each chapter. Lists of all participants are included in the appendices.

CHAPTER ONE

1. IGANGA DISTRICT

1.1 AGROFORESTRY SENSISTISATION WORKSHOP PROCEEDINGS

In Iganga district, five out of the six sub counties planned for sensitization have been covered. The sub counties and the dates on which the sensitizations were done are indicated below:

Sub county	**Date**
Magada	27 November 2002
Waibuga	25 April 2003
Nawandala	28th April 2003
Buyanga	29th April 2003
Ivukula	30th April 2003

Ibulanku Sub County remains un-sensitized. The following are papers presented during the sensitization meetings.

1. Introduction to Agroforestry and its role in development by Mr. Sam Esyara
2. Role of NARO/FORRI and local Government in Agroforestry activities by Mr. Ojambo Stanislaus
3. Role of agroforestry in Environment Management by Mr. Noah Isanga
4. Agroforestry micro projects by Mr. Dhikusooka
5. Agroforestry as a component of NAADS by Mr. Kugonza James.
6. Fruit crop production in Agroforestry by Mr. Sam Esyara

1.2 INTRODUCTION TO AGROFORESTRY AND ITS ROLE IN DEVELOPMENT.

Paper presented by Esyara Sam – Agroforestry technician, Iganga District.

Definition:

Agroforestry, social forestry, community forestry, village forestry and farm forestry are all forms used to describe tree growing that is undertaken mainly outside gazetted forestry area.
Agroforestry is a land use system in which trees or shrubs are sown in association with agricultural crops, pasture or livestock. Sometimes the term woody perennial is used instead of tree and shrubs. Woody perennials include; trees and shrubs with a life span of more than a year, but they also cover bamboos and palms.

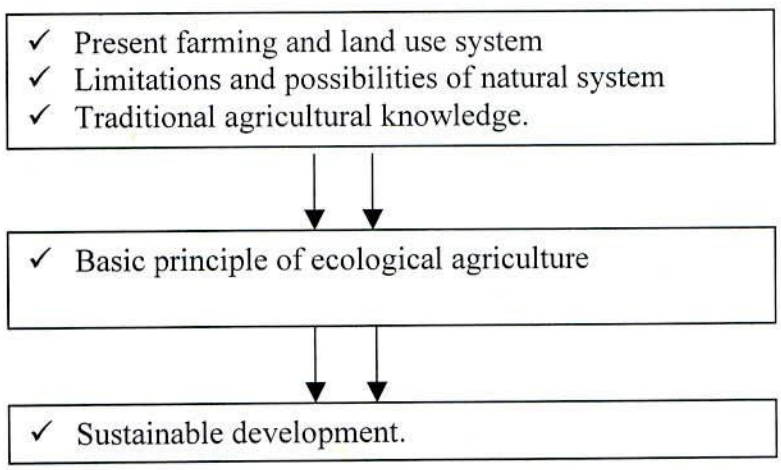
The trees in an Agroforestry system are not necessarily planted. Instead natural regeneration of trees may be protected or mature trees may be deliberately left in the field or pasture. Hence AF is a much wider concept that tree planting.

AF systems often involve management of trees and shrubs and utilization of their products. The trees and shrubs will have an impact on the other component in land use system. Hence, AF systems are normally characterized by ecological and economic intervention between woody perennial and crops.

Social forestry is slightly wider concept as it includes trees growing for ornamental purposes in urban areas and avenues. Farm forestry can be regarded as almost synonymous to agroforestry but it may also include large-scale forest production on private farms, an activity that would fall outside the definition of agroforestry.

Finally the term community forestry has been used to stress the involvement of people in tree growing efforts although people are of course much more involved in agroforestry activities. In many countries, the concept of community forestry has been replaced by those of farm forestry or agroforestry. The change is as a result of the de-emphasis of communal efforts, which have often proven less fruitful.

Development/sustainable development can only take place through integrated approach in which the present situation is accepted as a starting point. Therefore an understanding of present farming and land use systems and its development over a time is necessary. This has to be combined with limitations and possibilities of natural ecosystem as well as with a study of the agricultural knowledge and experience of the farming population. The understanding of the present situation should contain assessment of the potential for agricultural development. It should also take into account the political, social, cultural and economic context of the agricultural system. Such as different roles of men, women, available technologies existing power structure and production costs and benefits.



1.2.1 Roles of agroforestry:

- ✓ Production and promotion of non traditional cash crop for example agroforestry products has led to an increase in foreign exchange earning for mangoes and avocados for export to European union. This is feasible because in temperature countries some of the crops are not produced throughout the year.
- ✓ Development of agro based industries. For instance industries for making potting materials or container like polythene and fertilizers.
- ✓ Agroforestry also provide raw materials to agro-processing industries for instance mangoes are used in the processing of mango juice.

- ✓ Since orchards need labor, the agroforestry enterprise can provide employment to most of rudimentary labor in the area for example labor required in nursery establishment and management of tree/fruit nursery.
- ✓ Due to the small land holdings of our farming community, agroforestry is suitable for home garden.
- ✓ Some agroforestry products like fruits provide vitamins especially A and C and minerals which are not large enough in other foodstuffs.
- ✓ Trees/shrubs(fodder trees) support agriculture and livestock production, which also contribute to greater income from the farm.
- ✓ A standing stock of growing trees can be an important kind of saving and investment that can help bridge years when the harvest is poor, or help the family to manage in periods of financial crisis e.g. when many children require funds for school fees.

Trees are not subject to inflation and may be a better kind of saving than keeping money in bank account.

1.3 THE ROLE OF NARO/FORRI AND LOCAL GOVERNMENT IN AGROFORESTRY DEVELOPMENT. By OJAMBO STANSLAUSE - TRAINER OF TRAINEES

OBJECTIVE: To define the major roles of the above stake holders in the program

a) NARO

National Agricultural Research Organization (NARO) is an autonomous body established by government in 1992 to carry out research on Natural Resources Covering crops, trees, livestock, poultry, entomology and fish. It has several research centers established all over the country to meet this purpose. Examples include:

LIRI	-	Livestock Research Institute at Tororo
KARI	-	Kawanda Agricultural Research Institute at Kawanda
SARI	-	Serere Agricultural Research Institute at Serere.
FIRI	-	Fisheries Research Institute at Jinja
FORRI	-	Forestry Resources Research Institute, which is responsible for research in forest resources.

Under the agroforestry program FORRI will be responsible for the following major roles;

1. Continued Research on all aspects covering Agroforestry
2. Provision of all technologies geared towards the development of agroforestry including capacity building.
3. Provision of improved seed/seedling required fro agro forestry development.
4. Establishment demonstration sites and seed stands for Agroforestry development.
5. Dissemination and publication of all research information on Agroforestry .
6. Link and collaborate with other stakeholders i.e. NGOs, Cobs and agencies for purposes of agroforestry development.
7. Provision of non-locally available inputs required for establishment of demonstration sites and seed stands.
8. Monitoring and evaluation of the agroforestry activities.

1.3.1 Roles of local government (sub county)

1. Mobilize the communities in all agroforestry programs
2. Provision of locally available inputs for establishment of seed stands and demonstration plots.
3. Provision of land where to establish demonstration sites and seed stands.
4. Collaborate and link with all NGOs and CBOs in their areas for purposes of a groforestry development.
5. Avail all the indigenous knowledge on agroforestry to the researchers.
6. Provide security for all the established demonstration sites and seed stands.
7. Plan and budget for agroforestry programs activities.
8. Provision of the required technical input from extension officers in their areas whenever required.

1.4 THE ROLE OF AGROFORESTRY IN ENVIRONMENT MANAGEMENT:

Paper presented by Noah Isanga

1.4.1 INTRODUCTION:

Agroforestry the practice of integrating trees/shrubs and animals with crops is the answer to our rural development, a guide to farmers in modern practices and the best approach to any form of land use.

1.4.2 Objective of the topic:

To help participants understand that environment management is a function of good agroforestry practices.

1.4.3 What is agroforestry?

This is a form of natural resource management where trees/shrubs, animals and crops are combined on the same piece of land. These constitute the major component of our environment.

1.4.4 What is environment?

This is a natural phenomenon, which encompasses everything that is about where we live i.e. surroundings.

Agronomic technologies, which involve:

✓ Planting of trees/crops/pastures and rearing animals in carefully selected styles.

These styles may include;

a) Inter-cropping/growing two or more crops in the same piece of land.
b) Hedge rows- closely planted line of shrubs/trees between 2 to 8m apart.
c) Alley cropping – annual crops between hedgerows.
d) Boundary planting – trees from boundary or fence.

e) Woodlots – clusters of trees/shrubs pure stands.

f) Lopping, pruning and pollarding.

g)

Lopping	Pruning	Pollarding
Cutting unnecessary branches	Cutting side branches or roots of trees with aim of controlling or improving growth.	Top parts of trees are cut to produce regrowth.

h) Crop rotation and many others.

✓ **Physical technologies are those that involve man-made physical structures.**

These may include:

a) Water dams, wells etc.

b) Water retention ditches (channels)

c) Cut off drains

d) Terraces and terrace embankments

e) Other masonry structures e.g. walls and buildings.

Agroforestry practices apply the above technologies to influence and cause long lasting and viable changes in the landscape as follows;

✓ Transformation of trees in the area.

✓ Changing barren land, badly eroded land capes into forests/crops lands or grazing lands (range lands).

✓ Planned settlements with designed structures & well selected trees, crops/flowers and animals.

✓ Creating water sources and water catchment areas.

✓ Temperature changes

✓ Control of windstorms, floods, landslides and any other natural hazards into habitable places.

✓ Regeneration of soils to grow health plants.

✓ Improved livelihoods through provision of food, medicine and cash.

What is Agroforestry? Various versions available. Some of the common definitions of agroforestry are;

- ✓ Growing trees deliberately on farmland.
- ✓ An integrated use system where woody plants are grown in combination with agricultural or horticultural crops including pastures and/or animals on sustainable basis. This can be sequential or simultaneous on a piece of land not components using technologies which are adoptable and socially acceptable by the local population.

1.4.5 Objectives of Agroforestry program:

a) To determine and assess the profitability and acceptability of various AF technologies, innovations or practices for;

- ✓ Food security to the communities
- ✓ Increased farm incomes.
- ✓ Conservation of forests, soils and water.

b) To disseminate viable agro forestry technologies and provide policy advice.

c) To strengthen the local capacity to research, disseminate and implement AF technologies in the district.

1.4.6 Reasons for adoption of AF practice:

- ✓ High pop density has led to land degradation (low soil fertility and crop yields) through deforestation, bad farming methods.
- ✓ Shortage of wood products (fuel wood, poles, timber stakes, etc)
- ✓ Low incomes
- ✓ Food and nutritional deficits.
- ✓ Loss of biodiversity on farm land
- ✓ Diversity of crops fro use and sale on market.

1.4.7 Agroforestry systems;

- ✓ Agrisilvicultural – combination of crops and trees.
- ✓ Agrosilvopastoral – combination of crops, trees, animals/pastures.

✓ Silvopastoral - combination of trees and animal pastures.

1.4.8 Agroforestry practices: common practices

✓ Boundary planting
✓ Crop/tree combination
✓ Contour planting
✓ Tree/crop rotation i.e. fallows
✓ Wood lots – pure stands
✓ Home gardens.

1.4.9 Requirements for AF:

✓ Technology should have multipurpose characteristics
✓ Sustainable
✓ Ecological interaction (positive and negative).
✓ Acceptable – flexible – adaptable to farmers.
✓ Arrangement – simultaneous, sequential, linear, etc.

1.4.10 Major activities of Research:

⇒ **Wood production:**

✓ Screen tree species for pole and timber production.
✓ Develop tree management options
✓ Test screened tree species, 50spp, tested.
✓ Production of stakes for climbing beans.

⇒ **Soil Management:**

✓ Terrace management soil fertility improvement.
✓ Soil fertility conservation.
✓ Improved fallows for soil improvement. 10 trees/shrubs tested. *Sesbania sesban, Calliandra spp, Crotalaria spp, Tephrosia spp.*

⇒ **Trees with high value products**

- ✓ Substitute local fruit tree with improved ones e.g. Mangoes, Citrus and avocado.
- ✓ Introduce temperate fruit trees e.g. Apples, pears, plums.
- ✓ Improve propagation of indigenous high value trees.
- ✓ Market analysis for indigenous species with high potential.
- ✓ Environment improvement.

1.5 AGROFORESTRY MICRO PROJECTS By Mr. Dhikusooka .J.

The presenter described Agroforestry Micro projects as the various uses under which Agroforestry products can be categorized. On these criteria, the Agroforestry micro projects were identified as:

1. Wood lot-for firewood.
2. Trees for timber
3. Fruit trees for food and nutrition and income generation
4. Trees for providing fodder for livestock
5. Trees for soil fertility improvement
6. Trees for providing shed in crops
7. Trees for making fence/hedge.

1.5.1 Trees for firewood:

These trees are those that provide fire wood throughout the year, they should have the capacity to generate income when they are cut and should be fast growing. Examples cited include Cassia, Gliricidia to the households. The fruits, which are being promoted by the agroforestry programme, are Mangoes, Oranges and Avocado. Fruit trees, which are promoted by the project, are of superior qualities such as:

- ✓ Short maturing period
- ✓ Shorter bearing height
- ✓ Good taste, size that is acceptable on the international markets.

1.5.2 Trees for feeding animals (fodder trees):

The fodder trees are of the leguminous type. They provide proteins to the diets of animals, which improve performance of animals such as increased milk production. Examples of such trees are *Leucaena* and C*alliandra*.

1.5.3 Trees for improving soil fertility:

He said that these trees have the ability to draw nutrients from the air to the soil and also because of their deep root system they can take up nutrients from deep layers of the soil and they bring them to the surface. Such trees include *Leucaena, Sesbanaia, Calliandra* and *Cassia.* He stressed the importance of these trees in restoring soil fertility and he compared them to the equivalent of urea fertilizers when they are applied to the soil.

Legume Tree	**Amount of Nitrogen supplied per acre per year**	**Equivalent urea fertilizer.**
Leucaena	29.6 – 113.2 kg	74 – 284 kg
Calliandra	43.6 kg	101 kg
Sesbania	108 kg	270 kg
Cassia.	78.8 kg	197 kg

1.5.4 Shed trees

He said these are trees that are deliberately grown to maintain a good environment (shed) for the food growth of another crop. He gave examples of shed trees as;

- ✓ Albizia for bananas
- ✓ Ficus for coffee
- ✓ Musizi for cocoa

1.5.5 Hedge trees

These are trees grown along the boundaries to serve as live fences to the field. These trees can as well serve other purposes like fodder and soil erosion control. A good example is *Calliandra calothyrsus.*

1.6 AGROFORESTRY AS A COMPONENT OF NAADS By James Kugonza

Outline of the presentation:

Give an overview of agroforestry.

Explain the NAADs program

Indicate how agroforestry fits in the NAADs program.

1.6.1 Definition of Agroforestry:

Agroforestry is growing of trees on the farm.

Benefits of the trees on the farm include provision of wood products and non-wood products like fruits, fodder, nuts etc. Agroforestry ensures crop and livestock production as well as improving the environment. It provide income to farmers through sale of tree products.

1.6.2 Justification for practicing agroforestry:

- ✓ Increasing land degradation due to poor husbandry and management practices.
- ✓ Serious shortage of wood products.
- ✓ Low income in rural households.
- ✓ Food and nutrition deficits.
- ✓ Loss of biodiversity.

1.6.3 Objectives of agroforesty programs

1. Determine and assess the profitability, feasibility and acceptability of various agroforestry innovations, technologies or practice to;

- ✓ Increase farm incomes
- ✓ Ensure food security

- ✓ Improve rural livelihood
- ✓ Conserve forest soils and water.

1. Disseminate viable agroforestry technologies (practices) and provide policy advice.
2. Strengthen the local capacity to research, disseminate and implement agroforestry technologies within districts.

1.6.4 NAADS (National Agricultural Advisory Services)

NAADs is a new program in the MAAIF created under the PMA as one of the government's efforts to reduce poverty. The program is responsible for the provision of agricultural advice to farmers. It gives farmers powers to ask for advisory services for their priority enterprises.

''Farmers identify the advice they need and then contract the person to provide it''. In short, the goal of the NAADs program is to sustainably enhance rural livelihoods by increasing agricultural Productivity and profitability. The purpose of which is to ensure that farmers apply improved husbandry and management practices and identify and solve their technical and marketing problems using appropriate and modern knowledge and technologies.

1.6.5 Objectives of NAADS program

Increasing availability of appropriate advice and information to all farmer types in an equitable and cost effective manner.
Avail appropriate technologies in sufficient quantities to meet identified needs.
Assure the quality of advice and information provided to meet farmer advice and information.
Develop appropriate farmer controlled institutional structures and processes for managing NAADs at all level.

1.6.6 How agroforestry fits into the NAADS program.

i) NAADS emphasizes increase of farmers' access to information, knowledge and technology for profitable agriculture production. Agroforestry therefore is improved

knowledge and technology geared towards addressing issue of land degradation by integrating trees on the farm to increase the productivity and profitability of land as well as protecting the environment.

ii) Agroforestry promotes production of a variety of production (wood/non wood) and agricultural from one piece of land. Some of these products are of higher value for commercialization in order to increase household incomes and food security. This is in line with the Naiads approach.

iii) One of the objectives of agroforestry program is to disseminate viable agroforestry technologies (practice), which is service delivery to farmers to enhance farmer's performance.

iv) Agroforestry program links researchers with farmers and extension the kind of linkage Naiads is promoting.

v) Agroforestry research/program strikes to link technology to the markets, thus by developments market – oriented technologies (high tree products) so that the issue of market is addressed. This is in line with the Naiads program, which is emphasizing farming as a business.

vi) Managing natural resource productivity.

1.7 FRUIT PRODUCTION IN AGROFORESTRY by Sam Esyara

Agroforestry aims at diversifying crop production on small-scale farms.

Overall Objective:

Improve Nutrition of farmers.

Improve food security of farmers.

Improve financial income.

Specific Objectives:

Introduce highly marketable fruit germplasm.

Select suitable cultivars

Teach farmers specific management procedure.

Justifications of fruit production in Agroforestry

Suitable climate

Diversity of income sources

Shortage of available land for crop production

Adoption limitations

Lack of awareness to farmers about possible cash earnings from fruits

Lack of awareness about fruits types available for market

Limited supply of high quality fruits for market demand.

Quotation of national fresh fruit exports by air:

Fruits type	**1997**	**1998**	**1999**	**2000**	**2001**
Mango	14,000	22,000	31,000	27,000	11,000
Avocado	36,000	37,000	57,000	74,000	48,000
Banana	143,000	107,000	90,000	72,000	88,000

Fruit types available for trial and their uses.

Mango; Bire, Alfonso, Tommy Artkins, glen, Foregone, Apple, Ngowen.

Use; Juice, slices

Avocado; Semile 34, Semile 43, Drsom I, II, III, Reed.

Use; Fresh fruits for food (protection against many cancers.

Oranges; W, navel, Nova, Seminole

Use: Orange juice, used in confectionery.

Quick results from propagation:

1. Vegetation Propagation;
   Grafting for mangoes & avocadoes; connecting two different parts of a living plants thereby by joining to form a functional plant.

Budding for oranges.

2. Training of farmers and extensionists.
   Fruit tree management and marketing.
3. Collaboration at all levels.
   Local government, farmers, extensionists and researchers.

Expected impact of AF effort.

Self sufficiency in fruits of diverse types by farmers who adopt 5 years from now.

1.8 REACTIONS TO PRESENTATIONS:

These reactions overlapped in many cases for the different sub counties but they were summarized for each presentation as below;

1.8.1 INTRODUCTION TO AGROFORESTRY:

QUESTION 1

How should we plant the trees? Shall we have to cut the old trees on the farm in replacement of the good introduced ones?

Answer;

The farmers will be taught how to plant and manage the trees. For the indigenous ones, farmers are not encouraged to cut them but they will be taught how to manage them.

QUESTION 2

Shall the development partners assist us and how will the people access seedlings since they are poor

Answer:

The agroforestry program will provide them with the starter seed. It will also establish seed stands for trees that cannot be obtained locally in the communities. Farmers are also urged to

identify and collect seed from the indigenous trees. The program will teach them the techniques of how to establish and manage the trees including establishment of tree nurseries.

QUESTION 3

Will there be a possibility of availing short term maturing trees?

Answer;

Research has developed 50 spp that are aimed at addressing the problems of farmers regarding trees and their products. This is especially so with trees.

QUESTION 4

What trees shall we plant?

Answer;

The purpose of the workshop is to sensitize the participants so that they can also sensitize the people in their respective areas. The workshop guides them in identifying the problems related to lack of trees and in turn make appropriate selection of the type of trees to plant to address the problems.

QUESTION 5

Shall we get market for the forestry products?

Answer;

The agroforestry program is just making research in the adaptable trees and at the same time is also making research in markets so that whatever is promoted will have market.

QUESTION 6

Are there trees that will be planted on rented land?

Answer ;

Agroforestry can only be practiced on ones owned land. It is however suitable for people with small piece of land. What is required is the appropriate selection of enterprise to fit into the available land.

1.8.2 THE ROLE OF NARO/FORRI AND LOCAL GOVERNMETNS IN THE AGROFORESTRY PROGRAM:

1. QUESTION:

There has ever been a similar program, which has ever promoted the growing of trees in the communities. There seems to be no progress. Has there been a follow up to verify the reasons for the failure of the a program.

Answer;

NEMA is the program that has been promoting the planting of trees in the communities. However NEMA did not do it on a research level. NEMA thought that people knew about trees and its aim was to promote planting of trees as it thought that the purpose was to protect planting of trees as it thought that the purpose was to protect the environment. The failure also is attributed to some local governments where by seedlings at central nurseries at sub county levels were not distributed to the communities.

1.8.3 THE ROLE OF AGROFORESTRY IN DEVELOPMENT:

1. QUESTION:

It seems from the team which is teaching agroforestry (multi-disciplinary) and from the definition of agroforestry that all the promoters of agroforestry will be in position to promote only sectors in production.

Answer ;

The team is multidisciplinary because agroforestry cuts across many sectors of production such as animal husbandry, agriculture and forestry itself. That is the reason why the team is

composed of at least an officer from each of those sectors so that anything that deeply concerns any one given sector can adequately be handled by an officer from that discipline.

2. QUESTION:

Will the agroforestry program at community level be implemented on individual basis or as a group work. (The person who asked this question expressed fear that projects, which are done on a group basis, always fail).

Answer:

The teaching and training of the communities will be done on a group basis but implementation will be done on individual farm level.

3. QUESTION:

One participant wanted to know how minerals as a component of food values in our bodies as mentioned in the presentation that they also protect our bodies.

Answer:

These are like salts that are found in some foods and they assist in the formation of body parts like bones. They are found in fruits and also in the newly introduced tree of moringa.

1.8.4 ROLE OF AGROFORESTRY IN ENVIRONMENTAL MANAGEMENT:

QUESTION 1

If wetlands can yield rice and other crops, which fetch cash for the development of an individual, is it wrong to use it?

Answer:

Wetlands should be used wisely for the benefit of all community of all community members upon the values and uses of the wetlands and not haphazard use by individual members of the communities.

QUESTION 2

What should happen to people who damage our environment deliberately by cutting trees illegally and maliciously?

Answer:

Bylaws in the communities should help in combating such damages. Local governments should play a leading role in enforcing these laws in favor of communities.

QUESTION 3

How can we be sure of the ownership of the trees that are given in form of seed or seedlings by FORRI? Is there no risk of them being grabbed by the government?

Answer:

The trees that are established and managed by the farm owner belong to him/her as indicated by the Uganda constitution of 1995. Trees should be treated like livestock and agricultural crops.

1.8.4 AGROFORESTRY MICRO PROJECTS

QUESTION 1

Is it easy to get markets for tree products from introduced trees?

Answer;

One of the activity areas of agroforestry program is research on the markets from the products of the trees that are being promoted.

QUESTION 2

Crops that grow faster through chemical use and genetic modification is prohibited or discouraged. How does agro forestry address this?

Answer;

Agroforestry does not use chemicals or engineering that change the nature of the plants. The fruits mature fast because the scions are obtained from mature mother trees and that is why when a tree has established it is in position to bear fruits at an early time.

QUESTION 3

What problems can be solved by agroforestry practices at a household level?

Answer;

Fuel wood, building materials, soil fertility soil erosion, animal fodder, wind damage etc.

QUESTION 4

Why are indigenous trees not highlighted among trees to be used in agroforestry research?

Answer;

Indigenous trees are an important component in agroforestry and species survey will be carried out to establish the extent of the local trees that can be promoted in addition to the improved species and research will be carried out on them.

QUESTION 5

When the Ficus trees planted in coffee fields die the coffee trees also die. Is it advisable to continue promoting it.

Answer;

There is need to carry out proper tree management so that the Ficus trees used for shed in coffee do not dry. This is positive tree + crop combination in AF . this is not only for ficus but it happens also for other types of trees used as sheds in coffee.

QUESTION 6

Are fruits trees planted with manure added?

Answer:

From the observation of the way mangoes have yielded, for this season the fertilizer requirement for fruit in this locality may not be critical but research will be done to assess the extent of requirement.

QUESTION 7

Is the source of planting materials for fruits and other trees available for the current rains?

Answer:

For fruit trees any farmer who is ready can go ahead to plant the rootstocks in their positions in the field as he/she would require the plantation to be. Arrangements can be done to avail the scions and to graft the rootstocks for them. For the other types of fruits nurseries will have to be established at community level first before the majority of interested farmers are availed with planting materials.

QUESTION 8

Is there a plan for extending the agroforestry program to parish level?

Answer:

The plan is to reach the first man/woman at community level.

1.8.5 FRUIT CROP PRODUCTION IN AGROFORESTRY:

QUESTION 1

Scions for grafting require transporting over a short distance within a short time how will it be possible to move it over long distances up to the communities?

Answer;

There are preservation measures to keep the scions alive even for 4 days.

QUESTION 2

A farmer wanted to do research in controlling production by spreading the period of flowering/fruiting i.e. to manage or have control over proliferation of some tree seed e.g. Calliandra.

Answer;

Point taken.

1.8.6 AGROFORESTRY AS A COMPONENT OF NAADS:

QUESTION 1

There is fear that the agroforestry products as a result of this project will flood the markets.

Answer;

There is a component of marketing in NAADS in addition to the efforts that is being done by agroforestry research in identifying markets for the products they are promoting. It is however important that before we can get markets we should produce first.

QUESTION 2

Will the NAADs money be used to implement the agroforestry program?

Answer;

The agroforestry program is to sensitize the farmers about agroforestry, teach them the agroforestry technologies so that after they have known the importance of agroforestry they can then demand for the services in NAADs.

1.9 CLOSING OF WORKSHOPS:

At the closing of the workshops all the chairmen pledged to support the program. They promised to work with the agroforestry team for the success of the program. They appealed to the councilors to spread the message from the knowledge they have acquired in the workshops to the people they present.

CHAPTER TWO

2. TORORO DISTRICT

2.1 AGROFORESTRY SENSITIZATION WORKSHOPS IN TORORO DISTRICT

In Tororo district, the sub counties covered in the agroforestry sensitization workshops were Kisoko, Rubongi on 23rd may 2003 and Osukuru. In addition, sensitization was done for district Tororo district councils and heads of departments on 21st October 2003.

Presentations

The district TOTs on agroforestry plus the District Environment Officer presented the following topics:

- ✓ Introduction to agroforestry by Ogwang James.
- ✓ The role of agroforestry in PMA by Oketcho
- ✓ The role of agroforestry in NAADS by Opendi E
- ✓ Local on farm research in agroforestry by Gongo J.
- ✓ The role of agroforestry in soil and water conservation plus soil fertility management.

The FORRI team sensitized the district council and the following were the topics presented during the meeting:

i. Role of research in development by J.F.O Esegu.
ii. Role of Agro –forestry in development by Dr. Jean – Marc Boffa
iii. Agro- forestry research and development in Uganda by Dr. Okorio John
iv. Fruit production in Agro –forestry by Dr. Kagorora.
v. The role UGADEN in Agro- forestry and development in Uganda. By Mr. Clement Okia.

Participants

In all the sub counties, the participants included the sub county chiefs; sub county local council leaders, extension staff, religious and opinion leaders. Sub county environment and production committee members and Sub county farmers fora members.

2.2 THE ROLE OF AGROFORESTRY IN NAADS (National Agricultural Advisory Services) By Opendi Geoffrey Ochwo.

NAADS Co-coordinator/agricultural officer

2.2.1 BACKGROUND INTRODUCTION

Under the plan for modernization of Agriculture (PMA) umbrella, the government of Uganda (GOU) has undertaken to reform the Agricultural extension services and develop NAADS. This will eliminate public extension delivery and empower poor farmers to purchase privately delivered publicly funded advisory services.

PMAs main concern is poverty eradication by improving the natural resources based on;

- ✓ Increasing the incomes and improving the quality of life of the poor subsistence farmers
- ✓ Improving household food security.
- ✓ Providing gainful employment
- ✓ Promoting sustainable use of land and management of the natural resources.

Public funding of the agricultural advisory services are guided by a number of principles as follows;

- ✓ Focus on enhancing intensification and productivity of smaller holder agricultural
- ✓ Bring research closer to male and female farmer fields.
- ✓ Make linkages between farmers, extension workers and researchers more demand driven.
- ✓ Decentralize responsibilities to extension at the sub counties.
- ✓ Move from a civil service based extension services, technical back stopping and the training of agricultural advisory supervisors.
- ✓ Allow for a plurality of providers and methodologies at the field level.

- ✓ Learn from successful programs and experiences.
- ✓ Harmonies done supported programs with PMA program.

2.2.2 FORESTRY IN NAADS:

NAADS aims is promoting sustainable use and management of natural resource as one of the guiding principles and whose main objective is to establish effective and sustainable demand driven agricultural advisory services that will enable farmers to identify and pursue opportunities to increase their own productivity and incomes in a sustainable manner. It's over riding mission to increase farmers' access to information knowledge and technology for profitable agricultural production.

2.2.3 NAADS COMPONENTS;

- ✓ Advisory and information services to farmers support initiatives by farmer groups, working with their sub county administration, to contract agricultural advisory services.
- ✓ Technology development and linkages with the markets support the multiplication of new technologies at the sub county and district level, creation of linkages among farmers, extension workers and researchers.
- ✓ Quality assurance; regulation and technical auditing of the service providers.
- ✓ Private sector institutional development, assist private services providers to restrain and upgrade their skills.
- ✓ Program management and monitoring. Support public institutions in both local and national governments to play their statutory roles with respect to Agro forestry in NAADS including monitoring and evaluation of program.

3.2.4 NAADS PRINCIPLES AND AGROFORESTRY

- ✓ Empowerment of farmers and building their capacity to demand for appropriate technologies in the forestry sector.
- ✓ Mainstreaming of gender issues into the policy framework an integration of the gender concern into the implementation plans.

- ✓ Deepening decentralization to allow/enable farmers to own and control agricultural services. The collaborative forestry management addresses this.
- ✓ Increased commercialization by use of participatory processes in planning, contacting, monitoring and evaluation that is community forestry management.
- ✓ Ensure sustainable management of natural resources productivity forestry is a major natural resource.

CONCLUSION:

The integration of agro forestry into NAADS activities is very important in order to practice agriculture in a sustainable manner. It is therefore important that farmers begin promising forestry as one of the enterprises in order to benefit from publicity funded agricultural advisory services.

Among the services farmers can demand are soil and water conservation, nutrient recycling, Biodiversity, cultural and spiritual values of trees, climatic regulations and agricultural productivity.

The presenter gave a case study of opportunities relating to agroforestry as below:

2.2.5 CASE STUDY – OPPORTUNITIES IN FORESTRY

OPIO'S STORY

Opio is 40 years old, married with five children; Opio's family lives on a piece of land that he inherited from his father. The family has been using this land for a longtime. A few years ago Opio and his wife realized that the land could no longer support their family and productivity had gone down. There was no income from the garden and even feeding the family was becoming more and more difficult. Erosion had cut gullies in the land and run off the hill into the village well and made it dirty. Three of their children were not going to school because of lack of school fees it was around this time that an NGO operating in the area started mobilizing farmers to form interest groups to ask for advisory services. Opio and his wife joined a group, which

asked for advice to improve soil productivity. The Extension Officer from the NGO advised them to practice Agroforestry.

Through the NGO, they received the initial tree seedlings like Tamarind (Chwa/ Epeduru) Sesbania and Lusambya. Some of these they planted around the plot of land to mark off their land from others. They set up a piece of land where they planted some trees together with some crops.

At the same time they acquired some knowledge on how to establish a tree nursery. They chose a site near the courtyard and set up a tree nursery of about 20,000 trees. As the tree seedlings grew they prepared a piece of land to establish a wood lot.

By now other farmers were learning about the importance of forestry. When Opio and his wife finished establishing their forest, they discovered that they had more seedlings than they required. They sold some to other farmers. They have discovered that a tree nursery is a source of money and up to now they continue to raise plants in the nursery, use some on their land while they sell the rest to fellow farmers.

Today Opio and his wife feed their family adequately well. To their surprise, the soil has become more productive. They no longer lose soil through erosion and the village well is now clean. All their children are now going to school.

A visit to their home reveals that he even bought some goats and these are seen feasting on leaves of the harvests from the trees around their farm. The woodlot they establish now has mature trees. Recently they constructed a shed for the goats using poles from this forest.

Mrs. Opio is one happy woman. She has cut on the long distances she had to walk to look for firewood. She also has easy access to poles for staking her tomatoes in the garden. Opio promised that when he sells more poles from the woodlot, they would construct a mabati house, this time with a water tank to harvest rainwater.

Q 1. a) what made Opio and his wife adopt agro forestry practices?

b) How did they know about agro forestry?

Q 2. How has their decision to practice Agroforestry helped their family?

Q 3. What services can farmers demand from the NAADS in connection with the forestry sector?

2.2.6 ISSUES and questions arising from the presentations

Qn: One participant wondered whether some agro forestry species e.g. Tephrosia vogellii do not poison the under ground water since they are poisonous when crushed and squeezed and yet they add water to the underground water table.

Ans: The response was that these plants don't release water directly to the water table but rather absorb it from the ground and through transpiration release it to the atmosphere where it falls back as rain. This water is released after the tree has extracted all the nutrients. However, the participants were also advised not to plant such trees close to the water sources.

Qn: We hear of wonder trees that perform certain miracles in farmers lives. What are these trees and what miracles do they perform?

Ans: Neem tree and *Moringa oleifera* are said to be medicinal trees and are believed to relieve or treat a number of ailments but the participants were advised to exercise caution when using these plants as medicines since the researchers have not come up with appropriate doses and the diseases which these trees treat. Research is still going on needs to be documented and made available to the users.

Another participants raised the issue of how to eradicate striga. He was advised to plant Sesbania as it helps to eradicate striga and at the same time improves soil fertility through nitrogen fixation and fast decomposing leaf biomass.

One participant complained of one ficus tree in his garden which is over shadowing his crops lowering yields. He said the crops grow very tall but yield very little. He was advised to manage the tree by pruning some of the branches.

- ✓ One participant wanted clarification about the belief that people die when the roots of umbrella trees go underneath their houses. He was informed that there was no link between umbrella trees and the death of the house occupants since many people have giant mature umbrella trees in their compounds close to their houses and yet those people are alive. Umbrella trees are very good shade trees except that they are usually affected by hairy caterpillars, which feed on leaves, and these only need spraying. The participants were encouraged to plant these trees despite the problem of caterpillar as they are fast growing shade trees.

One participant wondered how he can access Moringa tree seed and said he has heard a lot about Moringa and would like to plant some. The participant was advised to buy seed from the tree seed center in Kampala or from some farmers in Kisoko who are now picking seeds from their trees, which were supplied to them by Africa 2000 Network (A2N).

Another participant said that the agro forestry technologies mentioned in the presentation may actually address the problem of declining agricultural productivity but wondered how people would access planting material (seedlings).

In response Mr. Ogwang said that the FORRI Agro forestry program will train farmers' groups in Tree nursery establishment and management and will support them in provision of tree seed, which is not locally available. Individuals are also encouraged to start private tree nurseries. They will also be trained on seed collection and handling so that they can be able to collect locally available seed. It is also hoped that seed stands will be established at sub counties.

Is it true that Eucalyptus can make land unproductive? Asked one participant.

Response; Characteristically, Eucalyptus is a very fast growing tree species, which means that they need a lot of water and nutrients to support that growth. It is therefore not suitable for integration in crops since it is highly competitive. It also causes shading, which is not good for crops. Its dense shade especially if planted as a wood lot kills off vegetation, which is not shade tolerant, eliminating other sources of organic matter therefore reducing soil fertility. But Eucalyptus can be planted in unproductive pieces of land as wood lots in soils, which can no longer support crop production. Despite its high rate of nutrient absorption Eucalyptus is still a good tree in provision of wood products.

After the presentations the participants raised some issues that were clarified by the FORRI team. The district Environment Officer chaired the session of these discussions.

- One participant asked whether there is provision for funding under the Agro-forestry research program or the program only deals with technology development and dissemination. The FORRI team advised that there were other avenues for accessing funding such as PMA, Micro –Finance institutions, bank and Donor especially NGO e.g. GEF, ECOTRUST, among others.
- The district production coordinator raised the issue of transporting Mango seedling from Kawanda research station to Tororo. The cost effectiveness was questionable.

She suggested that a technology site at farmer level could be developed for grafting & budding of the Mango and other fruits in the district. This would reduce the high cost and enhance learning of grafting by the local farmers. The response was that varieties that FORRI is already in the process of establishing the fruit trial sites to screen the varieties that are adaptable to the Tororo ecological zone. He mentioned that there are already 2 trial sites one in Asinge zone, Kayoro parish, Osukuru sub-county and Olobai zone in Kisoko sub county where a number of varieties of Mangoes, Avocados and citrus have been planted.

Another member appreciated the sensitization and the on set program but expressed fears that the program may end prematurely as many others have always done. He encouraged the FORRI team to continue with follow up programmers to ensure success

The Uganda wild life society representative of Eastern Uganda expressed appreciation of Environmental and forestry programmers in primary schools, he then suggested that the Agro – forestry program should be programmed in schools. This would ensure that the children learn early and internalize the technology for the future of this country. The school program is a good a venue for dissemination of technologies.

After the discussions, the district Environment Officer then called the house to order , and invited the vice chairman LC.V Mr. Okongo Okiror to close the workshop . In his closing remarks he expressed appreciations of the agro-forestry research program entering the District and called upon the honorable councilors to give support to the program. He then declared the workshop closed at 7:30 pm.

CHAPTER THREE:

3. MBALE DISTRICT: AGROFORESTRY SENSITISATION WORKSHOPS

3.1 Sensitization seminar for the district council departmental heads on agroforestry for development held at mbale local administration hall (lukhobo) 0n 22nd october 2002.

3.1.1 Introduction

District council members and departmental heads including extension workers attended a one-day sensitization workshop on Agro forestry at the venue and date stated above. This followed what was agreed during the August 2002 training of trainers (T.O.T) workshop on Agro forestry for the Eastern Highlands and lowlands whose participants were extension workers from Districts of Iganga, Tororo, Mbale and Kumi. The TOT workshop that was held at Kolonyi Salem Brotherhood center, Mbale was organized/funded by FORRI (Forestry Resources Research Institute of NARO (National Agricultural Research Organization).

3.1.2 Seminar structure

The one-day seminar took the following format:-

- Welcome by co-coordinator FORRI and Agro forestry partners in development in Eastern highlands and lowlands who also chaired the session.
- Silent prayer
- Self-introduction by participants and followed by introduction of Guest of honor at opening ceremony to the audience by the secretary for production Mbale.
- Opening speech by Chief Administrative Officer (CAO), Mbale who was represented by his Deputy.
- Presentations by FORRI team from Kampala, comprising
    - Director FORRI
    - ICRAF scientist
    - Program Leader/ Agro forestry

- FORRI Dissemination specialist
- UGADEN Development Facilitator

❖ General discussion of topics presented

❖ Discussion on the way forward

❖ Closing speech by the Chairperson LC5, Mbale who was also represented by his deputy.

3.1.3 Workshop participant composition

❖ The Chairman LC5 , Mbale and executive Committee Members

❖ Various cadres of District Council members

❖ The chief Administrative Officer(CAO) Mbale

❖ Agro forestry team from FORRI, Kampala(the team of Facilitators stated in 1.2 above).

❖ The chief Production Officer, Mbale.

❖ Sector heads in production Department

- District Veterinary Officer, Mbale
- District Agriculture Officer, Mbale
- District Forest Officer, Mbale
- District Environment Officer, Mbale
- District Fisheries Officer, Mbale
- Heifer Project International Co-coordinator,

❖ Sustainable Development Co-coordinator, IUCN/MECDP and co-coordinator, FORRI and partners in Agro forestry for Development in Eastern Highlands and lowlands.

❖ Supervisor Agro forestry Program, FORRI , Mbale and neighboring districts.

❖ Various categories of extension workers in Agro forestry partnership.

❖ Integrated Rural Development Initiative (IRDI) Co-coordinator, Mbale.

3.2 Presentation

Facilitators' representation of topics proceeded as follows

3.2.1 Role of Research in Development

This was a topic by Mr. Esegu JFO, Director FORRI in which the following sub headings were covered:-

❖ **What is Research?**

Research was defined in simple terms as a careful study or investigation in order to discover new facts and information with the aims of developing new and improved products and the improvement of manufacturing process.

❖ **Types of Research**

These were given under these outlines:-

- Pure/Basic Research
- Strategic /Applied Research
- Action Research
- Survey Research
- Ex-post Facto Research
- Experimental Research
- Anthropological Research
- Historical Research

❖ **Instruments used in Research**

- Interview schedule
- Questionnaire
- Observation schedule
- Checklist
- Library search
- Tests/ Experimentation

❖ **What is Development?**

This came to be understood as to grow or cause something to grow gradually to make it larger, more advanced or more organized.

❖ **The Role of Research in Development**

Participants as to undertake research in all aspects of Forestry. This is research and technology transfer in the Forestry sector aimed at contributing to sustainable forestry management and increasing benefits derived from Forestry resources.

❖ **National Developments**

Key aspects of National developments were clarified here.

❖ **Importance of Forestry**

This was well amplified to participants.

❖ **The Diversity of Stakeholders in Forestry**

This comprises:-

- Forest resources produces(Farmers, commercial tree growers and Forest owners).
- Forest resource uses
- Forest resource processors
- The concerned general public.
- Government , non- government organization and individuals

❖ Research in consideration of the concerns and wide changes and given the importance of Forestry to the country and her people.

❖ What is sustainable Forestry Management?

❖ Forestry concerns: (Deteriorating state of Forestry in the Country)

❖ FORRI Research Programmers

These are:-

- Forest Management (Natural and plantation Forests)
- Forest Products
- Plant Genetic Resources
- Agro forestry

❖ Research in consideration of the concerns and wide changes and given the importance of Forestry to the county and her people.

❖ What is sustainable Forestry Management?

❖ Forestry concerns: (deteriorating state of Forestry in country)

❖ FORRI research programs

These are :-

- Forest Management (Natural and plantation Forest
- Agro forestry
- Forest products
- Plant genetic resources

❖ FORRI projects in the NARO MTP 2001-2005

❖ Future directions

❖ Conclusions

The presenter emphasized the need to maintain /strengthen the partnership in Agro forestry for development in place so the needs of the future operation cannot be compromised .

3.2.2 Role of Agro forestry in Development

A topic presented by Dr. Jean Mark Boffa a scientist in (ICRAF) he proceeded under the following sub headings.

Introduction

The international center for research in Agro forestry. World agro forestry research center (ICRAF) works in collaboration with FORRI.

Consultative group of international Agricultural research center (CGIAR)

Participants learnt that many international organizations jointly work under CGIAR as their big umbrella organization. ICRAF is the key organization with six(6) centers in Uganda, five of which have collaborative activities.

ICRAF as a CGIAR Center

ICRAF's mission

Challenges that we face in the region given as poverty, food insecurity, environmental, Degradation and poor health.

Agro forestry as a provider of solutions to the challenges.

Benefits of Agro forestry – were well outlined

- Increasing incomes through diversification and commercialization
- Marketing and enterprise development

Market driven agro forestry was emphasized here

- Improving land management is the foundation to food security- improved fallow is key to this.
- Capturing environmental benefits through integrated water shed management
- Confronting the challenge of climate change.
- IFCC report (May 2000) carbon sequestration potential .
- Conserving biodiversity while benefiting the local communities
- Farmers contribution to conservation
- HIV/AIDS impact on rural poor
- HIV/AIDS : implication for Agro forestry.
- The concept of a Research – Development continue

- ❖ How do we raise the uptake levels ? The ten fundamental for scaling up.
- ❖ **Who does what?**

A look at role played by farmers, local communities and research Institutions in Agro forestry technology dissemination/ implementation. This was summarized in a tabular form .

3.2.3 Agroforestry research and development in Uganda

Paper presented by Dr. Okorio John, The program leader agroforestry

What is agroforestry? Simply put is growing trees on farm

The following were highlighted in detail during the presentation:

- ❖ Agro forestry program objectives
- ❖ History of Agro forestry Research and Development in Uganda
- ❖ Key stakeholders in Agro forestry
- ❖ Main Development partners in Agro forestry research and Developments
- ❖ Agro forestry Research and development activities in Uganda
    - Coverage of Agro forestry research and Development in Uganda
    - Research in three major areas – Wood production, Soil management and trees with high value products
    - Development: Facilitate dissemination.

Capacity building

Achievements

Future directions in Agro forestry Research and Development in Uganda

Conclusion

Summary at conclusion was that agroforestry can help farmers simultaneously

- Achieve food security
- Take the first steps out of poverty
- Protect and enhance the environment

2.2.4. Fruits production in agroforestry

A proper/ Topic presented by Dr Kagorora Kanahe P : dissemination specialist, Agro forestry program- FORRI. The presenter proceeded as follows:

Justification

- To avoid over dependency on cotton and other annual crops- Diversify i ncome sources-
- Mango, Avocado and citrus already grow well in Eastern Uganda-climate suitable.
- Use small pieces of land through Agro forestry.

Why do we meet expectations?

Uganda Fresh Produce Export (kgs) via Entebbe Airport.

- This was tabulated as an example of fresh fruit exports between 1997 and 2001.

Objectives of the program work in Eastern Uganda

Mango, Avocado and Orange types and their uses.

To get quick results.

Advantages of vegetative propagation

As the advantages were given to participants in conclusion they were cautioned against obtaining sub standard (poor quality) plantlets from non-technically guided sources. This will affect production. Reliable source for planting/ propagation material should be contacted at all times.

2.2.5 Role of UGADEN in Agro forestry Research and development in Uganda

Mr. Okia clement, development facilitator UGADEN, presented the Topics as follows:

What is UGADEN?

UGADEN stands for Uganda agroforestry Development Network.

It was found to provide a national wide mechanism for collaboration between the various stakeholders for effective agroforestry Technology Development and dissemination in Uganda with a focus to scale – up the benefits of agroforestry in Uganda.

Background to UGADEN formation

A mention of the first and second UGADEN workshops including one symposium was made to participants. Many multidisplinary professionals attended this fora where they shared their vast experiences in various field related to agroforestry vis a vis planning for expanding the expanding of agroforestry.

- ❖ Specific objectives of the workshop
- ❖ Key findings from the workshop
- ❖ Constraints to scaling – up agroforestry in Uganda
- ❖ Workshop out come.

UGADEN mission was derived as to enhance the generation of appropriate, profitable and environmentally sound Agro forestry innovations in all Agro ecological zones of Uganda for improvement of lively hoods.

Organizational structure

Uganda Agro ecological zones and UGADEN coordinating institutions (centers)

Role of UGADEN

Expected outputs of UGADEN

- Networking among stakeholders in Agro forestry enhanced.
- Sustainable network coordination secretariat established
- Capacity of Development workers ,local leaders and Farmers in Agro forestry greatly enhanced
- Agro forestry institutionalized at local levels at a key component of local government efforts to modernized Agriculture.

UGADEN vision

Making Agro forestry innovations available to at least a quarter of Uganda's rural house holes over the next decade thus improving livelihoods.

3.2 AGRO FORESTRY SENSITIZATION SEMINAR FOR BUSANO AND BUNGOKHO –MUTOTO COUNCILLORS CIVIL LEADERS AND EXTENSION WORKERS ON AGRO FORESTRY HELD AT BUNGOKHO SUB-COUNTY HALL, MBALE ON 21/11/2002.

1. Introduction

The above stated seminar followed the Eastern Highlands Agro forestry Training of Trainers (TOT) workshop for Iganga, Tororo, Mbale and Kumi districts extension workers at Salem Brotherhood in Mbale held between 20th and 23rd August, 2002 and the sensitization seminar for Mbale District councilors, civil leaders held in Lukhobo (District Administration Hall) on 21st Nov 2002.

Welcome and opening of seminar.

The sub-county chief Bungokho, Mbale who was out on other duty commitments on the seminar day was represented by his Deputy who officiated at seminar opening ceremony. Self introduction by guests, participants and facilitators was done for purpose of knowing each other. The guest of honor welcomed the participants and facilitators as well as expressing great thanks to forestry resources research institute (FORRI) of the National Agriculture Research Organization (NARO) for having directed Agro forestry program to Mbale District through the fine partnership arrangement with various stakeholders. He cautioned participants against receiving the good scientific information on Agro forestry and shelving it other than practically using it to support the technocrats in mobilizing the rural communities towards the noble cause of improving household incomes through implementing Agro forestry modern technologies.
In conclusion the guest of honor promised to collaborate with the sub-county chiefs of Busano ,Bungokho–Mutoto, their extension staff and the District at large in strong support of Agro forestry Program of FORRI and partners in Eastern Uganda.

Topics presented in the seminar.

It was deemed necessary that the background information to the FORRI-partnership plan on Agro-forestry research technology dissemination in Eastern Highlands and Lowlands be made a topic for the purpose of enlightening participants on the importance of the approach. Therefore the topics presented are as follows:-

3.1. Background on FORRI and partners Agro forestry Development plan for Eastern Highlands and Lowlands.

In this background information the presenter Mr. Ayo Julius Peter (the co-coordinator FORRI-partners in Agro forestry for Development in Eastern Highlands and Lowlands) highlighted how far the FORRI partnership Agro forestry for Development in Eastern highlands and lowlands has moved down to the road to date. The Districts covered in the first phase byway of training of trainers (TOT) and sensitization of political leaders , civic leaders and extension workers at District level and now being extended to grassroots are Iganga, Tororo ,Mbale and Kumi. Intensive training of the communities (beneficiaries) at all levels will follow the sensitization seminars.

FORRI partnership in Mbale features the following:-

- Goal; stated precisely as to improve household food security, incomes and livelihoods in Mbale.
- Criteria used in selecting the first 8 sub- counties to be sensitized were;-
  - The sub-counties where the august 2002 workshop participants were deployed in their routine work.
  - Sub-counties being targeted by the NGO collaboration with FORRI in Agro forestry.

The 8 pilot target sub-counties include;-

-Bugobero sub-county
-Bumbo subcounty
-Bumayola sub county
-Busano sub county
Bungokho-Mutoto sub –county
- Nakaloke sub-county
- Bufumbo subcounty
- Busoba sub-county.

- Objectives

Summarized as

i. Awareness raising amongst target groups /communities.

ii. Participatory planning with target communities /key farmers

iii. Mobilization of beneficiary contact farmers / households or communities

iv. Monitoring and evaluation to involve all categories of beneficiaries at the end of the period.

3.2 The role of Research in Development

Mr. Mabuya George, the District Forest Officer Mbale, presented this topic.

Definition of Research.

A scientific investigation into given phenomena that seeks to discover, confirm , reject or challenge existing knowledge by a systematic collection ,analysis and presentation of findings as a basis on which recommendations are proposed.

Types of Research.

These are:

- Pure /basic Research
- Strategic /Applied Research
- Action Research
- Survey Research
- Ex Post Facto Research
- Experimental Research
- Anthropological Research
- Phenomenological Research
- Historical Research

Instruments used in research.

These include:

- Interview schedule
- Questionnaire schedule
- Observation schedule
- Checklist
- Library search
- Tests/ experimentation.

What is Development?

From the word develop it is understood as to grow gradually to make something larger, more advanced or more organized.

Participants were furnished with the roles of development and diverse aspect of Research in Development including all categories of stakeholder in Forestry.

FORRI Research Program

These entail:

Forestry management (Natural and plantation Forests)

Forest Products

Agro forestry

Plant Genetic Resource

Future Direction

Institutional strengthening and information and enhanced

Demonstrating Linkages Regional networking

rural income

Conservation and sustainable

Management of priority species

- Social issues and impact of Sustainable forestry Management

3.3 Role of agro forestry in Development and fruit production in Agro forestry.

3.3.1 Role of Agro forestry in Development

Introduction.

Agro forestry was defined and participants learnt that Agro forestry was very old in the society of mankind. Therefore there is need today to modernize /systematize Agro forestry with great commitments to improve household livelihoods.

- Challenges that we face in the Region

These were stated as: -

- Low income
- Food insecurity
- Environmental degradation

- Poor health

To meet the challenges some International Organizations are committed to developing useful solutions to them under one big umbrella of Consultative group of international Agricultural Research Center (CGIAR).

ICRAF (World Agro forestry Center) was cited as one of such organization spelt in the presentation as key to partnership Agro forestry Research work with FORRI –NARO in Uganda . The mission of ICRAF, FORRI and NARO were clearly spelt to the participants.

- Benefits of Agroforestry

Participants were made to know the benefits as ability to increase incomes through diversification and commercialization with cited data from Srilanka, China, Thailand and Vietnam

Market –driven agroforestry was emphasized here alongside, improved fallows (IF) and Minjingu rock phosphates (RP) which have ever increased maize yield under farmers management in Western Kenya.

Roles played by Farmers, Local Councils NGO and Research Institutions/ Project were categorically tabulated to inform participants.

3.3.2 Fruit production in Agro forestry.

This part of the topic caused a lot of excitement amongst participants who became anxious to have the fruit growing training and other related services directed soon to their localities. Questions asked are in the discussions at the end of the report.

a) Justification
b) Why don't we meet the expectations?
c) Uganda Export. Here Mango, Avocado and Apple banana fruit exports were tabulated ranging from the year 1997-2001
d) Objectives of our work in eastern Uganda
    - Overall objectives

- Specific objectives were spelt

e) Mango types and uses

f) Avocado type and uses

g) Orange types and uses

h) To get better results continue: Here training of Extensionists and farmers was emphasized vis- a vis collaboration efforts at all levels with good focus on fine management and marketing.

3.4 Agroforestry Research and development

This was a topic presented by Dr. Chepkwurui Moses in which he related Agroforestry Research and Development under the following Sub-headings.

a) definition of the Key words - Agroforestry, Research and development

b) Why practice Agroforestry - Various Agroforestry benefits were punctuated here

c) Who are our partners in Research?

Here the participants learnt that all of us (Institutional Researcher's Extensionists, Councilors civic leaders and farmers) are stakeholders in Research.

d) History of Agroforestry.

e) Agroforestry and Development. Here a causal diagram was used to summarize the topic

3.5 Role of UGADEN in Agroforestry Research

Mr. Mwalye James, a Forestry staff attached to Mt. Elgon Conservation and development Project – MECD/IUCN, Mbale presented this topic under the following Sub-headings.

a. Definition of UGADEN- Uganda agroforestry Development Network.

Formed to provide a nation wide mechanism for collaboration between the various stakeholders for effective agroforestry technology development and dissemination in Uganda.

b. Roles of UGADEN

c. Background to UGADEN Formation

d. Expected out puts of UGADEN.

e. Vision

f. Mission

g. Uganda Agro ecological zones and UGADEN coordinating Institutions.

3.6 Discussions and way Forward.

(Q = question and A = Answers).

a) Q = Will there be any training on various agroforestry skills organized for farmers in future by FORRI –NARO?

A = yes. The training will start with pilot groups of farmers in the Sub-Counties of Bungokho – Mutoto (Bumboyi Parish) and Bumbo development will identify other sources of funding including local government to enhance FORRI efforts so to let more Sub-counties and parishes get training opportunities. Advice also was given to assist in identifying organized groups of farmers who have some

funding sources to be informed that FORRI- partners in Agroforestry for development are ready with personnel to respond to their call for training .

They will be trained in tree nursery management, getting / budding skills, fodder management, growing trees , fertility management among many.

All these have been included in the District , work plan for one year (Sept.2002-Aug.2003.

b) Q How will farmers receive scion for grafted / budding in future after training?

A. Since there are now many farmers who have grafted budded fruit trees on farm in place like Soroti and Kumi District, there will be need to make technically guided moves with funds secured from some funding bodies including individual funds secured from funding bodies including individual fund to go and collect scions (healthy/ braches) from well identified high value mother trees for propagation. Caution was given to participants against buying any grafted /budded plantlets from any source which is not keen on promoting good quality products.

c) Need to plan early for workshop/seminars: participants pleaded for the need to have them informed a week or so in advance for either sensitization or training program. This they said gives them ample time to prepare for the calls as they also have their work schedules.

In response the facilitators explained that since the money to run the seminars/workshops is always released according to the quick place at which the funding source direct to meet their objectives, little can be done to adjust that. They were informed on the need to be ready to move/respond faster to calls for training since the trends of challenges are so today.

Closing ceremony

His deputy at the close of the seminar represented the chairman LCIII B ungokho sub-county. Emphasis was on the need for the participant to cooperate with FORRI –partners in Agroforestry for development so to enhance implementation of the program objectives. The program was assured moral and material support (especially local funds where possible) to run agroforestry related activities in sub-counties. In conclusion the guest of honor expressed to FORRI – NARO and partners in their efforts to direct agroforestry program at the right time when the plan for modernization of agriculture is on now.

CHAPTER FOUR

4. KUMI DISTRICT

4.1 AGROFORESTRY SENSITISATION WORKSHOPS IN KUMI DISTRICT

Having received funds from FORRI, the Kumi district trainers of Trainees (TOTs) guided by FORRI Mbale staff organized agroforestry sensitization workshops for sub county leadership throughout the district. The purpose was to create awareness on the potential of agroforestry as well as to solicit the councilors support for agroforestry development in the district. Overall, 12 out of the 15 targeted sub counties have been covered so far. Those covered so far are listed below:

Sub county	**Date sensitized**
1. Mukongolo	2nd May 2003
2. Mukura	3rd May 2003
3. Kobui	14th April 2003
4. Kachumbala	15th April 2003
5. Ngora	17th April 2003
6. Bukedea	23rd April 2003
7. Atutur	24th April 2003
8. Kidongole	25th April 2003
9. Kumi	26th April 2003
10. Kanyum	30th April 2003
11. Ongino	28th April 2003
12. Nyero	19th April 2003

The following papers/topics were presented during the sensitization workshops.

1. Introduction to agroforestry by Mr. Odeke C.P.
2. Agroforestry in environment management and land use practices by Mr. Okiria Ateker.

3. The role of Extensionists, farmers and councilors in agro forestry development and adoption by Mr. Okutui James.
4. Trees and shrubs for soil fertility enhancement by Mr. Ikilai I. P.
5. Fruit production on small scale farms by Mr. Oboi Andrew.
6. Agroforestry and poverty eradication by Mr. Ikanut Michael Bernard.

4.2 INTRODUCTION TO AGROFORESTRY *(By Odeke Peter Charles)*

Definition of Agroforestry – Agroforestry means growing and managing of trees on farms/plots

- Trees on farms:
  - Provide wood products (timber, poles, fuelwood) and non-wood products (nuts, fruits, gums and resins, fodder).
  - Support crop and livestock production
  - Source of income for farmers from the sale of tree products
  - Improve the environment e.g. microclimate

4.2.1 WHY PRACTICE AGROFORESTRY

It is practiced for a number of reasons:

- Increasing land degradation due to high population
- Lack of wood products (firewood, poles, timber, stakes)
- Low incomes
- Food and nutritional deficits
- Loss of biodiversity

4.2.2 AGROFORESTRY SYSTEMS

- Trees and crops (Agrisilviculture)
- Trees/ animals/ pasture (Silvipastoral)
- Trees/ crops/ animals (Agrisilvipastoral)

4.2.3 AGROFORESTRY PRACTICES

- **COMMON PRACTICES**
  - Planting trees on farm/plot boundaries
  - Mixing trees with crops
  - Planting trees along contours
  - Plant trees in rotation with crops e.g. improved fallows

- **AGROFORESTRY PRACTICES FOR SOIL CONSERVATION AND FERTILITY ENHANCEMENT**
  - Contour hedges
  - Improved fallows
  - Rotational woodlots

- **AGROFORESTRY PRACTICES FOR WOOD AND ENERGY PRODUCTION**
  - Boundary planting
  - Trees scattered in crop land
  - Woodlots
  - Rotational woodlots

- **AGROFORESTRY PRACTICES FOR LIVESTOCK PRODUCTION**
  - Fodder banks
  - Contour hedges
  - Trees in rangelands and pastures

- **OTHER AGROFORESTRY PRACTICES**
  - Home gardens
  - Buffer zone

- Agroforestry for fruit production
- Apiculture (trees in honey production)
- Aquaculture (trees in fish production)

4.2.4 METHOD OF PLANTING TREES

- Wildlings e.g. leave seedlings when cultivating land
- Seedlings grown in nurseries
- Cuttings from already grown trees

4.2.5 WAY FORWARD FOR THE FUTURE OF AGROFORESTRY IN SUBCOUNTIES:

- To develop a sub-county wide agroforestry program for promotion of the impact of agroforestry in the sub-counties/nation
- Promote the establishment of "Uganda Agroforestry Development Network (UGADEN) and all its activities
- Form groups in all parishes for agroforestry activities
- Develop by-laws that are geared to promotion of agroforestry

4.3 AGROFORESTRY IN ENVIRONMENT MANAGEMENT – KUMI CASE

(By Okiria Ateker)

4.3.1 DEFINITION OF ENVIRONMENT:

Is all that is around us. It comprises of living i.e. animals, plants and non-living i.e. water, air and soil.

4.3.2 STATE OF ENVIRONMENT IN KUMI

- Very low biomass cover – the lowest in all the district in Uganda
  (National Biomass report 1992)

- Wet land degradation – 61% of wetlands have been modified (National Environment report 1999)
- Declining soil fertility and productivity
- Unpredictable and unreliable weather conditions
- Poor waste management

CAUSES:

- Little/lack of awareness
- Poverty
- Population pressure
- Negligence
- Tradition

CONSEQUENCES

- Increasing scarcity of wood fuel leading to increased distance and time spent on collecting firewood
- Drying water sources during the dry spells. Quantity and quality of water has kept on deteriorating
- Increasing cost of living
- Increasing prevalence of crop and animal pests and diseases
- Increasing conflict among the rural folk
- Malnutrition

4.3.4 ROLE OF TREES /SHRUBS IN CHECKING ENVIRONMENT DEGRADATION

- Trees/ forests influence weather patterns
- Trees check soil erosion and siltation of wetlands
- Trees reduce the rate of evapo-transpiration
- Tree perform the function of air exchange
- Trees increase the amount of water that seeps into the soil
- Trees recycle nutrients

- Trees provide habitat for wild life
- Trees provide natural regeneration through nursing of other trees

4.4 THE ROLE OF EXTENSION WORKERS, COUNCILORS AND FARMERS IN AGROFORESTRY DEVELOPMENT AND ADOPTION by Okutui James

Before we begin talking of the roles of the extension workers, councilors and farmers, the following terms must be defined:

1. Extension – It is the process by which new knowledge, ideas and skills are introduced in order to improve on the lives of the rural folk. This implies the transfer of ideas and knowledge from wherever they are generated to wherever they are needed.

2. Extension worker – This is the person who brings new ideas and knowledge from wherever they are generated to wherever they are needed.

3. Farmer – This is the person who participates actively in any farming system in his or her own farm/plot.

4.4.1 THE ROLE OF EXTENSION WORKERS AND COUNCILORS

- The extension worker together with the councilor are the people who try to arouse people to recognize and take interest in their problems, to persuade them to act on their teachings so that they achieve a sense of satisfaction and happy with their achievements.
- The extension workers and councilors are professionals who influence the innovation of new technologies to their people and make decisions geared towards their needs.
- The extension workers and councilors are people who set in action a process of change after realizing that certain changes are necessary for the rural society.
- The extension workers and councilors are the people whose primary role is to achieve a transformation of attitudes, behavior and social setting of the organization.

However the above statements capture the flavor of the wide range of views on the role of the extension workers and councilors.

4.4.2 THE ROLE OF FARMERS IN AGROFORESTRY DEVELOPMENT AND ADOPTION

- The farmers need to secure land for continuity of their farming systems and to fulfill their immediate felt needs such as food production such that there is continuous production of food to sustain their families.
- Farmers also need to know that they are specialists in certain farming techniques so that researchers and extension workers for planning purposes can use it.
- Farmers also need to learn, choose and adopt the agroforestry practices which will suit his/her farming systems so that it will fulfill the long term and short term objectives while not exceeding the carrying capacity of the farm/plot.
- The farmers also need to give the knowledge and needs they have to scientists so that they can be used to initiate agroforestry systems, which will address their needs, so that they with time will achieve its objectives and all the needs and wishes of farmers are taken into account.
- Farmers also need to know that whatever knowledge and ideas their leaders are telling them is for their own benefit but not for leaders and they should do what they are told but not what the leaders are doing.

  N.B. However for the above program to succeed, all the extension workers, councilors and farmers must work actively together as a team for its implementation and adoption.

4.5 FRUIT PRODUCTION AND PROPAGATION OF IMROVED FRUIT TREES BY SMALL SCALE FARMERS *(By Oboi Andrew)*

4.5.1 Principles of grafting

Definitions

The following broad definitions are needed in order to understand grafting and budding techniques and their underlying principles.

- Grafting – It is a technique of connecting two pieces of living plant tissue together so that they unite and form a functional plant.
- Budding – Is a special form of grafting in which we use a bud as a scion. It is more economical as more scions can be produced from a single tree.
- Scions – The aerial part of a tree that will form the crown of the new plant. This part contains the dormant buds of a tree with desired characteristics which need to be multiplied
- Root stock – The below ground or lower part of a tree that will form the root system of the new plant.
- Vascular cambium – A thin layer of meristematic cells between the bark of a tree (phloem) and wood (xylem).
- Callus tissue – A mass of undifferentiated cells formed around a plant wound during grafting or budding

4.5.2 REASONS FOR GRAFTING AND BUDDING

The main reasons why you may consider grafting or budding of trees are as follows:

- To multiply a tree that c an not be multiplied through sexual or other asexual propagation methods
- To obtain a tree that combines both good characteristics of one tree and the rootstock of another tree.
- To decrease the amount of time that a tree needs to attain maturity.
- To rejuvenate older trees through the use of young improved material from another tree.
- To repair damage caused to certain parts of a tree.

- To detect viral diseases

4.5.3 HEALING CONDITIONS

For a successful graft union to be established several factors are important and the following should be observed:

- The cambial layers of both scion and rootstock must be in proper contact to allow the newly formed cells to grow into a joint or graft union.
- The graft union needs to be protected from desiccation by wrapping and/ or waxing the graft union.
- Time of grafting – the best time for grafting dormant scions should be just before the onset of the rains

4.5.4 INCOMPATIBILITY

Problems of graft incompatibility are often cited as the most severe hindrance to full acceptance of grafting and budding. Indeed they occur and caution should be taken. However (Fencht 1987) in his general rule states that graft unions are more successful the more botanically closely related the partners are. This should be a guiding principle when carrying out grafting and budding.

The most common incompatibility symptoms that may appear late after the graft union has formed are the following:

- Failure to form a graft union in a high percentage of cases
- Early defoliation of deciduous plants, decline in vegetative growth due to shoot die back.
- Premature death of trees after a few years.
- Marked differences in growth rate between the scion and the rootstock. Over growth that above or below the graft union.
- Graft components break apart clearly at the graft union.

4.6 AGROFORESTRY AND POVERTY ERADICATION

By Ikanut Bernard

OBJECTIVE: To raise an appreciation and understanding about importance of agroforestry in relation to sustainable poverty eradication to the rural population.

AGROFORESTRY: Is the deliberate integration of woody perennials (trees and shrubs) into the existing farming system for ecological and economic benefits

POVERTY: Is the inability to meet the basic physiological needs i.e. food, shelter, clothing, medical care and education.

STIGMA OF POVERTY:

Poverty comes along with stigmatization that makes one:

- Fear to associate with others
- Fear to expose and express his/her views
- Have inferiority complex

N.B. A well off person does not have the stigma associated to poverty.

Most of the population of Kumi cannot meet basic needs and earns and spends less than one dollar in a day.

4.6.1 HOW CAN AGROFORESTRY ERADICATE POVERTY IN KUMI?

- Building poles are highly on demand; each pole on average depending on the species and size is not less than Shs. 2000
- Improved fruits fetch a lot of income; mangoes and oranges can go for more than shs 200 per fruit. In severe Opio sells a mango fruit for shs 500.
- Beekeepers can earn a lot of money from honey and other products like bee wax.
- Tree seedlings on high demand e.g. Orange budding sells for not less than shs 2000 each Moringa seedling at shs 1000 each etc.

- Calliandra, Leucaena etc. increase milk production which also generates a lot of income to the farmers

4.6.2 DISADVANTAGES OF TREES (Perceived or actual)

- Trees occupy a lot of land
- Trees planted in the compound destroy houses
- Tree roots when they enter the house the head of the family dies e.g. Umbrella tree
- Trees spoil the soil
- Crops grown with trees never yield well

4.6.3 WHAT SHOULD BE DONE:

- Deliberate growing/integration of trees in our farming systems (Agroforestry)
- Do selective cutting of trees; cut:
  - ✓ A dry one
  - ✓ A mature one
  - ✓ The abundant one
  - ✓ The one with less variety of benefits
  - ✓ The one, which is easy to propagate or easily regenerates naturally and grows and matures faster.

- Introduce/ use energy saving techniques
  - ✓ Cook in an enclosed place preferably a house
  - ✓ Light fire when there is ready food to cook
  - ✓ Put adequate water
  - ✓ Cut food into small pieces
  - ✓ Cover the source pan while cooking
  - ✓ Soak food first before cooking
  - ✓ Use modern appropriate cooking stoves e.g. LORENA – two source pans can be cooked at the same time.

- By-laws e.g. whoever cuts a tree for charcoal, brick baking etc. must have planted at least 10 trees on his farm.

The councilors participation and contributions during the sensitization workshops were encouraging. The following are some of what they expected:

- Free seed and seedlings from FORRI.
- Establishment of a tree nursery in the sub counties so that it can be used as a demonstration for farmers
- Awareness on agroforestry to be extended down to the village level so that the community takes it serious because they have had from FORRI TOTs other than them
- They also expected free nursery material from FORRI since their farmers are poor.

From the above views the councilors resolved and drew a way forward from both councilors and farmers as far as agroforestry development and adoption is concerned in their sub counties:

4.6.4 COUNCILOR'S TASK

- ✓ Sensitize the community together with sub county technical staff on agro forestry.
- ✓ Integrating agro forestry in their farms/plots (lead by example).
- ✓ Enforce byelaws to the community as regards to tree planting and destruction is concerned.
- ✓ Include agro forestry in their sub county action plan.
- ✓ Lobbing for support from other NGOs and government.
- ✓ Organize exchange visits
- ✓ Form linkages with several Institutes (FORRI inclusive) for purposes of accessing inputs like chemicals and seed.

4.6.5 FARMERS TASK

- ✓ To practice agro forestry as a solution to poverty
- ✓ To allow their women to attend agro forestry meetings.

- ✓ To abide by the community rules and laws protecting their trees planted.
- ✓ To shift from subsistence to commercial oriented agriculture (P.M.A).
- ✓ Ensure timely planting.
- ✓ Farmers should form groups and emphasize on group dynamics.

5. APPENDICES: LIST OF PARTICIPANTS

5.1 IGANGA DISTRICT SENSITISATION WORKSHOPS - ATTENDANCE

5.1.1 Buyanga subcounty

Name	Designation
1. Kibedi Paul	Wowoya NGO, Idudi
2. Kibwidha Anna	Councilor Idudi
3. Mukama Bruno	Councilor Buyanga
4. Tigabugwa S.M.	Abagweri RFA, Idudi
5. Kibedi Patrick	Farmers Forum
6. Kakaire Dave	Abali Aghalala farmers
7. Kasadha Peter	Sub-county NAADS Coordinator
8. Dhabalamu Nathan	Chairperson L.C III
9. Balaba Lowranti	O/C sub-county, Buyanga
10. Kasango Edirisa	Youth, NAADS
11. Isanga Daniel	Vice chairman NAADS
12. Nabosa Sofia	
13. Kasura Alex	SFG, Bugweri
14. Namaganda Sarah	
15. Waiswa Aidah	W/C Buyanga sub-county
16. Mukama Adolf	Buyanga
17. Kininungi David	Production
18. Kitanda Abdul	Buyanga
19. Kakaire Aminsi	Councilor
20. Mukwaya Muhamad	Chairman NAADS Buyanga sub-county
21. Kakaire Nuulu	NAADS Idudi
22. Tenywa Hussein	NAADS, Buwoya
23. Bandha Sulaiman	Farmer Bulunguli
24. Namudiba Faridah	Farmer Buwoya
25. Tibasobore John	Member, farmer forum
26. Maganda Amiri	Farmer
27. Nkuutu Edward	Farmer
28. Kaziba Samuel	Farmer
29. Kagoya Emilly	Farmer
30. Kakaire Baker	Farmer
31. Muwabe Z.	Farmer
32. Nyangweso James	Farmer
33. Sekandi Juma	Farmer
34. Mumbya A	
35. Mulinda Zubairi	
36. Kakaire I.	Farmer
37. Bumaali Ben	Farmer

38. Isabirye Robert	Farmer
39. Ivulabe Zakay	Farmer
40. Wambuzi John	Farmer
41. Bukyabubi Alex	Farmer
42. Muyinda Godfrey	Farmer

5.1.2 Nawandala subcounty

Name	Designation
1. Muwumba	Farmer Namusisi
2. Rev. Baligeya Moses	Religious leader
3. Kisige Herbert	NGO secretary
4. Bazigu Fred	LC III Secretary for defense
5. Bagaya Ezra	Youth councilor
6. Mukasa George	LCIII secretary for education
7. Kitosi Lubaale	Speaker/act chairperson LCIII
8. Namugere Ruth	Councilor
9. Bakyekose Robinah	Councilor
10. Namukasa Edith	Councilor
11. Mukooza James	C/P
12. Kayindi Chris	Farmer, Kyadabawala
13. Buwedewo Adnan	PDC sub-county chairman
14. Habajja Samuel	NAADS sub-county coordinator
15. Dhikusooka Charles	Chairperson farmer forum
16. Tenywa Annet	Vice chairperson LC III
17. Mutesi Florence	Councilor
18. Natooli Nuubu	Councilor
19. Ngobi Robert	Local defense Nawandala
20. Kyera David	Farmer
21. Rev. Kasawuzi	Religious leader
22. Magumba Eria	Sub-county chief
23. Batambuze H	Veterinary
24. Balikowa Musayi	Farmer
25. Bagaaga	Farmer
26. Mwenwkira Fred	Farmer
27. Dhafa Yafasi	Farmer
28. Zimba Margaret	Farmer forum
29. Isabirye David	Councilor
30. Katwalo James	LC I chairman, Namabwore II
31. Kyeera David	Farmer
32. Kange Samuel	LC I chairman, Namabwore I
33. Wavamuno Chris	Farmer
34. Isanga Gonza	Farmer
35. Kiwumo Grace	Lay leader

36. Namugere Rebecca	Farmer
37. Kakayi	Farmer
38. Nsako John	Farmer
39. Nabikamba John	Farmer
40. Nawandyo Fred	Farmer
41. Batambula Peter	Farmer

5.1.3 Ivukula subcounty

Name	Designation
1. Baisemwine N	
2. Kaleka Kamuyati	
3. Namulondo Mary	
4. Gejje D	
5. Walugambire A	
6. Balirane D.	
7. Kamiza R T.	
8. Namoli W.	
9. Nabirye E.	
10. Baliraine P.	
11. Bageya P.	
12. Mubinga S.	
13. Waiswa S.	
14. Kitakule U.	
15. Namugosa Miria	
16. Luvunia E.	
17. Kabaala F.	
18. Njal Nuuliat	
19. Mirembe Hariet	
20. Bamusalire M.	
21. Walube J	
22. Musenze MP.	
23. Wakayinja P.	
24. Myod Jeniffer	
25. Kakaire I.	
26. Wambuzi John	
27. Lukohe Florence	
28. Namukose Hadija	
29. Tebagalika Safina	
30. Lutaya Monica	
31. Muliranyi G.W.	
32. Menya K.G.	
33. Magumba K.	

34. Wako F	
35. Kayumba K.	
36. Swaibu M.	
37. Menya Hasifa	
38. Mutesi Hanifa	
39. Baligeya F.D.	
40. Basalirwa F.	
41. Wandira A.	

MBALE DISTRICT

NO	NAME	SUB-COUNTY	DESIGNATION
1	MUKUMBA PATRICE	BUSANO	FORESTRY
2	KIMUSAYA MICHAEL	BUNGOKHO –MUTOTO	OCLAP
3	MUYEYE FRANCIS	MUTUTO	FORESTRY
4.	WESONGA WILLIAM	BUNGOKHO /BUSANO	E. MENT
5.	NAMANDA GEEFREY	BUSANO	E. MENT
6.	WAMUSAYI MAGIDU	BUSANO	COUNCILLOR
7.	KALINDI MASSA	BUNGOKHO – MUTOTO	"
8.	OBURU JOHN BONIFACE	"	"
9.	MUTONY LOYCE MASABA	"	"
10.	BWAYO SIRATI	"	P/CHIEF
11.	ABBEY MUSA	"	C'LLOR
12.	KHAUKHA PATRICK	"	"
13.	WATSALA DON	BUSANO	"
14.	WAMBWA S.P	"	CDA
15.	WATITI MAKAYI. A	"	E/C'LLOR
16.	NABUSOBA PAUL	B/MUTOTO	AAO
17.`	KHISA MESULAN	BUSANO	E/C'LLOR
18.	GRACE WAMURUBU	BUSANO	FARMER
19	GEORGE MADINGO. W.	MUTOTO	H/A
20	BARARUNGA LIZ. B	BUSANO	C'LLOR
21.	MUKITE JULLIET	BUSANO	C/MAN F.T.W
22.	J.K MASABA	BUSANO	YOUTH C'LLOR
23.	NAWATSI PARICE	BUSANO	BUSANO S/COUNTY
24.	WEPUKHULU DAVIS	BUNGOKHO MUTOTO	AG/G/C/P/C
25.	WAMATELE MICHAEL	MUTOTO	R.C III C/PERSON
26.	NAMULUNYI DISON	MUTOTO	FINANCE& PLANNING
27.	MUYIYI BONI KANKE	B/MUTOTO	SEC

28.	KHAKZA MARY	BUSANO	SEC
29.	MUKABIRE PAUL	BUSANO	AAO
30.	KHAUKHA EDMUND	BUSANO	ENTOMOLOGIST
31	MABONGA EDITH	BUSANO	S/W
32.	WAKWALU NATHAN. B.	BUNGOKHO MUTOTO	CDO
33.	RUTH ONGODIA	BUNGOKHO MUTOTO	AHO
34.	MUTONYI. L. MASABA	BUNGOKHO MUTOTO	C/LLOR
35.	DOROTH KIBETI	BUSANO	COUCILLOR LC III
36.	MAKYEME GRACE	BUSANO	C/PERSON WC III
37.	FOOZI HUSSEIN	BUNGOKHO MUTOTO	PARISH CHIEF
38.	WANIAYE SAFIYI	BUNGOKHO MUTOTO	PARISH CHIEF
39.	MABONGA CHRISTOPER	BUSANO	SEC/LCI
40.	BWERI ALFAEO	BUSANO	CHAIRMAN LCII
41.	WATSEMWA MARG	BUNGOKHO MUTOTO	SEC
42.	WABUYI JOHN ROBERT	BUSANO	EXTENSION OFFICE
43.	WABWIKE GODFREY	BUNGOKHO MUTOTO	COUNCILLOR
44.	GIDUDU PETER	BUNGOKHO MUTOTO	SEC. FOR YOUTH
45.	WAKHOLI USUFU	BUNGOKHO MUTOTO	E.METEL
46.	MUTENYO MOSES	BUNGOKHO	V/PERSON LCIII
47.	WAMUKOTA LORNA	BUNGOKHO	S/C CHIEF (AG)
48	MUKWEN. M. CHARLES	MUTOTO	BUNGOKHO COUNCILLOR

PARTICIPANTS IN AGROFOREESTRY SENSITISATION SEMINAR FOR DISTRICT COUNCILLORS HELD IN THE ADMINISTRATION HALL (LUKHOBO) ON 22-10-2002

NO	NAME	INSTITUTION
1.	Wanakina	SMS FM MEDCP
2.	Wakwoma G .R	PBEW
3.	Mwalye James	SMS/ IUCN ,MBALE
4.	Magomu Kidiiya Jecko	FORRI
5.	Kakayi Mary B. Wamimbi	MBALE(AGRIC EXTENSION)
6.	Angella A. Nagudi	EXT. OFFICE MBALE
7.	Egwelu Milton	FORRI-NARO , MBALE
8.	Mutenyo Moses	IUCN MBALE
9.	Michael Namundi Mafabi	MBALE LC V C'LLOR
10.	Bukeni Sarah Kituyi	C'LLOR /C/PERSON FOR EVN MB
11.	Waniaye Kenneth	DCAO, MBALE
12.	Mrs. Betty Namundanyi	C'LLOR
13.	Watuwa Angela	C'LLOR
14.	Kibone Susan	A.V.O /PBEW
15.	Masaba Tom	AC/C MBALE
16	Siawunwa John	C'LLOR MBALE
17.	Dr. phillip Wakimwere	VET OFFICER MBALE
18.	Kazibwe A.K	A.H MBALE
19.	wasike Nakabuli	EXT/HPT
20.	Magome R. Richard	A.G.D/ PLUMBER MBALE
21.	Modesta Nambuya	DAO MBALE
22.	Damascus W Masaba	PROD. ENV. COMM
23.	Dr. George .H. Were	DVO MBALE
24	F.M Walyamboga	DFO MBALE
25.	Musamali Khisa	C'LLOR LC V.

26.	Nabusoba Paul	PBEW / BUSANO
27.	Zaale Elizabeth	C'LLOR LC V MBALE
28.	Charles Twikhilize	DCO
29	Namboso Harriet	LC V C'LLOR
30.	Sean White	IUNC / MECDP
31.	Wambu Paul	D. ENV. OFFICER MBALE
32.	Wekalawo Michael	C'LLOR LC V
33.	Yiga Andrew	IRDI MBALE
34.	Wamakia Dan W.	BUDUDA C'LLOR LCV
35.	Manita Julliet	C'LL LCV BUNGOKHO
36.	M.Mwambu	CPO MBALE
37.	Kakayi Shiondo	LC.V C'LLOR BUSOBA
38.	Musalo Benya	LC.V C'LLOR MBALE
39.	Ayo Julius Peter	PARTN' AF,IUCN(COORD) MBALE
40.	Masogoi Waswa	VICE CHAIRPERSON , LCV MBALE

5.2 KUMI DISTRICT SENSITIZATION WORKSHOPS – ATTENDANCE LIST

Sub-county: ***Mukongoro***

NAME	M/F	DESIGNATION	PARISH
1. Onaba Aojan	M	Parish chief	Kadami
2. Asekenye Loy	F	Councilor	Odokoto
3. Tukei John	M	Councilor	Oleilo
4. Imalingat JR	M	Parish chief	Kodokoto
5. Tukei Gideon	M	Parish chief	Agaria
6. Omoit Charles	M	Councilor	Kabukol
7. Agelar Stephen	M	Councilor	Kakuret
8. Otiriba Kokas	M	Parish chief	Oleico
9. Atai Ogwang Lucy	F	Councilor	Kadami
10. Asako G	F	Councilor	Akadot/Ogosoi
11. Okipi Elizabeth	F	Councilor	Oladot
12. Ojakol Cuthbert	M	Councilor	Ogosoi
13. Ojangole Patrick	M	Parish chief	Ogosoi
14. Okerenyang Gregory	M	Parish chief	Onyakelo
15. Otema Silver	M	Parish chief	Mukongoro
16. Ngatung Dinah	F	Councilor	Oleico
17. Asinei Peter	M	Councilor	Oladot
18. Emorut J	M	Parish chief	Osopotoit
19. Onapito Michael	M	Parish chief	Mukongoro
20. Agumar JM	M	Ass. Agricultural officer/FPP	Mukongoror
21. Osoto JC	M	Ass. Agricultural officer/Environment	Mukongoro
22. Emokol S	M	Ass. Health officer	Mukongoro
23. Anyadai S	M	Councilor	Kajamaka
24. Emokol Benna	F	Head teacher	Mukongoro Rock P/S
25. Ekwanait Ignatius	M	Speaker LC III	Mukongoro
26. Kulume E	F	Councilor	Mukongoro
27. Okiror	M	Councilor	Osopotoit
28. Odeke Y	M	Councilor	Osopotoit
29. Otigo David	M	Councilor	Onyakelo
30. Okise J	M	Police	Mukongoro

Sub-county: ***Mukura***

NAME	M/F	PARISH
1. Egau John	M	Kokodu
2. Epuleit Chris	M	Kees
3. Orena Fabian	M	Kees
4. Osapa Joseph	M	Mikakise Ariet
5. Asinai Dinah	F	Kees
6. Ilomu Edith	F	Ajeluk
7. Ojangole Constant	M	Kumel
8. Akujut Janet	F	Morukakise
9. Acono Lucy	F	Adul
10. Osauro John	M	Madoch
11. Asimo Catherine	F	Kokodu
12. Eyadu Ben	M	Madoch
13. Opure Thomas	M	Okunguro
14. Onyait Daniel	M	Ajeluk
15. Okiria Naume	F	Mukura
16. Okalebo James	M	Akubui
17. Aanyu Margaret	F	Mukura
18. Akemo Margaret	F	Kokodu
19. Okur Charles	M	Okunguro
20. Among Elabu Joyce	F	Mukura
21. Ochepa Stephen	M	Kumel
22. Anukup Charles	M	Mukura
23. Ongerep Grace	F	Kaler
24. Apedel Florence	F	Akubui
25. Aguti Conney	F	Madoch
26. Elaku Charles	M	Akeit
27. Oluka John Francis	M	Mukura
28. Awayo Joyce	F	Ariet
29. Amujal Deborah	F	Akeit
30. Orena Francis	F	Kaler

Sub-county: ***Kobwin***

NAME	M/F	PARISH
1. Olego M	M	
2. Ijongat Loy	F	
3. Asupo M	F	Kodike
4. Opolot Anthony	M	Kodike
5. Akoromit Loyce	F	Kacowa
6. Oliaro Ben	M	Kadok
7. Okiror Joseph	M	Tiling
8. Anyakoru Hellen	F	Atoot
9. Igolu Lucy	F	Atoot
10. Akello Grace	F	Opot
11. Okiring Justine	M	Aciisa
12. Kongai Josephine	F	Aciisa
13. Ogwang Onespol	M	Opot
14. Ogwang James	M	Kobwin
15. Alenyo Enos	M	Kobwin
16. Abila Andrew	M	Kobwin
17. Opolot James	M	Kobwin
18. Ogwang Martin	M	Oswara
19. Ilukor Ann	F	Kobwin
20. Ekopai Levi	M	Atoot
21. Osauro	M	Kobwin
22. Akol Vincent	M	Kobwin
23. Adicha Armstrong	M	Kobwin
24. Alupo Ann	F	Kadok
25. Oumo Hellen	F	Kobwin
26. Takan Philemon	M	Kococwa
27. Onanyang Michael	M	Kobwin
28. Amuruo Samson	M	Kobwin
29. Oluka Moses	M	Kadok
30. Okiror JAmes	M	Kadok
31. Oluka Simon	M	Omoo

Sub-county: ***Kachumbala***

NAME	M/F	DESIGNATION
1. Otukol G Aguma	M	Councilor
2. Oposia Erasmus	M	Councilor
3. Akuru M Fazira	F	Councilor
4. Apio Joyce	F	Councilor
5. Aguti Judith	F	
6. Aluka Grace	F	Councilor
7. Ekodo Christine	F	Councilor
8. Adakun P	M	Councilor
9. Mugida Faridah	F	Councilor
10. Amunyo Silver	M	Councilor
11. Osire Paul	M	Councilor
12. Okiring Samuel	M	Councilor
13. Aboot Florence	F	Councilor
14. Okiria Jane Betty	F	Councilor
15. Ojon Hellen	F	Councilor
16. Anyapa Christine	F	Councilor
17. Odong Mary	F	Councilor
18. Achieng Florence	F	Councilor
19. Aduutu Stephen	M	Councilor
20. Malinzi Ali	M	Councilor
21. Oluka Nicholas	M	Field advisor KUDFA
22. Were Christine	F	Councilor
23. Omadi John	M	Councilor
24. Teko Kokas	M	Councilor
25. Odong Clement	M	Councilor
26. Okerenyang	M	Councilor
27. Akello Florence	F	Councilor
28. Tukei William	M	Chairman LC III
29. Arukudo Jane	F	Councilor
30. Okwi Michael	M	Councilor

Sub-county: *Ngora*

NAME	M/F	DESIGNATION
1. Olupot Rehema	F	Vice chairperson
2. Angeki David	M	Speaker
3. Okalebo S. B	M	Councilor
4. Iguto Angela	F	Councilor
5. Opio Francis	M	Councilor
6. Atwamar James	M	Councilor
7. Iluka S	M	Councilor
8. Ojakol Charles	M	Councilor
9. Adong A.M	F	Councilor
10. Ecutoit David	M	Councilor
11. Oumo David	M	Councilor, Kobuku
12. Olupot Paphras	M	Councilor
13. Agwelakwap Ogelan	M	LC III chairperson
14. Otoi Anthony	M	Councilor LC III
15. Oryada Moses	M	Councilor
16. Abwot William	M	Councilor
17. Aguti Josephine	F	Councilor
18. Opio Joseph Ogaino	M	Councilor
19. Agwang Alice	F	Councilor
20. Akiror Benna	F	Councilor
21. Apolot K	F	Councilor
22. Agama Christine	F	Councilor
23. Osapet Cuthbert	M	Councilor, Angod
24. Ocepa Francis	M	Councilor, Ngora
25. Omujaju R	M	Councilor
26. Akol Jane	F	Councilor
27. Ocepa Bosco	M	Councilor
28. Agetu A	M	Councilor
29. Ariko Ben	M	Councilor
30. Okia M	M	Councilor

Sub-county: ***Bukedea***

NAME	M/F	DESIGNATION
1. Anyait Janet	F	Councilor
2. Imalingat Annet	F	Councilor
3. Eruitai James	M	Councilor, LC III
4. Ekitui Justine	M	Councilor, LC III
5. Ojilong James	M	Councilor, LC III
6. Achen Margaret	F	Councilor, LC III
7. Olupot J. P	M	Councilor, LC III
8. Omoding Moses	M	Councilor, LC III
9. Adong Maimuna	F	Councilor, LC III
10. Emokor Francis	M	Councilor, LC III
11. Asio Angella	F	Councilor, LC III
12. Omaido Immaculate	F	Councilor, LC III
13. Omerikol N.P	M	Councilor, LC III
14. Emokor Elias	M	Speaker LC III
15. Angura James	M	Councilor, LC III
16. Opolot Stephen	M	LC III Secretary for Environment
17. Esunget Nathan	M	Councilor
18. Obukui Stephen	M	Councilor
19. Igune Alfred	M	LC III secretary for Environment
20. Odeke Stephen	M	V/chairman, LC III
21. Oluka C. Opolot	M	Chairman land committee
22. Amulen Immaculate	F	Councilor, LC III
23. Opolot Peter James	M	Councilor, LC III
24. Okot Esera	M	Councilor
25. Ikonyet Jane	F	Councilor
26. Mugena Agnes	F	Chairperson, LC III
27. Ikojo Moses	M	Councilor
28. Opolot David	M	Councilor
29. Okudi Nathan	M	Councilor
30. Acam Betty	F	Councilor

Sub-county: ***Atutur***

NAME	M/F	DESIGNATION
1. Okello Jimmy	M	Councilor
2. Akello Betty	F	Councilor
3. Odikor Joseph	M	Councilor
4. Okwii Alfred	M	Councilor
5. Ikilai Joseph	M	Councilor
6. Okiror Sam	M	Councilor
7. Akol Emanuel	M	Councilor
8. Acetun Stephen	M	Councilor
9. Acom Evaline	F	Police
10. Auma Grace	F	Councilor
11. Otim Omoding	M	Ass. Agricultural officer
12. Okello John	M	
13. Akurut Rose	F	Councilor
14. Angolirin Sarah	F	Councilor
15. Okodei Zaituna	F	Councilor
16. Edooret Sam	M	Speaker
17. Ariko Ketty	F	Councilor
18. Okwii Patrick	M	Councilor
19. Osire Richard	M	Councilor
20. Ochom	M	Health Assistant
21. Omoding Simon	M	Councilor
22. Akello Jennifer	F	Councilor
23. Akello Florence	F	Councilor
24. Aalet Jane	F	Councilor
25. Obwang Robert	M	Councilor
26. Arionget A. B	F	Community Development Assistant
27. Akol Michael	M	Chairman LC III
28. Osire John Peter	M	Sub-county chief
29. Adome Kizito	M	Councilor
30. Aloikin John	M	Councilor

Sub-county: ***Kidongole***

NAME	M/F	DESIGNATION
1. Imalingat Okello B	M	Councilor
2. Idi Omar	M	Secretary for production and Environment
3. Ogicho Vincent	M	Councilor, persons with disability
4. Opolot Charles	M	General secretary
5. Omongot Rose	F	Councilor
6. Opule Difas	M	Secretary for defense
7. Okwi Margaret	F	Councilor
8. Okiria Amina	F	Chairperson for health
9. Kalolo Muhamed	M	Youth councilor
10. Okurut Umar	M	Chairperson for production
11. Opus Justine	M	Treasurer
12. Okurut Moses	M	Secretary for education
13. Anatu Julius	M	LCIII speaker
14. Ochom Oputan Martin	M	LC III Chairman
15. Osomele Jimmy	M	OC Police
16. Ikoolit Jennifer	M	Councilor
17. Aguti Christine	M	W/PC
18. Apio Hellen	F	Councilor
19. Ochom Noar	M	Councilor
20. Oleuko John	M	Councilor
21. Agolu Simon	M	Councilor
22. Angura James	M	Councilor
23. Ochom D	M	Councilor
24. Omuna John	M	Councilor
25. Adong Angela	F	Councilor
26. Okweny M	M	Councilor
27. Okiria Micheal	M	Councilor
28. Asio Harriet	F	Councilor
29. Okello J (Mrs.)	F	P/C
30. Aisu John	M	Councilor

Sub-county: ***Kumi***

NAME	M/F	DESIGNATION
1. Onyac Willy	M	Assistant Agricultural Officer
2. Akorikin Martin	M	Councilor
3. Among Jennifer	F	Councilor
4. Akia Betty	F	P/C
5. Olego John	M	Senior Health Assistant
6. Omoding Pascal	M	Health Assistant
7. Okurut John	M	ACO
8. Angura Vincent	M	Councilor
9. Oming F	M	Councilor
10. Aluga Berna	F	Farmer
11. Osele Teddy (Mrs.)	F	Treasurer
12. Asekenye Brenda	F	Farmer
13. Ongodia Mary	F	Farmer
14. Emorut Sam	M	Chairman LC III
15. Apio M Immaculate	F	Councilor
16. Odeke Sois	M	Councilor
17. Emudong Sam	M	Councilor
18. Osele Joseph	M	Farmer
19. Okururt Desiat	M	Farmer
20. Ongolinyang M	M	Farmer
21. Acor Christine	F	Parish Chief
22. Isenged Francis	M	Councilor
23. Oduan Margaret	F	Vice chairperson LC III
24. Odungul	M	Farmer
25. Okiria (Mrs.)	F	Farmer
26. Akello Helen Felista	F	Secretary
27. Atim Naomi	F	Councilor
28. Oleicho Paschal	M	P/C
29. Ogwang Jimmy	M	P/C
30. Agemo Harriet	F	Councilor

Sub-county: ***Kanyum***

NAME	M/F	DESIGNATION	PARISH
1. Alupo Tikila	F	Councilor	Okeito
2. Bokello Tuesday	M	Councilor	Kacha
3. Anguria Nicholas	M	Vice chairman LC III	Kanyum
4. Onomu Ysaf	M	Secretary for finance	Kamacha
5. Okweny Moses	M	Councilor	Kanyum
6. Ogwang C Robert	M	Chairman for production	Olumot
7. Apoo Deborah	F	Councilor	Kanyum
8. Ekellot Robinah	F	Councilor	Ajuket
9. Oolio Jane	F	Councilor	Kajamaka
10. Okwalinga Ben	M	Farmer	Kacha
11. Orono Peter	M	Secretary for education	Kanyum
12. Aguti Josephine	F	Farmer	Kanyum
13. Ayaro Janet	F	Councilor	Ariet/ Akisim
14. Akwap Mary	F	Councilor	Okeito
15. Akwi Rose	F	Councilor	Katlekori
16. Asio Harriet	F	Councilor	Kajamaka
17. Okodan Richard	M	Secretary	Okeito
18. Okello Mark	M	Coordinator FAL	Olima
19. Ojelel Julius	M	Secretary for youth	Kanyum
20. Okwi Silver	M	Police	Kanyum
21. Anguria J	M	Police	Kanyum
22. okou Robert	M	Councilor	Akisim
23. Odongo Justine	M	Instructor FAL	Okeito
24. Teka Tom	M	Councilor	Ajuket
25. Arionget Florence	F	Police	Kanyum
26. Senyi Norah	F	Police	Kanyum
27. Ogeatum K	M	Councilor	Kajamaka
28. Okwaja Norah	F	Councilor	Omurang
29. Ariit Grace	F	Councilor	Kogili /Kacha
30. Oluka James	M	Secretary for defense	Kogili

Sub-county: ***Ongino***

NAME	M/F	DESIGNATION	PARISH
1. Ojakor John Bosco	M	General secretary	Ongino
2. Imalingat Aloysius	M	Vice chairperson	Akide
3. Aanyu Stella	F	Councilor	Kachelakweny
4. Etiang John	M	Farmer	Kanapa
5. Akiteng Mary	F	Farmer	Ceele
6. Adome Adakun Hellen	F	Councilor	Ongino
7. Opolot Juventine	M	Secretary for production	Ceele
8. Imalingat Margaret	F	Secretary for production	Kachaboi
9. Adoili Augustine	M	Councilor	Kachaboi
10. Akello S F	F	Deputy speaker	Tisai
11. Akellot Anna Loy	F	Councilor	Morupeded
12. Amongin Jane	F	Councilor	Oseera
13. Akwi Jesca	F	Councilor	Ongino
14. Ariong John Mike	M	Secretary for education	Oseera
15. Ajori Grace	F	Councilor	Ongino
16. Amuge Christine	F	Councilor	Ongino
17. Okorom Moses	M	LC III secretary for defense	Obotia
18. Omugen Moses	M	Vice chairperson	Kakerekwam
19. Aloikin Martin	M	Councilor	Kodukul
20. Otienya J	M	Councilor	Kongura
21. Opolot Michael	M	Subcounty chief	Ongino
22. Akol Catherine	F	Councilor	Kanapa
23. Okwi Mike	M	Agriultural officer	Ongino
24. Acora William	M	Assistant Agricultural officer	Ongino
25. Odong Patrick	M	Councilor	Oseera
26. Okolimong	M	Councilor	Acucun
27. Ameletum J	M	Councilor	Acucun
28. Ojeka Timoth	M	Councilor	Kanapa
29. Aogon Tom	M	Councilor	Obotia
30. Opamu C	M	Councilor	Kanapa

Sub-county: *Nyero*

NAME	M/F	DESIGNATION
1. Ewadinga Peter	M	LC III secretary, PWDs
2. Adiebo Immaculate	F	Vice chairperson LC IIII
3. Atiang Florence	F	LC III Secretary for Education
4. Akurut Peninah	F	Education LC III
5. Omoding Simon	M	Secretary for defense
6. Akol Stephen	M	P/C
7. Ochom Stephen	M	Extension worker
8. Acam Florence	F	Subcounty chief
9. Esimat C P	M	Elder, Kodike
10. Ongodia Basil	M	Councilor
11. Odelle Richard	M	Councilor
12. Akiteng Ruth	F	Councilor
13. Asio Hellen	F	Councilor
14. Omunyot Kesiron	M	LC III secretary for environment
15. Akai James	M	Chairman LC III
16. Ilakut Vincent	M	Chairman LC I
17. Ikosiot Charles	M	Parish chief
18. Osingil John	M	Extension worker
19. Emudong P J	M	P/C
20. Aboki S P	M	LC I
21. Omuron JB	M	Secretary for finance
22. Osuban M (Mrs.)	F	Councilor
23. Ademun Florence	F	Councilor
24. Aikomo Rose	F	Councilor
25. Angobo Richard	M	Mobilizer
26. Edotun Aloysius	M	Assistant Agricultural officer
27. Ogolit William	M	Parish chief
28. Oluka Gilbert	M	Councilor
29. Okurut Francis	M	Parish chief
30. Obeke Nicholas	M	Councilor

5.3 TORORO DISTRICT SENSITIZATION WORKSHOPS – ATTENDANCE LIST

Sub-county: ***Rubongi***

NAME OF PARTICIPANT	DESIGNATION	PARISH
1. Onyango Eric	Secretary for Eduacation	Rubongi
2. Odoi Dorothy	Secretary for children	Rubongi
3. Oketcho Hellen	Secretary for environment	Rubongi
4. Owino Casmir	Councilor	Panyangas
5. Ofwono H	Councilor	Kidera
6. Kaendeke S	Councilor	Nyangole
7. Odongo Paul	Member farmers forum	Panyangas
8. Othieno Oburu	Chairman farmers forum	Rubongi
9. Olowo Scola	Member farmers forum	Nyakes
10. Olaka N	Member farmers forum	Osia
11. Owor Juliet	Member farmers forum	Kidera
12. Oboth Angella	Member farmers forum	Ngangole
13. Obbo Silver Mawele	Member farmers forum	Osia
14. Olowo Owino	Member farmers forum	Panyangas
15. Abbo Anna	Veterinary officer	Rubongi
16. Othieno O	Assistant Agricultural officer	Rubongi
17. Obbo S	Assistant Agricultural officer	Rubongi
18. Oketcho Lawrence	Sub-county chief	Rubongi
19. Akongo Dorothy	Chairperson production committee	Rubongi
20. Owida Casmir	Member production committee	Rubongi
21. Ofwono H.O.	Member production committee	Rubongi
22. Ochar Paul	Member production committee	Rubongi
23. Nyaketcho Mary	Member production committee	Rubongi
24. Oketcho Obaire	Opinion leader	Nyakesi
25. Oburu Aloysius	Opinion leader	Nyangole
26. Oketch Wazir	Opinion leader	Panyangas
27. Opoya Yokoyas	Opinion leader	Kidera
28. Oboth	Opinion leader	Misukire
29. Dominsiano	Church leader	Panyangas
30. Reverend Obunga	Church leader	Misukire
31. Oburu John	Farmer	Ngangole
32. Othieno Simba	Farmer	Panyangas
33. Onyango Ochwo	Farmer	Nyangole
34. Ochwo Obonyo	Farmer	Nyangole
35. Ofwono P	Farmer	Kidera
36. Okello W.	Farmer	Nyakesi
37. Okoth Ben	Councilor/secretary production	Rubongi
38. Anyango Meresiana	Farmer	Rubongi
39. Abbo Jane	Farmer	Nyakesi
40. Ogolla Loyce	Farmer	Nyangole
41. Gongo John	District environment officer	Tororo

42. Ereng John	Africa 2000 Network	Tororo
43. Oketcho Francis	Trainer of trainers	Osukuru
44. Ogwang James	Agroforestry technician	Tororo
45. Olowo George	LC III chairman	Rubongi
46. Kakande Abdu	Trainer of trainers	Osukuru
47. Opendi G.O.	Agricultural officer	Rubongi
48. Oburu J.J.	Secretary for environment	Tororo

Sub-county: ***Kisoko***

NAME OF PARTICIPANT	DESIGNATION	PARISH
1. Okere Okere	Chairman LC III	Kisoko
2. Hyuha Dauson	Sub-county chief	Kisoko
3. Oboth James Owoko	Councilor	Peipei
4. Oketcho Nelson	Secretary for production	Gwaragwara
5. Owor Michael	LC I chairman	Kisoko
6. Nyaketcho Jane	Teacher	Gwaragwara
7. Ejoyati Jane	Councilor	Kisoko
8. Reverend Namukuna James	Priest	Kisoko
9. Wakwili Peter	Entomology	Kisoko
10. Obel Lawrence	Teacher	Kisoko
11. Opendi Silver F.	Opinion leader	Morkiswa
12. Nyaweize Aidah	D.A. police	Kisoko
13. Olweny Charles	Councilor	Kisoko
14. Tanga Moses	Opinion leader	Peipei
15. Okoth James	Teacher	Pomded P/S
16. Orono John	Opinion leader	Peipei
17. Oketcho Lastone	O.C. prisons	Kisoko
18. Achieng Margaret	Councilor	Pepet
19. Oketcho Vincent	Teacher	Kisoko
20. Onyango Joyce	Councilor	Gwaragwara
21. Ofwono Angela	Councilor	Gwaragwara
22. Othieno Victoria	Religious leader	Kisoko
23. Olele Lucy	Councilor	Morkiswa
24. Iluku Leonard	Health assistant	Kisoko
25. Olowo Gideon	Sub-accountant	Kisoko
26. Okumu M.B.	Council speaker	Kisoko
27. Awinjo Winfred	Secretary for the youth	Kisoko
28. Odoi Augustino	Extension officer	Kisoko
29. Oketcho Gerald	Extension officer	Kisoko
30. Okoth Oketcho Asitaluko	Opinion leader	Gwaragwara
31. Obwaga Tereza	Farmers forum	Morkiswa
32. Omitta Jackson	Farmers forum	Gwaragwara
33. Ondoro Esther	Councilor	Kisoko

34. Wanje Michael	Assistant Chief Administrative officer	Kisoko
35. Kasango Ken	Extension worker	Kayoro
36. Kakande A	Trainer of trainers	Osukuru
37. Oketcho Francis	Trainer of trainers	Osukuru
38. Ogwang James	Agroforestry Technician	Tororo
39. Ereng John	Africa 2000 Network	Tororo
40. Okumu Onyango A.	Religious leader	Gwaragwara
41. Gongo John	District Environment Officer	Tororo
42. Opero Tadeo	Farmer	Kisoko
43. Oketch P.	Farmers forum	Gwaragwara
44. Odoi M.	Farmers forum	Kisoko
45. Owor M.	P.W	Kisoko
46. Onyango Stephen	Councilor	Kisoko
47. Anguti Silas	District Forest officer	Tororo
48. Opendi E.	Agricultural officer	Rubongi