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AN ACCOUNT OF 3 FIELD TRAINING EXERCISES IN PRA

PART OF SCF WORKSHOP ON
PARTICIPATORY RURAL APPRAISAL
(PRA)

KOBO
29 MAY TO 6 JUNE 1995

PRA Report NO. 2
SCF - KOBO
JUNE 1994

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AN ACCOUNT OF THREE FIELD TRAINING EXERCISES

IN PARTICIPATORY RURAL APPRAISAL, SEPTEMBER 1994

PREFACE

Participatory rural appraisal (PRA) is an approach to working with communities. It takes as its starting point, that people know best their own personal, social and environmental reality. PRA attempts to elicit the knowledge and views of local people, for the purpose of development - whether at the level of needs assessment, planning, designing, implementing or evaluating activities. It does this through a variety of methods. These allow people to express their own ideas, and to engage in a process of communication about issues of concern to them.

Between 29 May and 6 June 1995, a training workshop on PRA was organized by Save the Children UK in Kobo, Region 3. Participants of the workshop (20) were predominantly from the zonal level of the Ministry of Agriculture, Ministry of Natural Resource and Environmental Protection.

Participants were given conceptual training that involve exercise for four days in Kobo. Practical field training in three groups took place at three different villages (Aiub, Mendefera, Jarota).

This report is an account of field exercises in AIUB, BUFEYELIE and MENDEFERA villages in Kobo Woreda. It is entitled **"Learning by Doing, Report No. 2, SCF, Kobo, June 1995.** This report documents the field exercises carried out, the methodologies and findings.

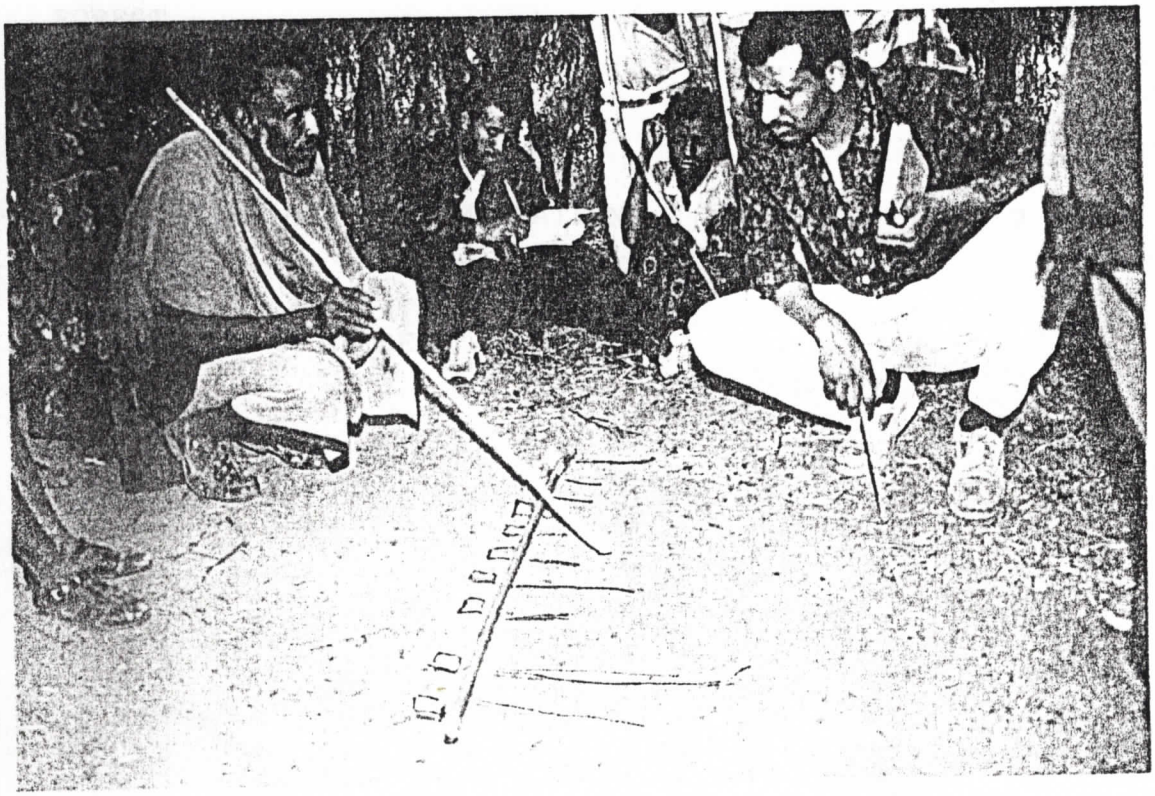
A second report named **"Participatory Learning"** SCF PRA Report No. 1, Kobo, June 1995 documented the workshop processes itself. A third report known as **"Handing Over the Stick: A Guide to PRA Tools and Approaches"**, SCF PRA Report no 3. contains the handouts and materials distributed during the workshop.

It is hoped that these three reports will be of value to the participants, and to others interested in carrying out similar workshops or PRA exercises.

REPORT ON PRA FIELD EXERCISE

GROUP NAME ZOBEL

ASSESSMENT OF THE FEASIBILITY OF SOIL AND WATER CONSERVATION DEVELOPMENT PROGRAMME IN AIUB VILLAGE



June 7, 1995
North Wollo
KOBO

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I. INTRODUCTION

Aiub is a small village in Aiub peasant association. The people living in the village are mainly farmers practising subsistence agriculture. Their economy is dependant mainly on agriculture.

The topography of the village varies from hill to plain. Trees mainly grow in the hill while crops grow on plain areas. As the information obtained from the farmers indicated, the number of trees on the hill side had decreased from time to time starting 1983 due to change of the government. Some measures should be taken to reduce the rapid destruction of trees by people.

Problem of drinking water has been solved to some extent by the installation of a motor pump. But they do have acute problem in livestock drinking water. They bring water by diverting a river from an approximate distance of 18kms. Their effort was further hindered by the sandiness of the soil. The major water-borne disease in this area is malaria. It occurs in the months of September and May.

II. OBJECTIVE OF THE STUDY

The main objective of the PRA exercise are:

1. to assess the existing situation of soil erosion in the area
2. to assess the existing situation of forest in the area
3. to assess the existing situation of irrigation in the area
4. to assess the existing situation of water borne diseases in the area
5. to recommend possible direction of development strategy.

III. BACKGROUND OF THE AREA

Location

Aiub is one of the eight villages ('gottes') in Aiub peasant association. It is located at an approximate distance of 12 kms. North of Kobo town. The village is bordered by Gidan woreda in the west, Amaya PA in the north, Duberti and Chobie villages in the south and Golesha village in the east.

The area of Aiub PA is estimated to be 280ha. There are 2926 family heads in Aiub PA, out of which 900 are female family heads.

The population of Aiub village is about 150 households. According to the estimate made by the community, female heads of household comprise on-third of all the households. The villagers have estimated the average family size to be eight people.

History

According to the interview made with elders of the community, the village was established in 1912. During this time most of the people were engaged in trade. The major item of trade was rock salt (Amole Chew).

After the Italians invasion, trading activity decreased from time to time. Villagers were inclined to farming by cutting trees and preparing the land for agriculture. There were lots of trees during this time.

Prior to 1965, the rainfall was enough both in amount and distribution and there was very high crop production. But since 1965, the rainfall was unreliable both in amount and distribution. Consequently, the people have repeatedly faced harsh effects of drought.

In 1965, there was severe drought in this area which forced the people to migrate to Asayta, Djibouti & Humera. Though it was very late the government has tried to give some relief assistance. However, lots of people died being unable to reach the relief centre.

Similarly, in 1977, the village faced very high drought again. The government made lots of effort to give relief for the people, nevertheless, many people died for they could not reach the relief centres. The main reason for the occurrence of the drought was shortage of rainfall. Prior to 1965, it was very easy for community to predict the occurrence of rain fall in the area, but nowadays it has become very difficult.

Climate

The climate of the village is more or less Kolla, crops and tree species grown in the area are of kolla type. The area get very high rainfall in July and no rainfall in February and June. There is a very high temperature in May and a very low temperature in July. Refer Fig 2 for rainfall pattern.

Topography

The topography of the village varies from hills to plain areas. Most of the land comprises of plain areas. The plain area is used for crop production, while the hills are used for forest and grassland. The hills are dissected mainly by gullies. The settlement is located at the foot of the hill.

Existing Institutions

Different governmental institutions give service to Aiub village, namely, MOA and MNRDEP. There are religious institutions such as the Church and the Mosque. Moreover, there are traditional organizations like Edir. Formal organizations such as peasant

association are involved in different activities of the community. Refer Figure 3 & 4 for relationship of the community to the above institutions as drawn by male and female community members.

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IV. Soil Erosion

Different soil types exist in Aiub village. The major soil types in the village are sandy soil, silty clay soil and (Fig. 5).

Trees and grasses are mainly grow in sandy soils while cereal crops like teff, sorghum, and chick peas mainly grow in clay soil. The major crops grown in this area is teff, sorghum is the next dominant crop in this area.

The topography of the area varies from hills to plain areas. Refer Fig 6 for the transect walk that covers the geographical variations in the region. The majority of the land is covered by plain area (Fig 7).

There are many gullies (big and small) in the hill side area. With regards to the land use pattern, most of the area is covered by farm land (Fig 8). Soil and water conservation practices are undertaken by farmers. Refer Fig 9 for a farm sketch of Ato Wondiye Sisaye indicating land use.

Check dam and terraces are constructed on the hill side, and soil bunds on the farm land. There is a very high danger of soil erosion on the hill side. Proper structural and vegetative measures have to be practised on the hill side. More check dams have to be constructed on rapidly increasing gullies. Terraces should also be constructed on the unterraced parts of the hill. Previously constructed Terraces should also be maintained.

On the other hand farmers have commented on the technical aspect of constructing soil bunds. They preferred to construct soil bunds by burrowing soil from the lower side of the bund rather than burrowing soil from its upper side.

They preferred the later because a kind of ditch developed in front of the bund which accumulated every water flowing from the upper part instead of dispersing it to the front.

Technically it is better to construct this type of soil bunds in areas where there is a very high problem of water. The ministry of Natural Resources ought to improve this.

V. FOREST

Different kinds of trees grow in Aibu village. Trees mainly grow on the hill side. The major tree species in this area are Acecia species, namely, Sebensa, Mewata, Doret, Korora, Bedena, Agam, Watcho, and Kunkure.

These trees are mainly used for making farm implements, house construction, fuel wood, fencing and shade. Refer Fig 10 forest coverage in the Aiub.

The amount of trees in the forest area is declining from time to time. Around 1968, there was a good coverage of forest area. The forest was managed by local institutions, such as the "Haga", persons selected by the community to manage the forest.

The community used to have some rules and regulations for managing the forest, but were not effective to conserve the forest from destruction.

The government took control and handed the forest over to the Forestry & Wild Life Conservation Authority. The Authority selected area closure as the best way of conserving the forest and the area was closed until the government was changed in 1983.

During this time (area closure), lots of local indigenous trees regenerated. The amount of trees existing in the forest increased rapidly. As to the usage of the output of the forest, people initially were allowed to buy grasses with cheaper price which finally became free.

The system was so effective that the forest regenerated immediately and the community were able to get enough grass for their livestock and construction of house.

Nevertheless, the increasing trend of the forest was disrupted by the 1977 drought. The number of trees have decreased in 1976 and 1977. Because of good rainfall in 1978 the forest was increasing rapidly approaching its original size by 1982.

Due to the change of the government, the people destroyed the forest in 1983 and its amount is still decreasing up to now. The main reason for the destruction were:

1. There were no body responsible for protecting and managing the forest.

2. The community assumed that the forest will be taken and become the property of the government.

The profile of the forest is shown by a trend diagram (Fig. 11) Based on their usage value, the community has classified each tree species according to its importance. A preference ranking was made to identify this. Taking different usage parameters into consideration, the community have selected the following tree species in the order of their importance. Doret, Sebensa, Kunkura, Bedena, Korora, Agam, Kinchib, Mewata, Watcho and Ajjo. Refer Fig. 12 for preference ranking of trees.

As to the kind of soil and water conservation measure to undertake, comparison between different methods of conservation was done and the community have selected area closure as the best measure for conserving the forest.

They preferred the government to employ forest guards. They do have reservation in the effectiveness of protecting the fores by cultural methods. Refer Fig. 13 for pair-wise ranking for soil conservation methods.

There ought to be a good management for using the output of the forest. It is better to distribute land to each farmer and have some rules or regulations on how to use the output of the forest.

After the area is closed, soil and water conservation measures like terrace and check dam should follow. It is after this that plantation may be practised if at all there is a need to do so. But the species selected for plantation should be of lowland species adaptable to this environment.

VI. RURAL WATER SUPPLY

With regards to source of water, there is no surface water around the village. Previously the people used to fetch water from a spring located at an approximate distance of 18 kms. one way. Women and children were forced to bring water from this source.

In 1968, the government understanding the problem of drinking water constructed a hand pump in the middle of the village and this has worked for a certain period of time. Another well was drilled and a motor pump was installed. This one is still working.

Presently it seems the problem of drinking water for human beings is solved to some extent. But the drinking water for their livestock is still unsolved. By diverting a river located at an approximate distance of 18kms, they make water available for livestock.

However, their effort is adversely affected by the sandiness of the soil. Most of the diverted water got infiltrated into the soil while coming to the pond. There are times when the water will not reach the pond. Some measure have to be taken for lining the existing canal. Otherwise the problem of drinking water for livestock is still a big burden left for the community.

The community have got a water committee for managing the existing water resource. The water committee ought to be strengthened. It should develop strong relationship with water service of the woreda and WSSA of Kombolcha office. In this way, they could be able to use their available water resource.

VII. WATER BORNE DISEASES

The major water born disease in this area is malaria. Malaria occurs twice a year. It occurs following the rainy season in September and May.

With regard to measures taken by the government or any other organizations, village responded that the village was not sprayed for many years. They have reported to government officials, but no one has responded immediately.

It would be necessary to spray the area before the month of September and May, and give treatment service during these months. Refer Fig. 14 for malaria infestation by season.

VIII. CONCLUSION AND RECOMMENDATION

Aiub is a small village in Aiub peasant association. The major crop grown in this area are teff, sorghum, maize and chick peans, teff being the dominate crop. Most of the land is covered by farm land. The topography varies from hill to plain. Trees are mainly grown on the hill side while crops are grown on plain areas. Soil and water conservation practices are being under taken. Yet they have to be strengthened. The situation of the forest existing in the village is becoming worst and worst after the change of the government. Measures have to be taken to conserve the forest and soil.

The situation of drinking water for human being is some what good as compared to earlier years. But the people have to protect the existing water supply properly. The problem of drinking water for livestock is still unsolved. Based on our assessment, we have found a soil and water conservation development programme feasible and we have recommended the following development directives.

RECOMMENDATIONS

1. The number of trees in the forest is declining from time to time. Some measure have to be taken immediately. We recommend areal closure with good management of the usage of its output to be applied to reduce the rapidly declining number of trees.

2. Even if the situation of water for human seems some what good at the present, the community ought to protect the available water resource. They have to strengthen their water committee they have to strengthen their relation with Kobo water service and WSSA in Kombolcha.

3. Soil conservation activities should be further strengthened.

4. Since there is malaria infestation in may and September, the village has to be sprayed prior these months and treatment service should be given during these months.

ANNEXES

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2. Bar Graph for pattern of rainfall distribution
3. Venn Diagram - Institutional Relations - Male's perspectives
4. Venn Diagram - Institutional Relations - Female's perspectives
5. Pie Chart - Soil Type
6. Transect
7. Farm Sketch - Ato Wondiye Sisay
8. Pie Chart - Land Slope
9. Pie Chart - Land Use Pattern
10. Bar Graph - Tree Coverage by type of Species
11. Trend Diagram - Forest Cover since 1968
12. Preference Ranking - Kinds trees by Use
13. Pair Wise Ranking - Soil & Water Conservation Measures
14. Bar Chart - Malaria Infestation Periods

LIST OF GROUP MEMBERS

NAME OF GROUP ZOBEL

MEMBERS

W/t Abeba Habtu

Ato Abreha G/Tensie

Ato Fikru Demissie

Ato Hiluf Gashaye

Ato Solomon Tulu

Ato Yohannes Afework

FACILITATOR

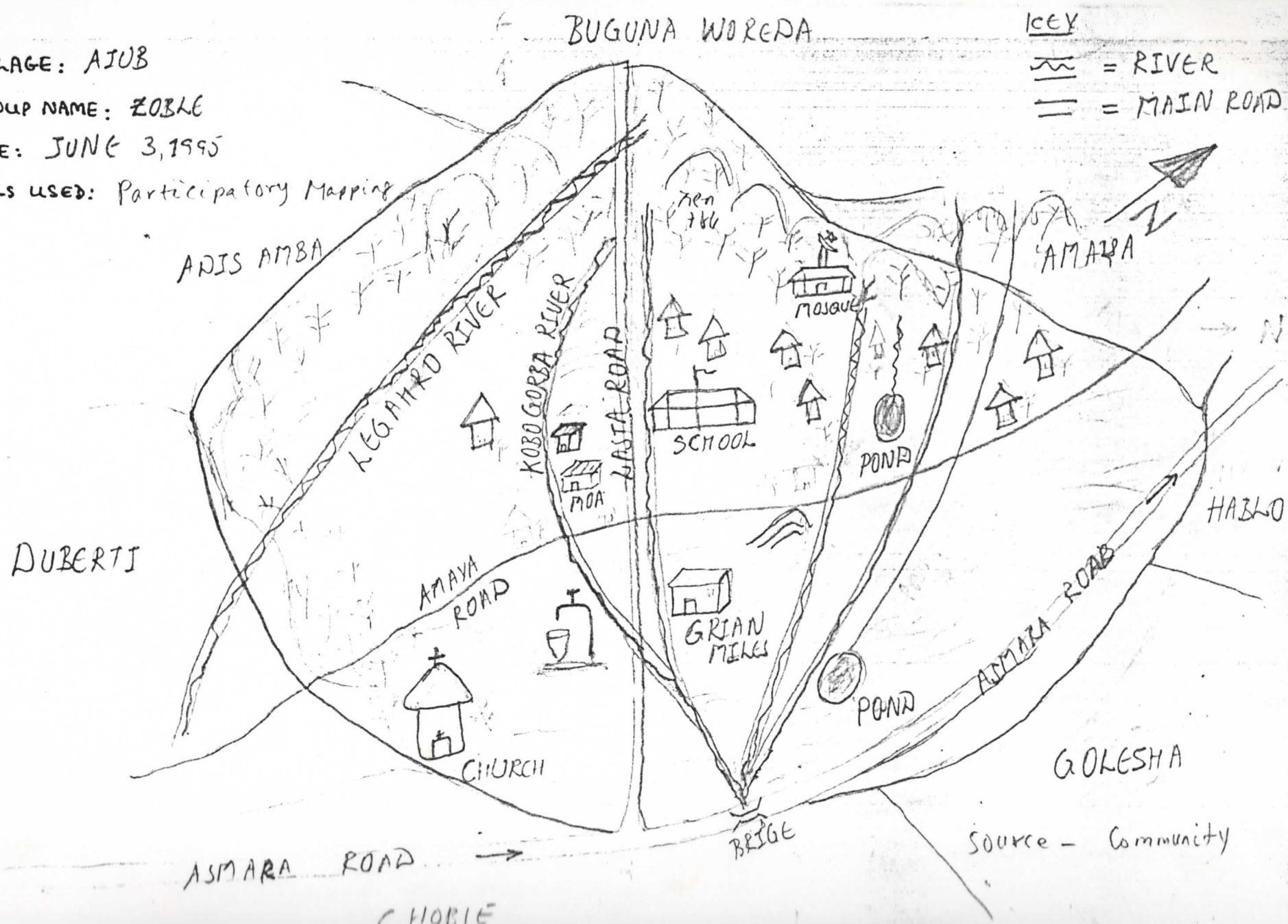
Wr/o Elizabeth Mekonnen

VILLAGE: AIUB

GROUP NAME: ZOBLE

DATE: JUNE 3, 1995

TOOLS USED: Participatory Mapping



Source - Community

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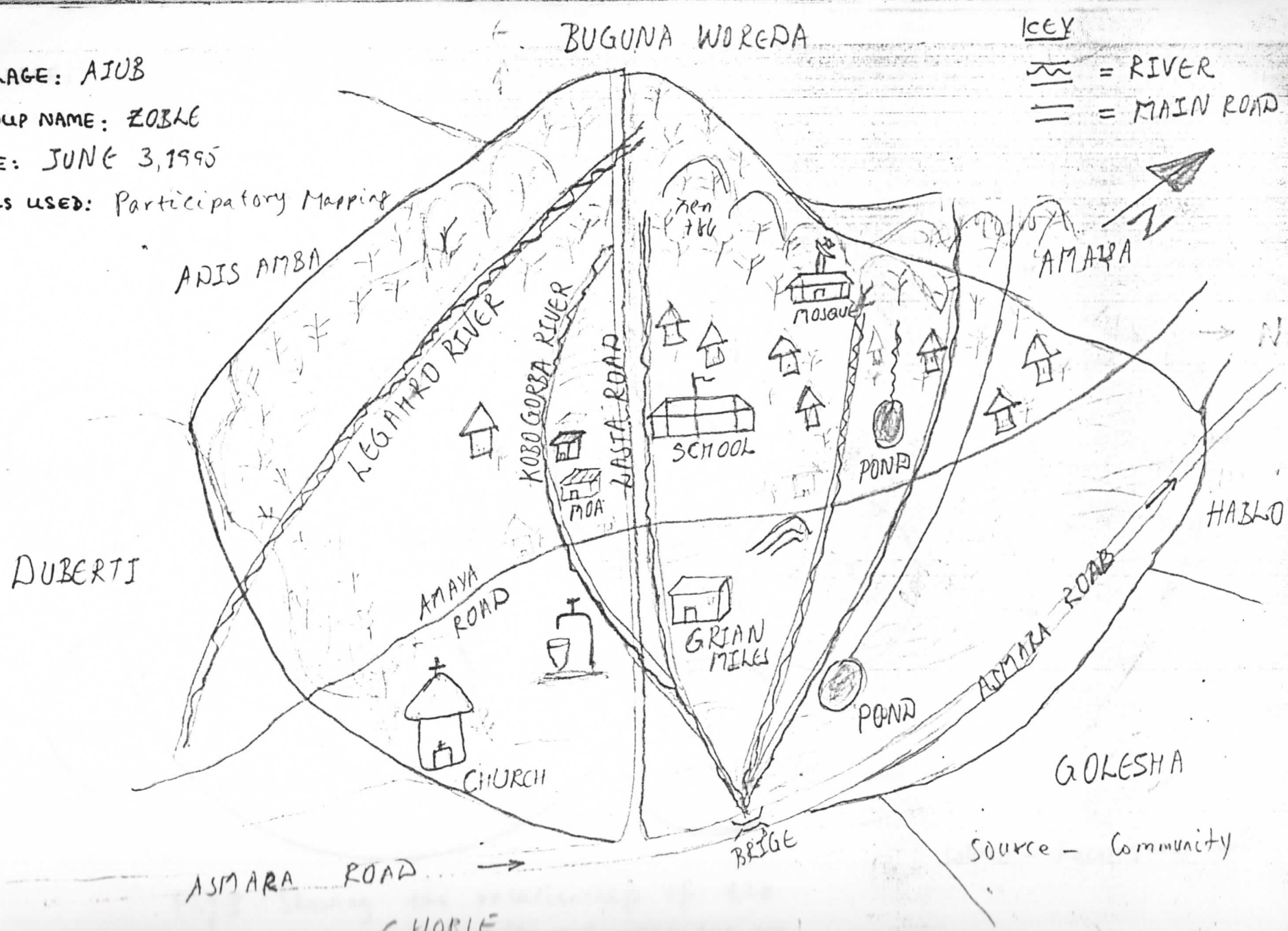
Figure 1 Map of Aiub Village as drawn by the Community

VILLAGE: AIUB

GROUP NAME: ZOBLE

DATE: JUNE 3, 1995

TOOLS USED: Participatory Mapping



SCF PRA WORKSHOP 1995

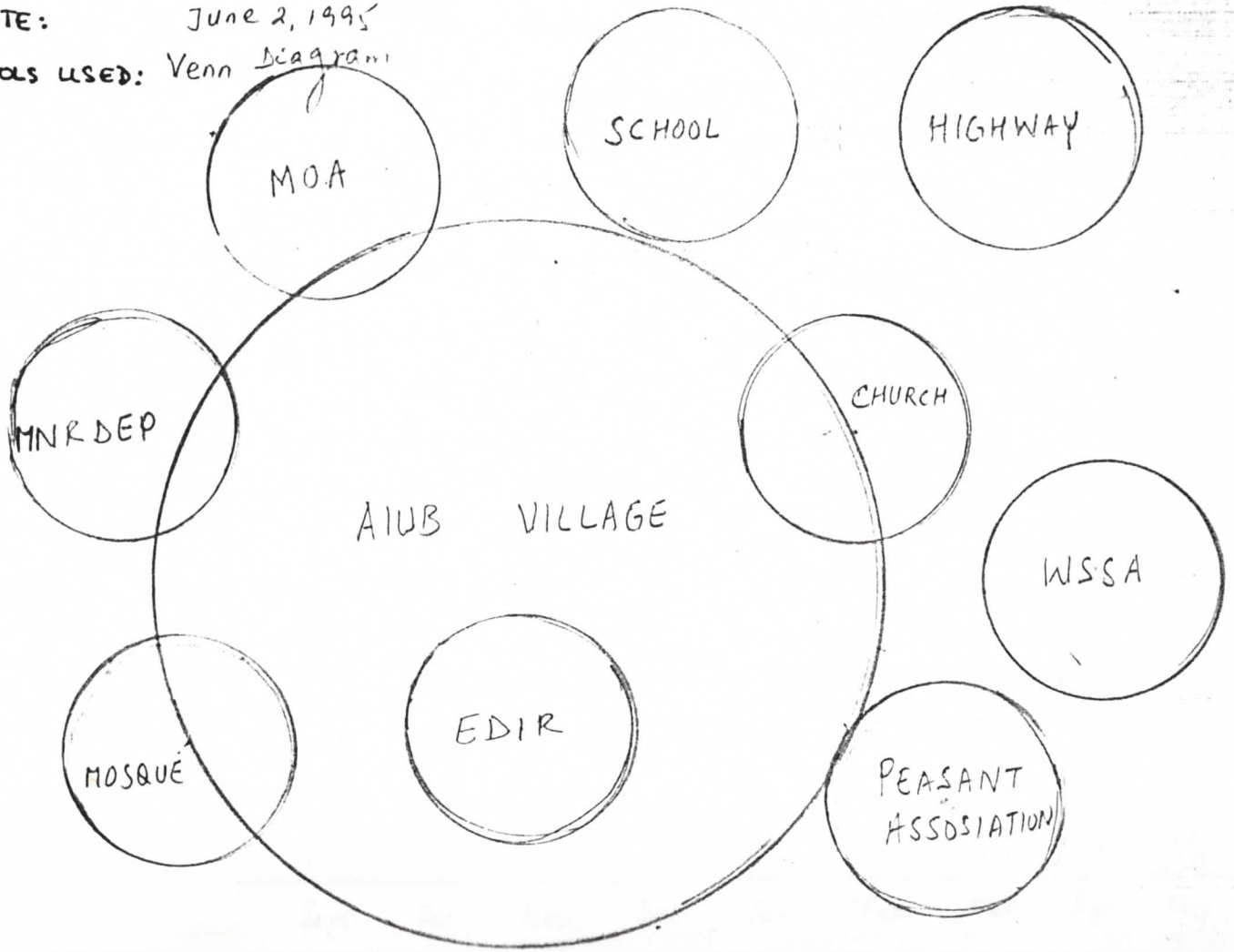
Fig-1 Map of Aiub Village as drawn by the Community

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Venn Diagram



Source – Focus group men

Fig 3 Showing the relationship of the village with different institutions of the government (drawn by male community members)

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Bar graph

source: Focus Group

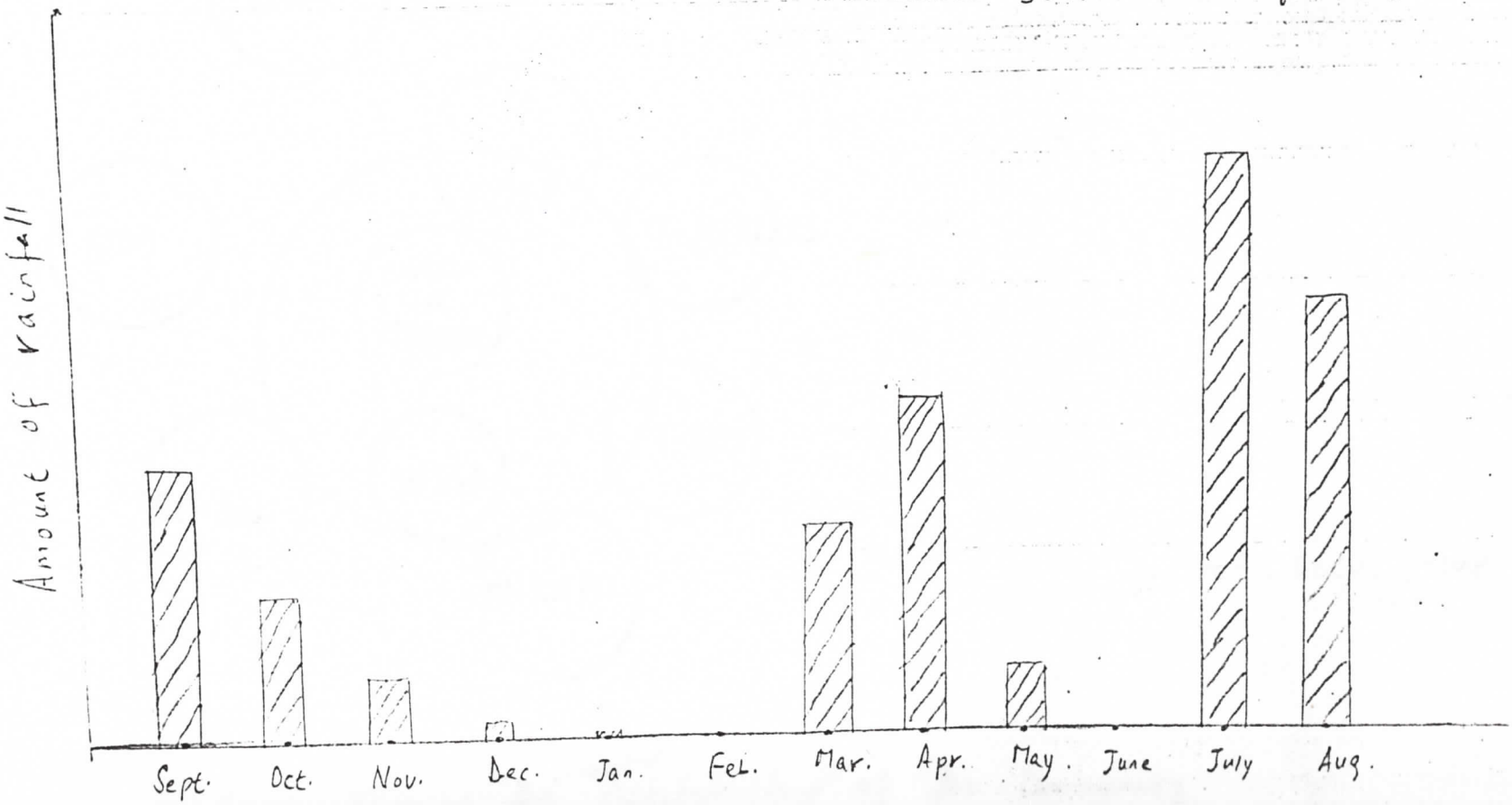


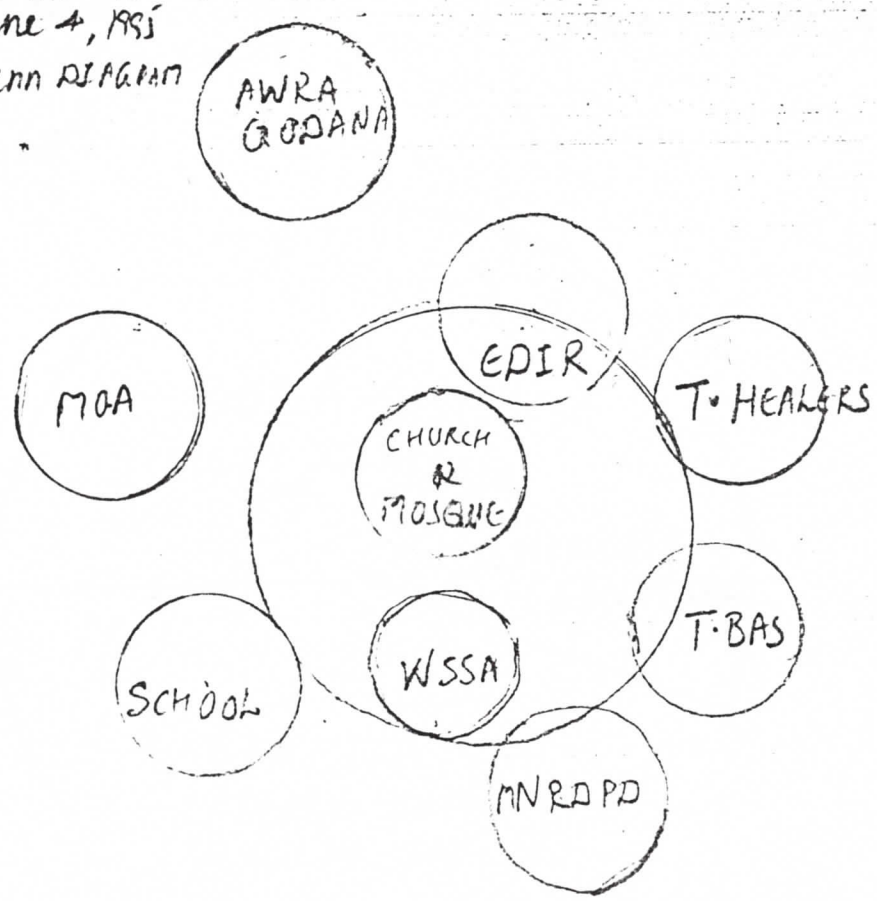
Fig. 2 Bar graph showing the relative distribution of rainfall in different months of Aiub village

VILLAGE: AIUB

GROUP NAME: ZOBLE

DATE: June 4, 1995

TOOLS USED: Venn DIAGRAM



Source: Focus group women.

Fig 4 Showing the relative relationship of the community to different institutions (drawn by female community members).

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Pie chart

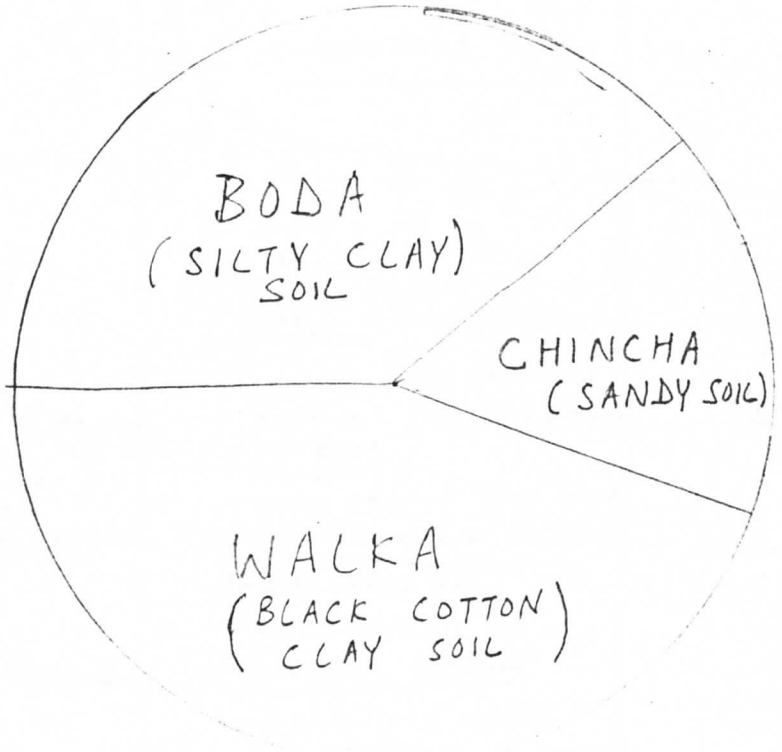


Fig 5. Areal coverage of different soil types in Aiub village

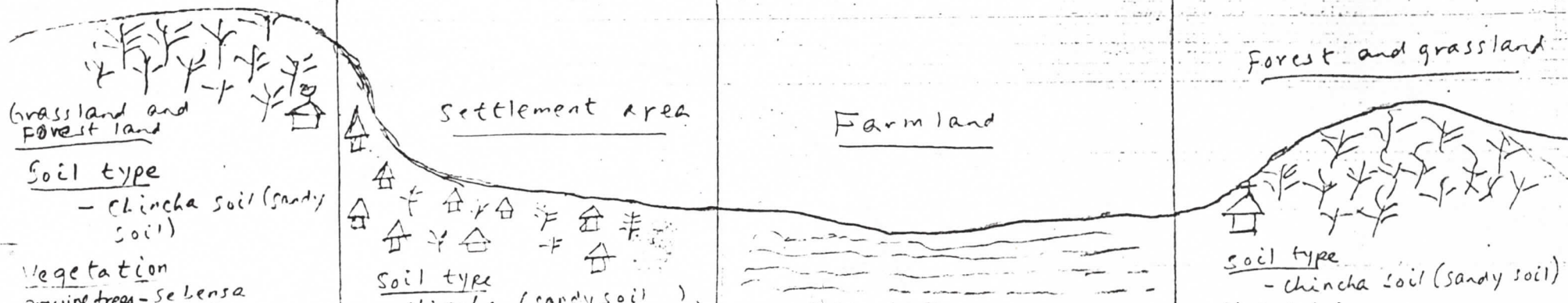
source - community

VILLAGE: Aiul

GROUP NAME: ZOBEL

DATE: June 4, 1995

TOOLS USED: Transect



Grassland and Forest land

Soil type
- Chincha soil (sandy soil)

Vegetation
growing trees - Selensa
Watcho
Dovet
korera
Bedena

Major composition by sequence
- Doret
- Selensa
- Bedena

Soil Conservation measure
- Terracing
- check dam
- Area closure (not good management)
- trees

Water resources
- dry gullies (very big)

physical feature
- tip of the hill
- many gullies

Pond

Settlement area

Soil type
- Chincha (sandy soil)
- Boda (silty sandy soil)

Vegetation
- Kinchib (for fencing)
- Bedena (for shade)
- kunkure
- kulkual
- crop around their home

Soil Conservation measure
- small check dams
- vegetation

physical feature
- stabilised land
- the settlement area also includes grassland
- almost all institutions exist in this area
- the land is having a medium slope

Farmland

Soil type
- Walka (Black cotton clay soil)

Vegetation
- growing teff

Soil conservation measure
- Soil bund
- check dam with kinchib and stone

phyfical feature
- the land is plain

Forest and grassland

soil type
- chincha soil (sandy soil)

Vegetation
growing trees - sebensa
- mentero
- Mewata
- Dorret

Soil Conservation measure
- Area closure (not good management)
- Terrace & check dam
- trees

physical features
- many gullies
- tip of a hill

source - Key informants & PRA team

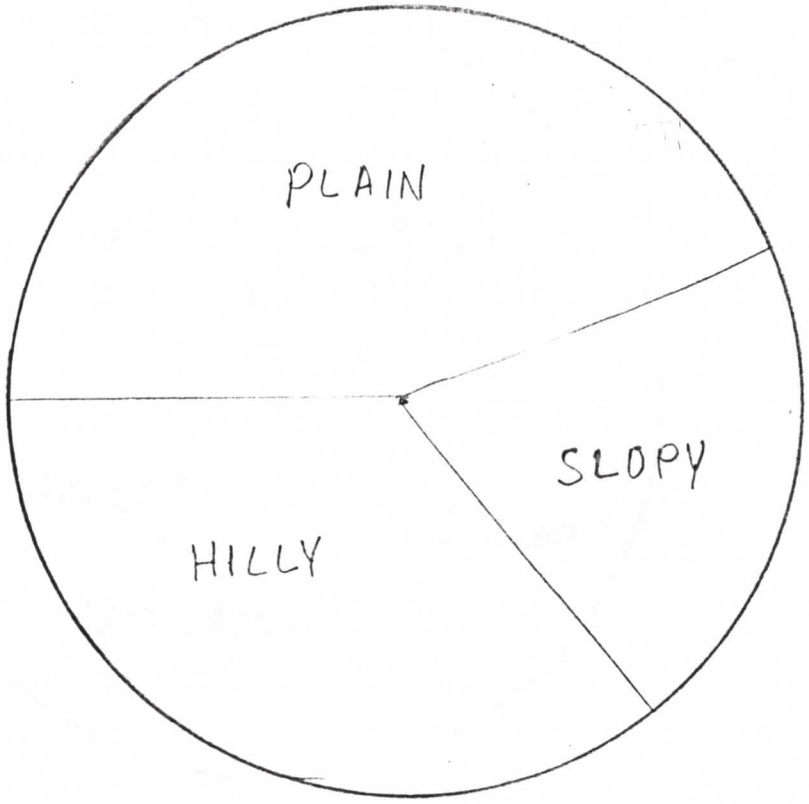
Fig. 6

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Pie Chart



Source :- [illegible]
Focus group

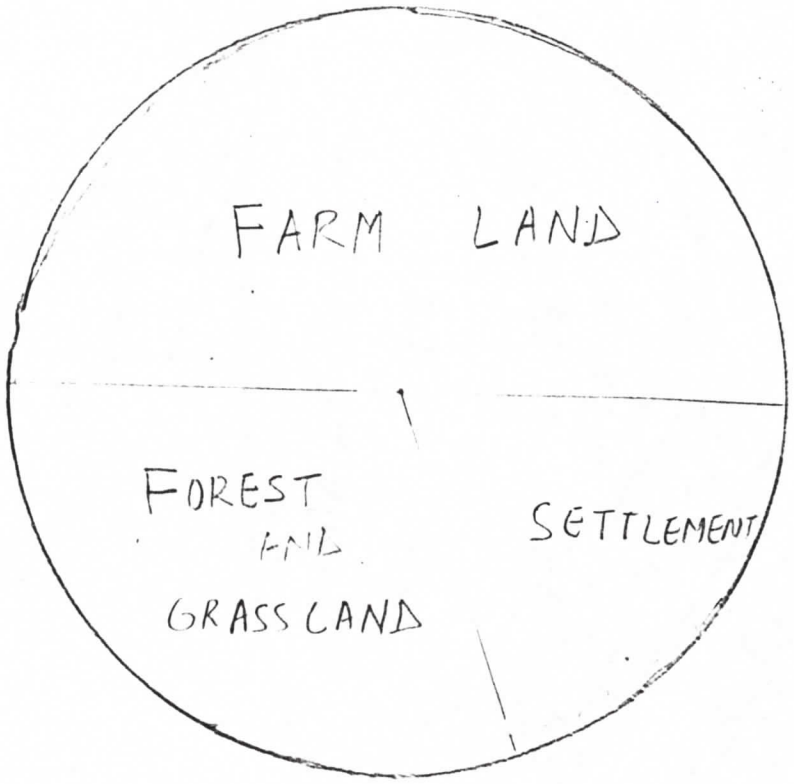
Fig. 7 Land slope classification of Aiub village

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Pie chart



Note

The area of the settlement includes
- area covered by institutions
- (School, Grain mill, MOA, NRDEP, etc)
- area covered by houses of villagers
- area covered by farmland around villagers' house

Fig 8. Land use pattern of Aiub village Source - Focus group

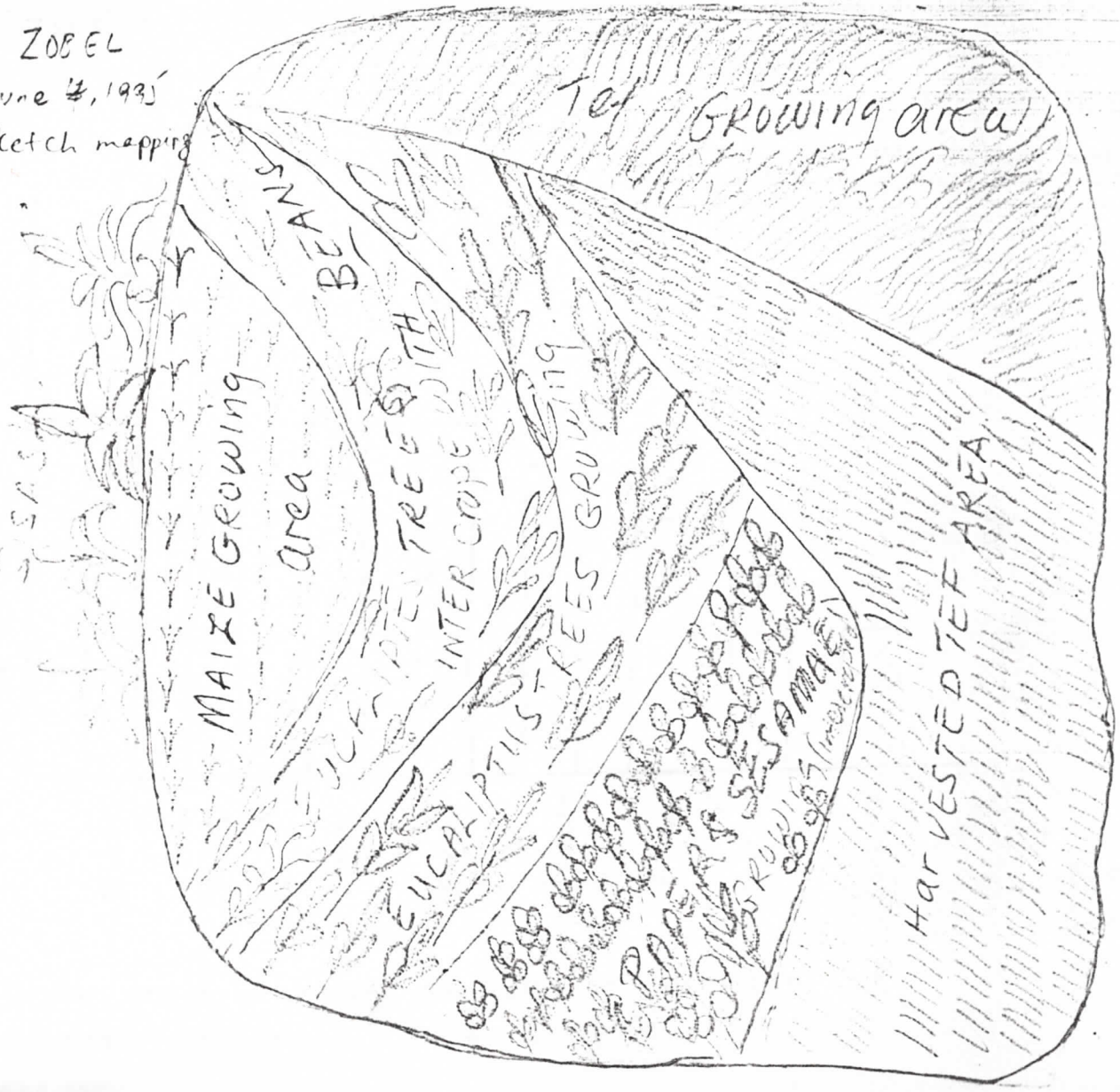
VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 7, 1995

TOOLS USED: sketch mapping

LAND USE PATTERN OF ONE FARMER (Ato Wondiye Sisay) IN AYDB VILLAGE



Source - PRA Team

Fig. 9

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VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 3, 1995

TOOLS USED: Bar graph

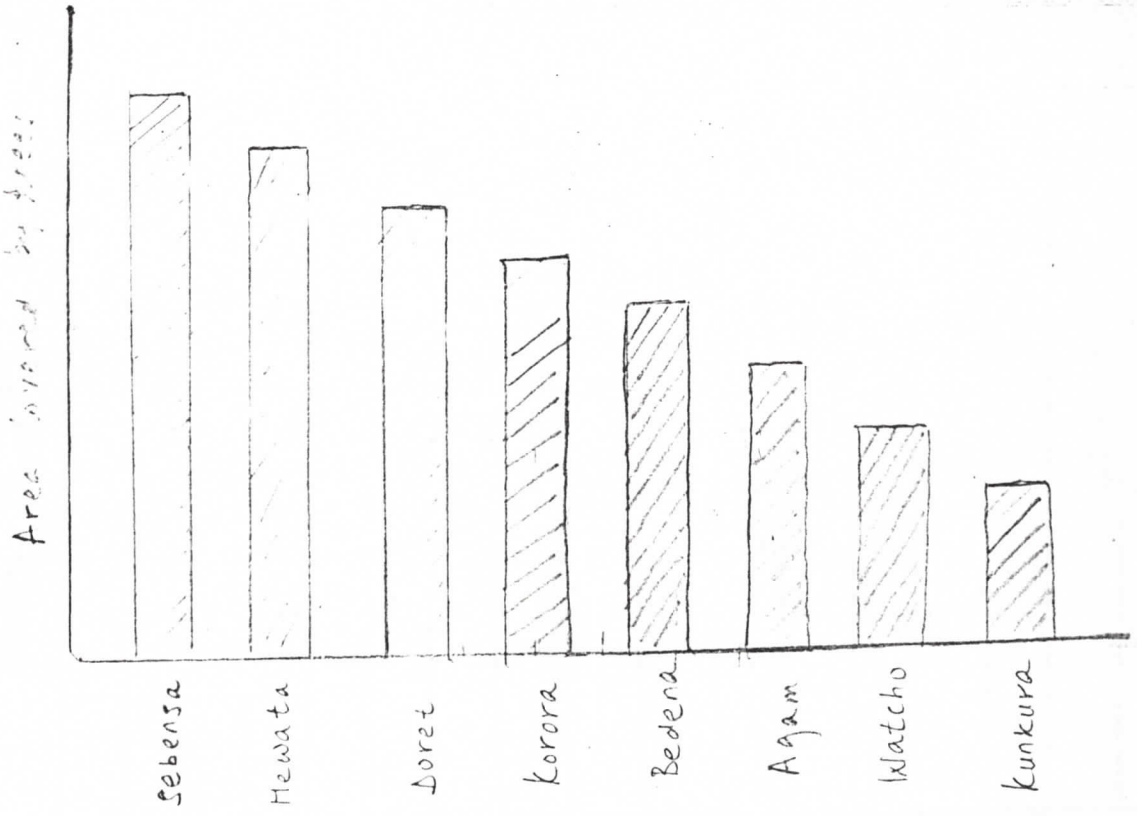


Fig 10
Source: Focus group

Bar graph showing the relative coverage of tree species in Aiub village

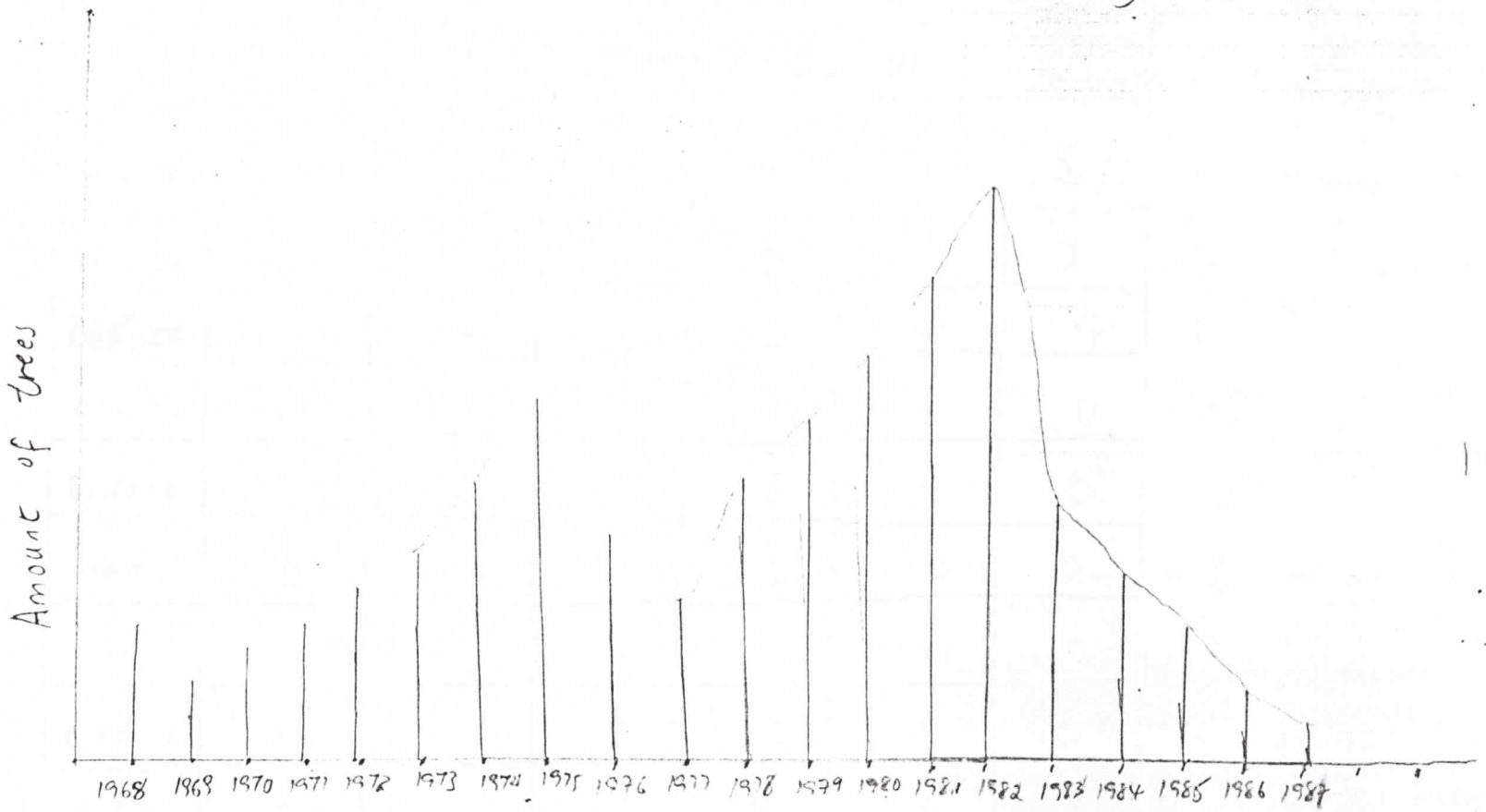
VILLAGE: Aiwb

GROUP NAME: ZOBEL

DATE: June 3, 1995

TOOLS USED: Trend diagram

Fig 11
Source: Focus group



Trend diagram showing the coverage of forest from 1968 - 1987 E.C

VILLAGE: Ayub

GROUP NAME: ZOBEC

DATE: June 3, 1995

TOOLS USED: Preference ranking &

	For farm implement	For house construction	For fencing	for fuelwood	for shade	for soil conservation	
sebensa	5	0	0	4	1	5	15
Mewata	0	1	0	0	0	3	4
~~DoBatt~~	1	5	0	5	2	4	17
Korora	2	4	2	1	3	0	12
Bedena	3	2	1	2	4	0	12
Agam	0	0	4	0	0	2	6
Watcho	0	0	0	3	0	0	3
kunkura	4	3	3	0	5	0	15
Ajjo	0	0	0	0	0	1	1
Kinchib	0	0	5	0	0	0	5

Fig 92
Source: Focus group

Preference ranking: trees by use

VILLAGE: Atub

GROUP NAME: ZOBEL

DATE: June 3, 1995

TOOLS USED: Pairwise Ranking

	Check dam	Terracing	afforestation	Irrigation	Pond Construction	Area closure
Checkdam		Checkdam	Checkdam	Irrigation	Checkdam	Area Closure
Terracing			Terrace	Terrace	Terrace	Area Closure
afforestation				Aff.	Aff.	Area Closure
Irrigation					Irrigation	Area Closure
Pond Construction						Area Closure
Area closure						

Area closure	5
Check dam	3
Terracing	3
Afforestation	2
Irrigation	2
Pond Construction	0

SOURCE: Focus group

Fig 13 Soil & Water Conservation Measures

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 4, 1995

TOOLS USED: Bar graph

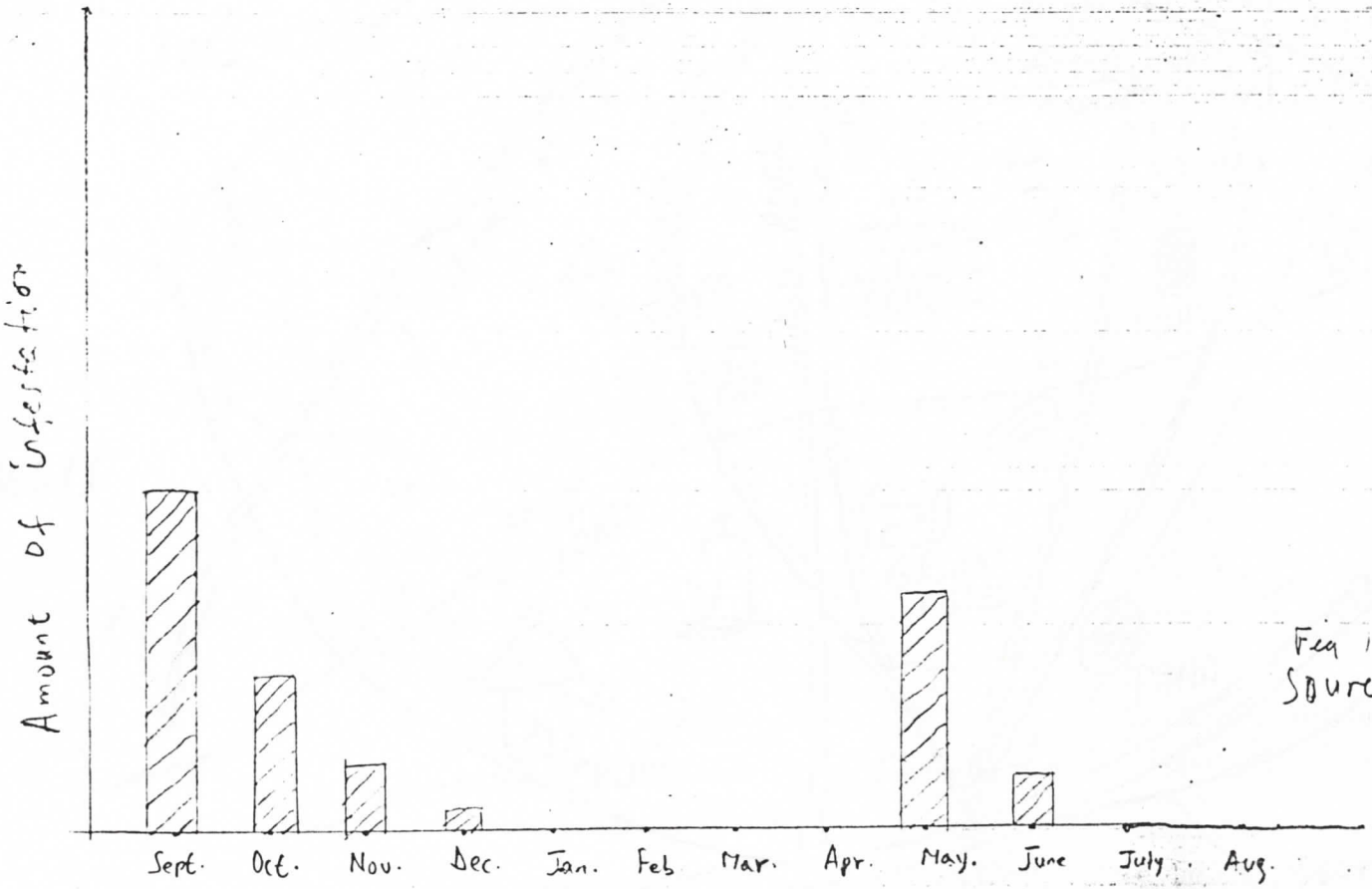


Fig 1
Source: Focus group female

Fig. 14 Showing the relative infestation of Aiub villagers by Malaria.

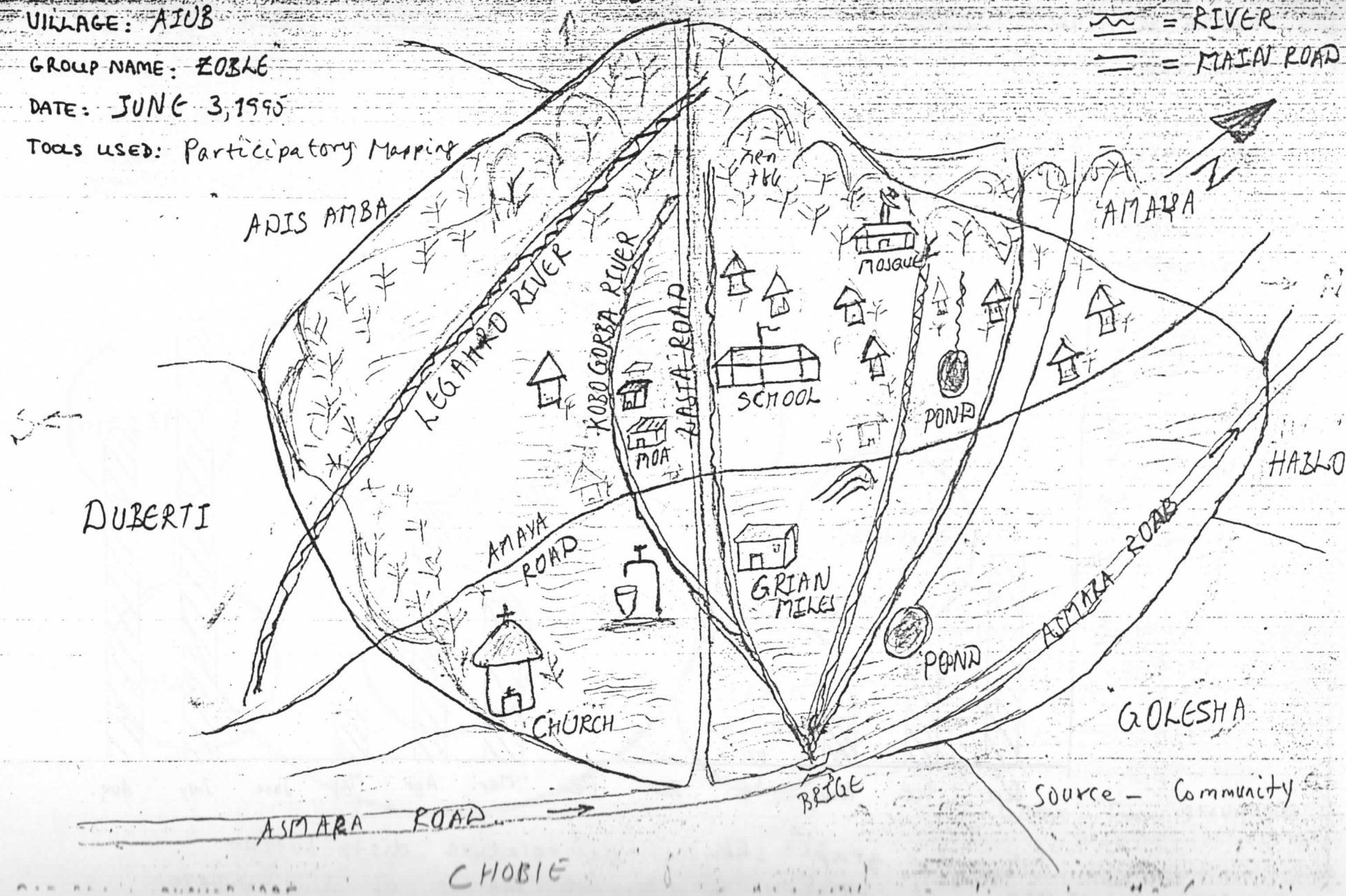
(1)

VILLAGE: AIUB

GROUP NAME: ZOBLE

DATE: JUNE 3, 1990

TOOLS USED: Participatory Mapping



Source – Community

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Bar graph

source: Focus group

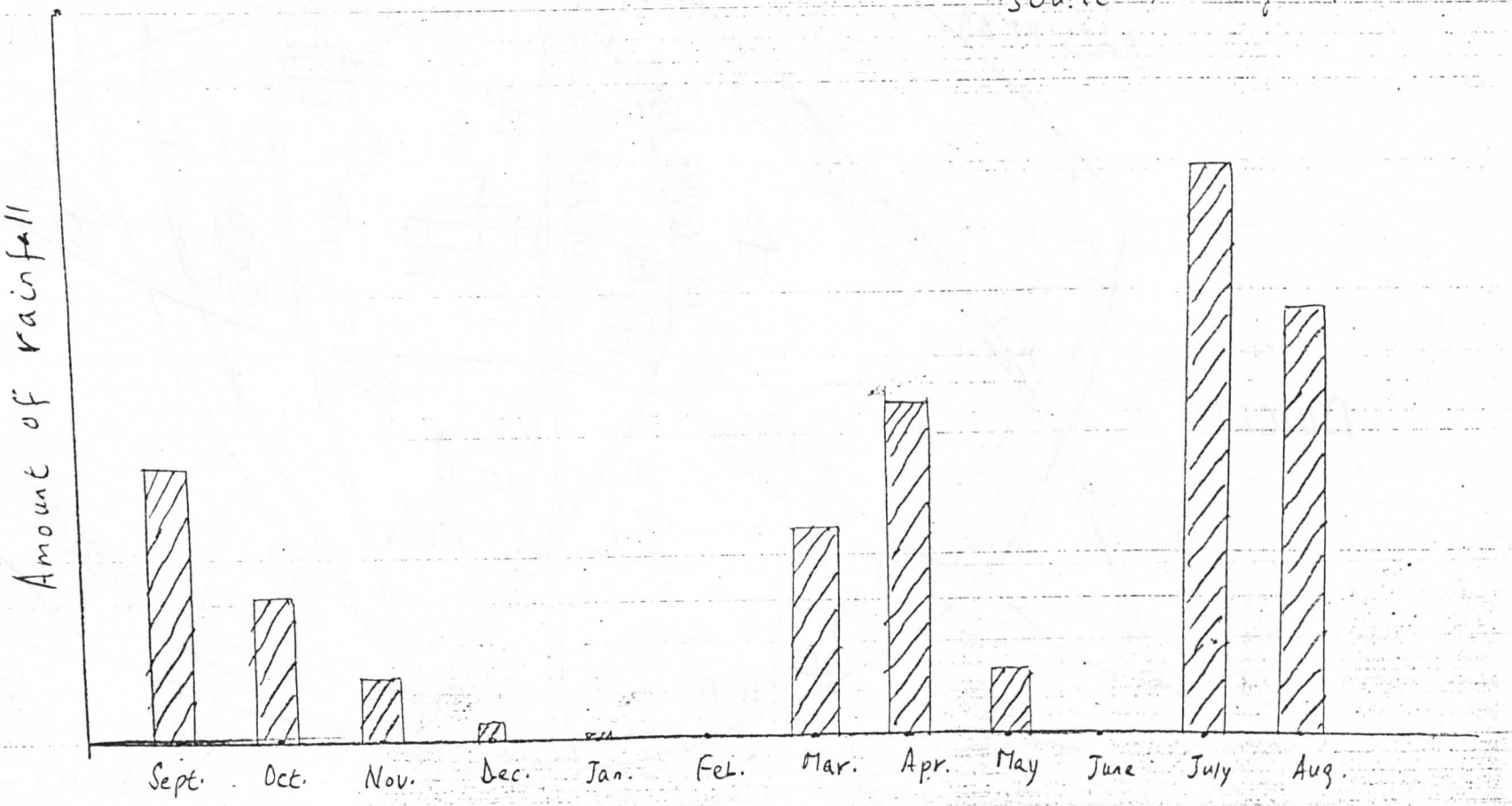


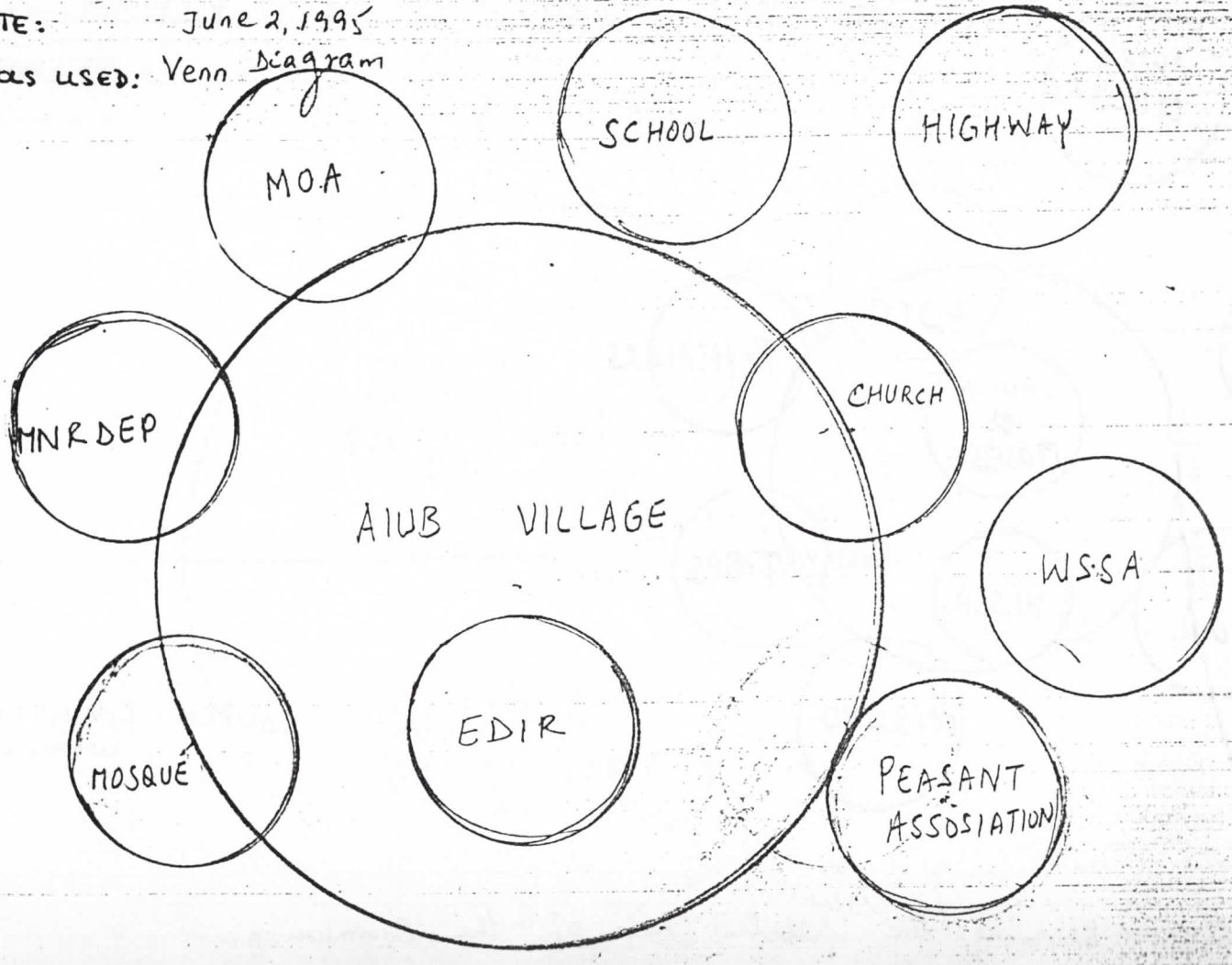
Fig. Bar graph showing the relative distribution of rainfall in different months of Aiub Village

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Venn Diagram



Source – Focus group men

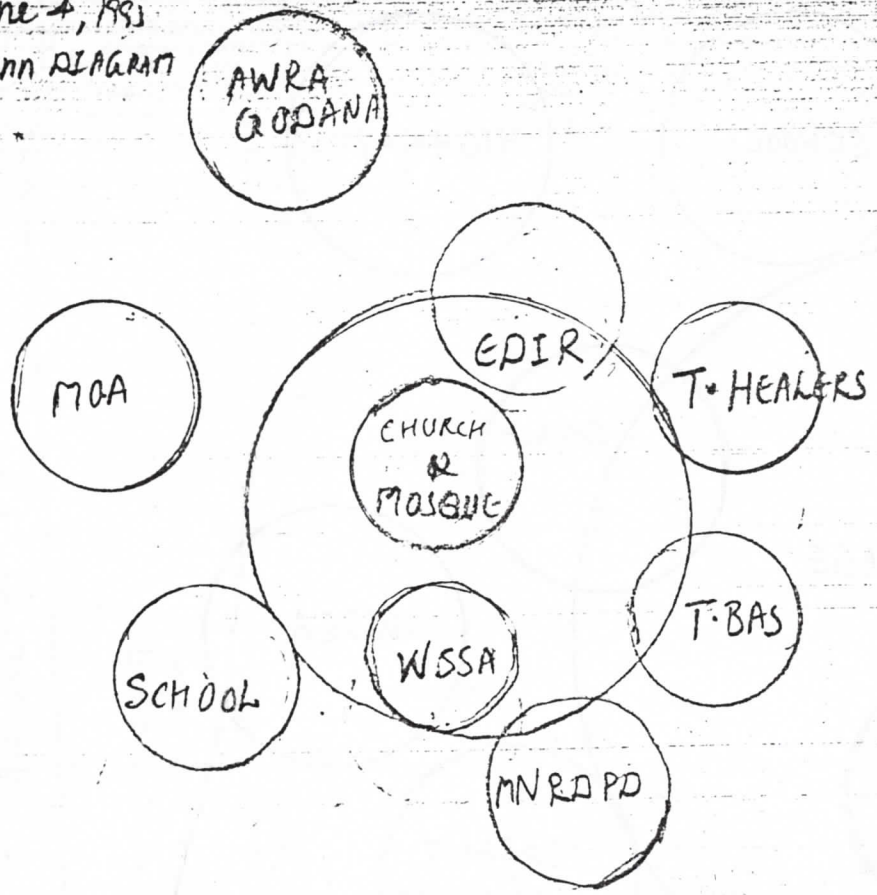
Fig 2. Showing the relationship of the village with different institutions

VILLAGE: AIUB

GROUP NAME: ZOBLE

DATE: June 4, 1995

TOOLS USED: Venn DIAGRAM



source: Focus group women.

Fig: Showing the relative relationship of the community to different institutions (drawn by female community members).

SCF ODA WORKSHOP 1995

VILLAGE: Alub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Pie chart

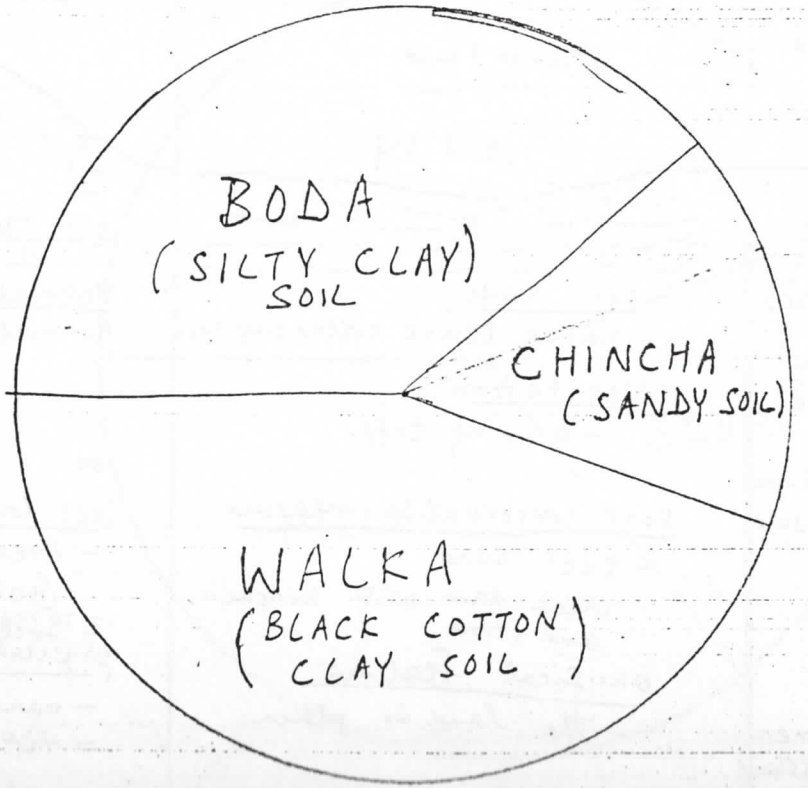


Fig. 4: Areal coverage of different soil types in Alub village

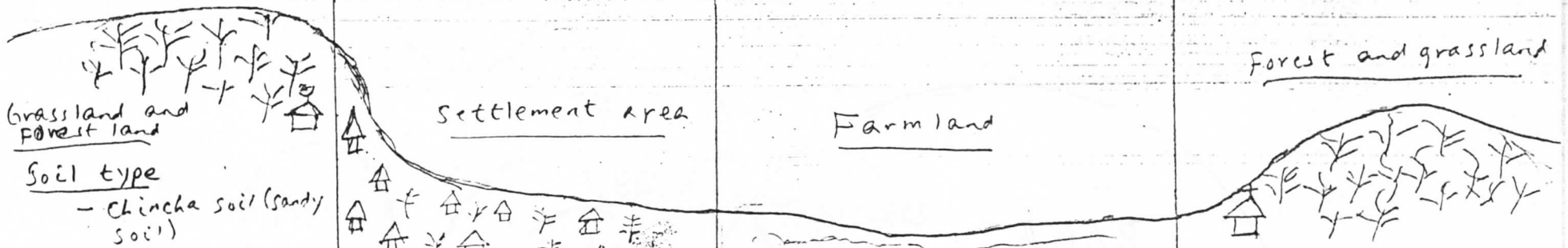
source- community

VILLAGE: Aiul

GROUP NAME: ZOBEL

DATE: June 4, 1995

TOOLS USED: Transect



Grassland and Forest land

Soil type
- Chincha soil (sandy soil)

Vegetation
growing trees - Sebensa
Watcho
Doret
Korera
Bedena

Major composition by sequence
- Doret
- Sebensa
- Bedena

Soil Conservation measure
- Terracing
- Check dam
- Area closure (not good management)
- trees

Water resources
- dry gullies (very big)

physical feature
- tip of the hill
- many gullies

Settlement area

Soil type
- Chincha (sandy soil)
- Boda (silty sandy soil)

Vegetation
- Kinchib (for fencing)
- Bedena (for shade)
- kunkure
- kulkual
- crop around their home

Soil Conservation measure
- small check dams
- vegetation

physical feature
- stabilised land
- the settlement area also includes grassland
- almost all institutions exist in this area
- the land is leveling

Farmland

Soil type
- Walka (Black cotton clay soil)

Vegetation
- growing teff

Soil conservation measure
- Soil bund
- check dam with kinchib and stone

physical feature
- the land is plain

Forest and grassland

soil type
- chincha soil (sandy soil)

Vegetation
growing trees - sebensa
- mentero
- Newata
- Dorret

Soil conservation measure
- Area closure (not good management)
- Terrace & check dam
- trees

physical features
- many gullies
- tip of a hill

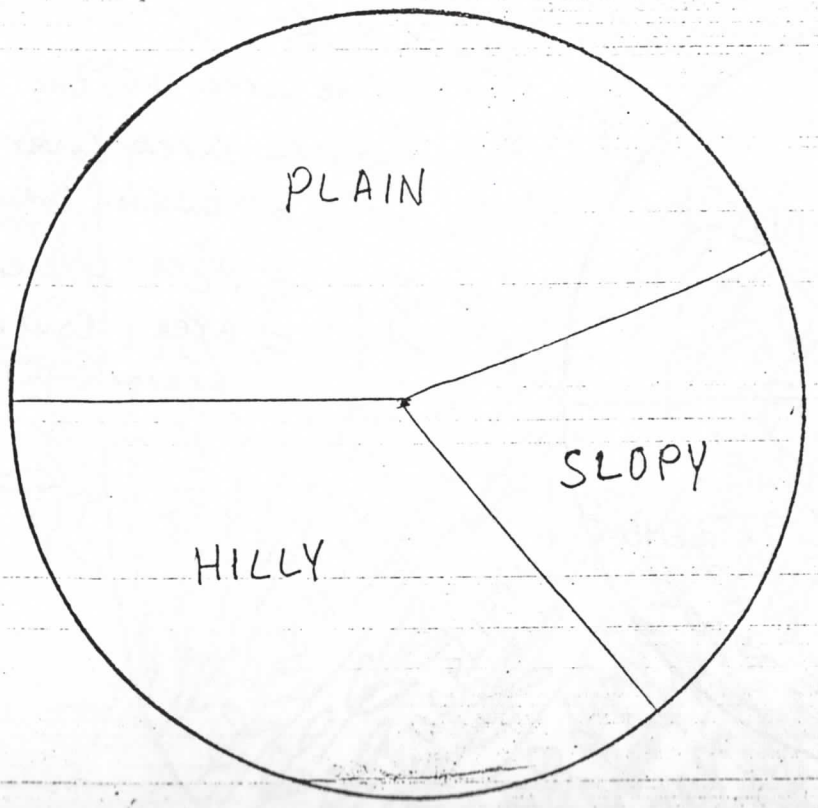
source - Key informants & PRA team

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Pie Chart



Source – Key informants
Focus group

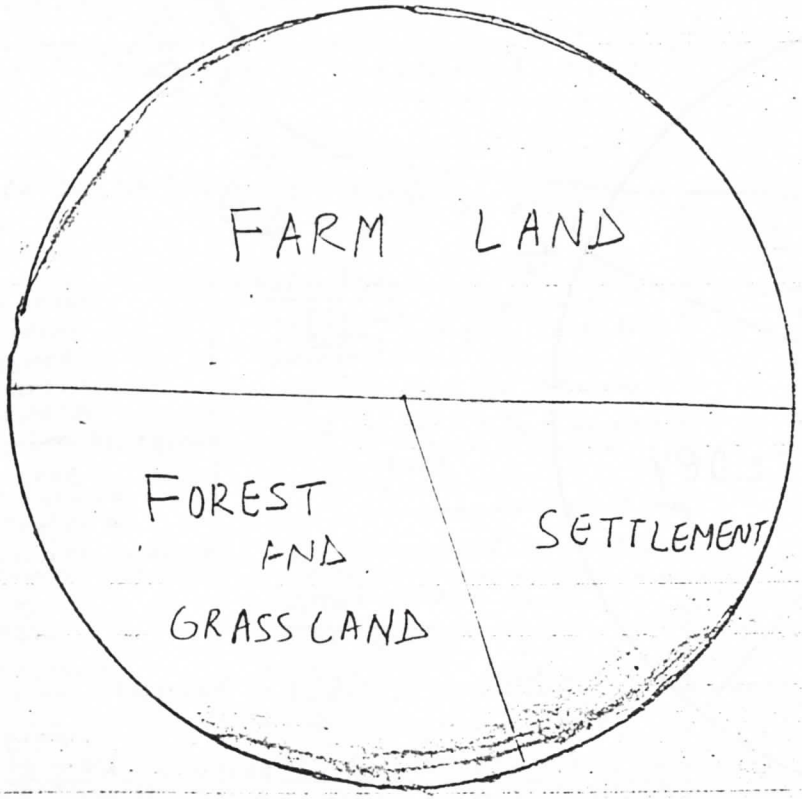
Fig. 7. Land slope classification of Aiub village

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Pie chart



Note

The area of the settlement includes
- area covered by institutions (School, Grain mill, MOA, NRDEP, etc)
- area covered by houses of villagers
- area covered by farmland around villagers' house

Fig. Land use pattern of Aiub village Source - Focus group

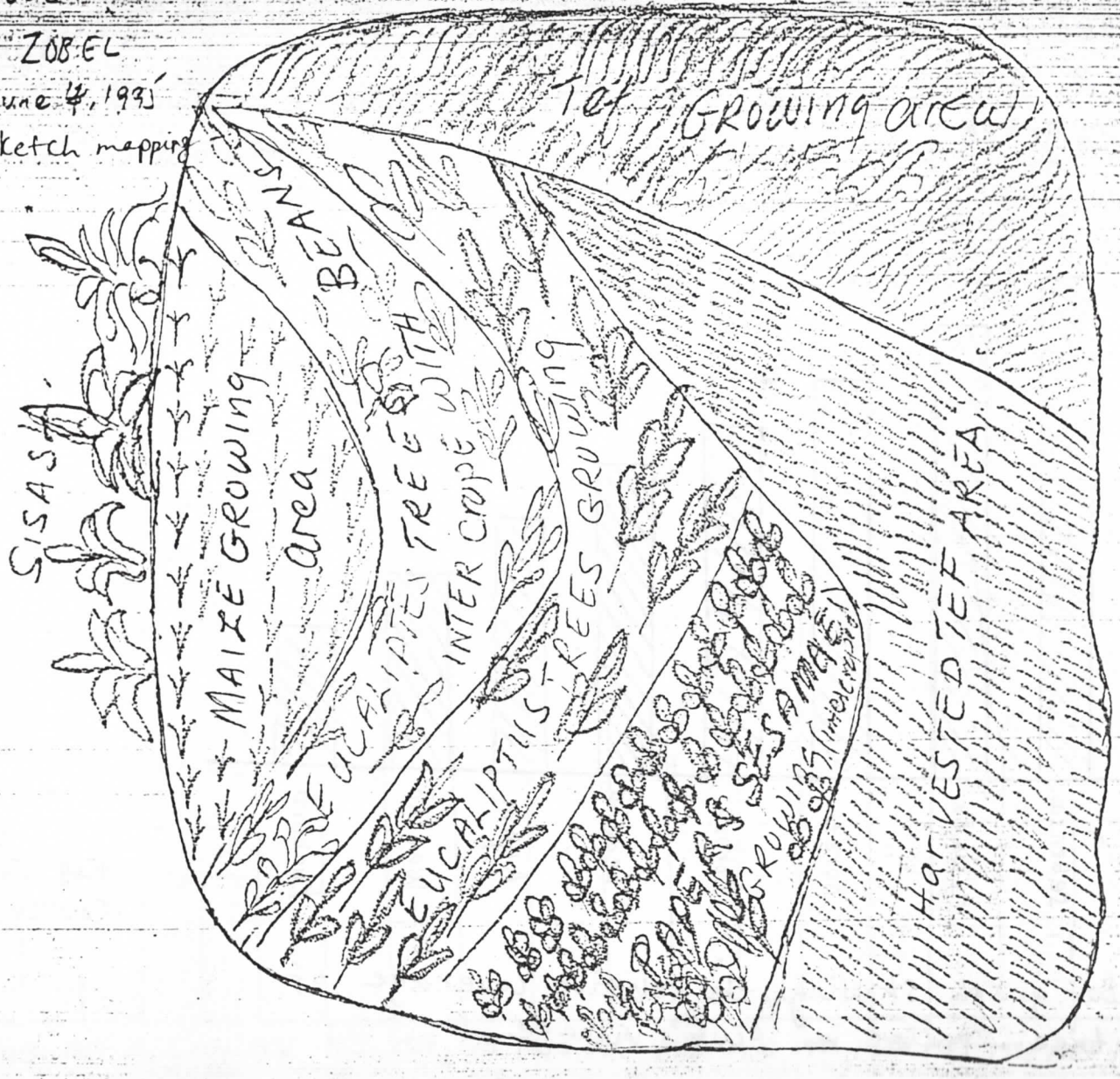
(9) LAND USE PATTERN OF ONE FARMER (Ato Wondiye Sisay) IN AYDA VILLAGE

VILLAGE: Ayda

GROUP NAME: ZOBEL

DATE: June 4, 1995

TOOLS USED: Sketch mapping



Source - PRA Team

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 2, 1995

TOOLS USED: Bar graph

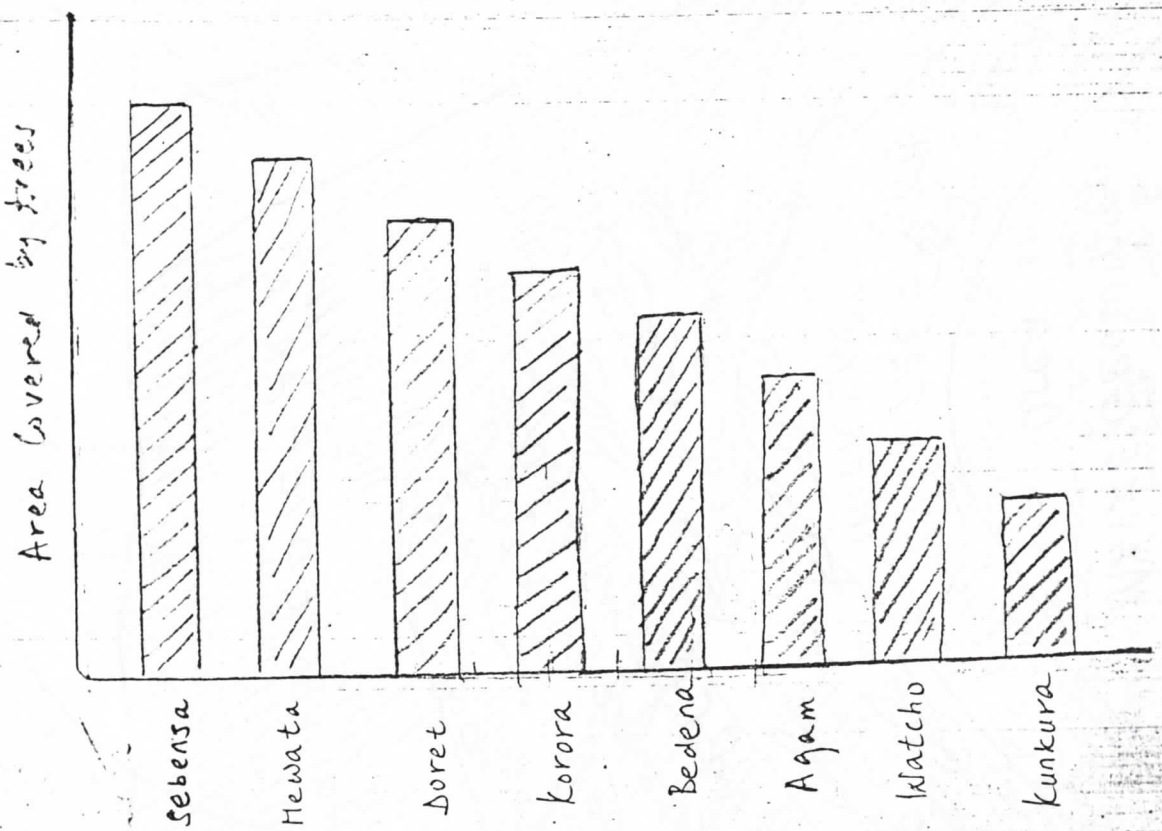


Fig 7

Source: Focus group

Fig 7

Bar graph showing the relative coverage of tree species in Aiub village

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VILLAGE: Arub

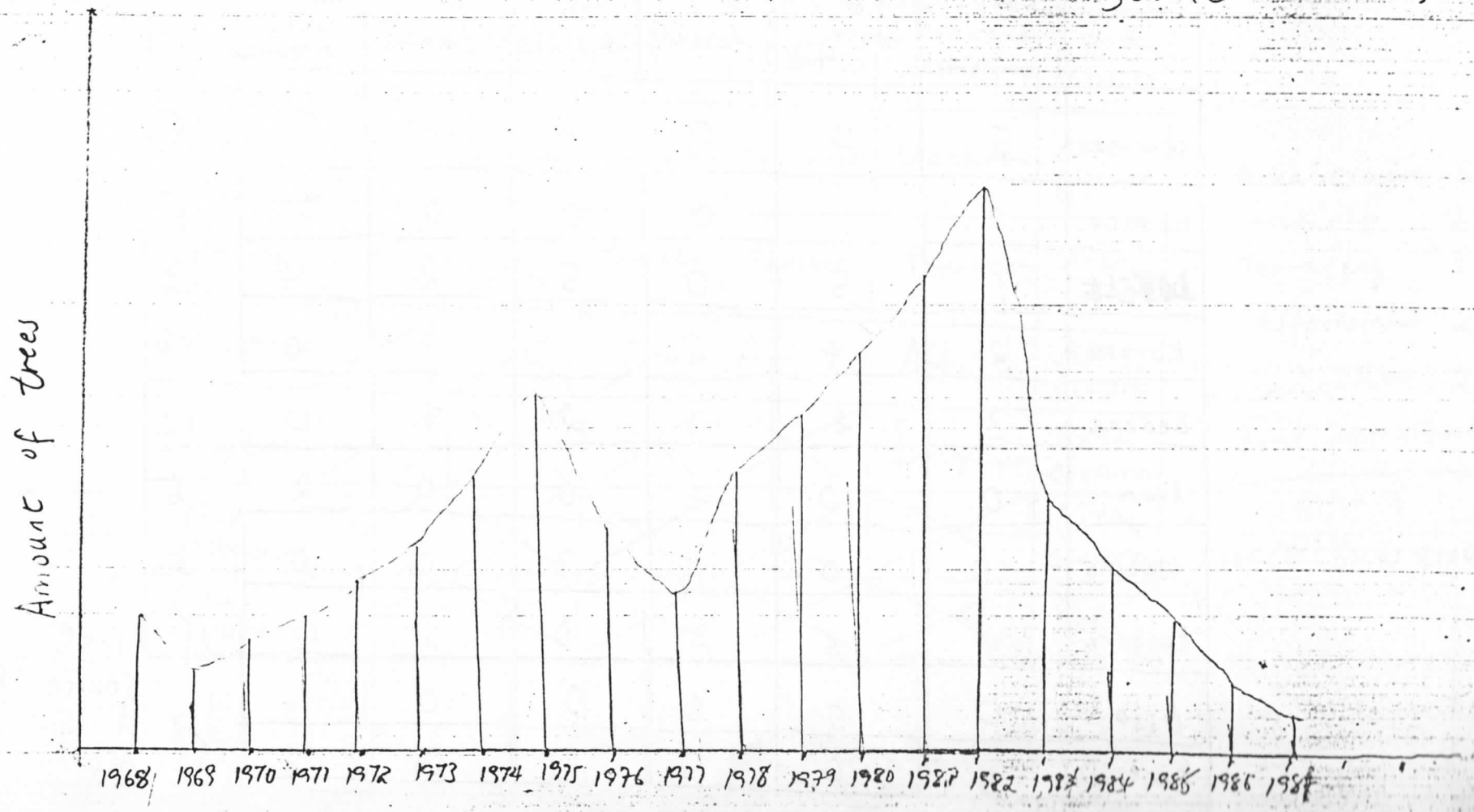
GROUP NAME: ZOBEL

DATE: June 3, 1995

TOOLS USED: Trend diagram

Fig 9

Source: Focus gro



Trend diagram showing the coverage of forest from 1968 - 1987 E.C

VILLAGE: Aiub

GROUP NAME: ZOBEC

DATE: June 3, 1995

TOOLS USED: Preference ranking 3

	For farm implement	For house construction	For fencing	for fuelwood	for shade	for soil conservation	
sebensa	5	0	0	4	1	5	15
Mewata	0	1	0	0	0	3	4
~~Dobatto~~	1	5	0	5	2	4	17
Korora	2	4	2	1	3	0	12
Bedena	3	2	1	2	4	0	12
Agam	0	0	4	0	0	2	6
Watcho	0	0	0	3	0	0	3
kunkura	4	3	3	0	5	0	15
Ajjo	0	0	0	0	0	1	1
Kinchib	0	0	5	0	0	0	5

Fig 9

Source: focus gro

VILLAGE: Acub

GROUP NAME: ZOBEL

DATE: June 3, 1995

TOOLS USED: Pairwise Ranking

	Check dam	Terracing	afforestation	Irrigation	Pond construction	Area closure
Checkdam		Checkdam	Checkdam	Irrigation	Checkdam	Area Closure
Terracing			Terrace	Terrace	Terrace	Area Closure
afforestation				Aff.	Aff.	Area Closure
Irrigation					Irrigation	Area Closure
Pond construction						Area Closure
Area closure						

Area Closure 5
Check dam 3
Terracing 3
Afforestation 2
Irrigation 2
Pond Constructin (

SOURCE: Focus grou

Fig Soil & Water Conservation Measures

VILLAGE: Aiub

GROUP NAME: ZOBEL

DATE: June 4, 1995

TOOLS USED: Bar graph

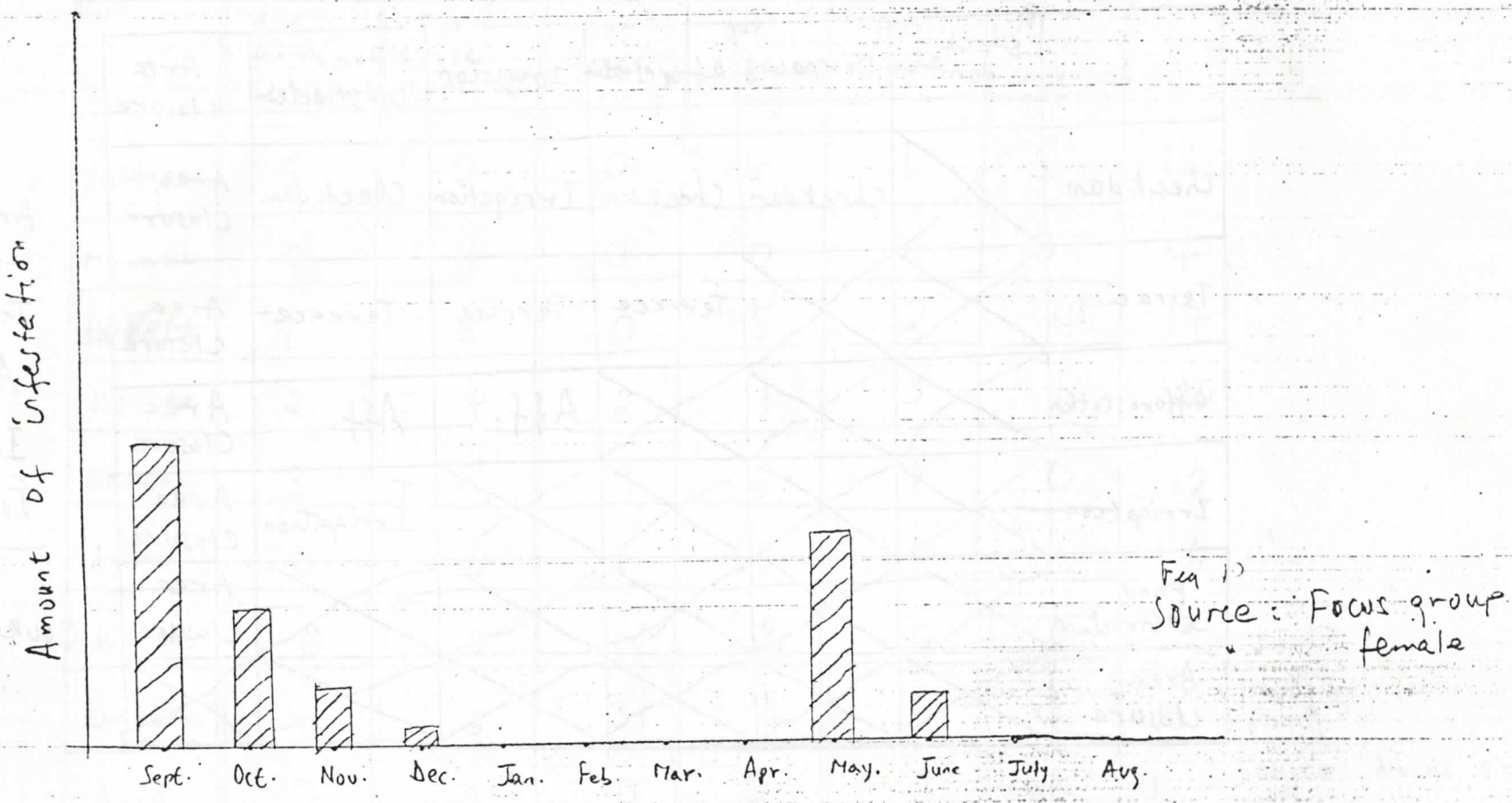


Fig 1)
Source: Focus group female

Fig. Showing the relative infestation of Aiub villagers by Malaria.

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REPORT ON PRA FIELD EXERCISE

GROUP NAME - RAYA

ASSESSMENT OF POTENTIALS AND CONSTRAINTS OF CROP PRODUCTION AT MENDEFERA VILLAGE



I. INTRODUCTION
II. OBJECTIVE(S)
III. DESCRIPTION

1.0 PHYSICAL FEATURES OF THE STUDY AREA.
- 1.1 Location
- 1.2 Topography
- 1.3 Size
- 1.4 Soil
- 1.5 Climate (Rainfall)
- 1.6 Water resources
- 1.7 Vegetation

2.0 SOCIO -ECONOMIC CONDITIONS OF THE AREA.
- 2.1 Population (size composition settlement etc)
- 2.2 Culture (language,religion)
- 2.3 Social services and Institutions
  - 2.31 Schools
  - 2.32 Clinics
  - 2.33 NGOs
  - 2.34 GOs
  - 2.35 Local (traditional)
  - 2.36 Accessibility (Road, Telephone, Radio etc)

3.0 LAND USE AND LANDHOLDING

4.0 CROP
- 4.1 Types
- 4.2 Area coverage / yield
- 4.3 Culture practices / traditional/
- 4.4 Labour by Gender
- 4.6 Uses (house hold consumption, marketing other)

5.0 CONSTRAINTS ON CROP PRODUCTIONS

6.0 CONCLUSION AND RECOMMENDATION

7.0 ANNEXES
- FIGURES
- LIST OF GROUP MEMBERS

INTRODUCTION:

From May 29 to June 6,1995, a PRA training was organized by SCF (UK) at KOBO, 50 kms away to the north of Woldia

In the workshop experts from different organizations (GOs & NGOs) attended brainstorming sessions and did field exercises. Participants were divided in to 3 groups for the field exercise.

Our group, named RAYA did its field exercise on 3 villages (upper and lower side of the road & Kidanemehert) of PA 08. These villages are found 5 kms away from the Woreda centre (KOBO). There is a dry weather road passing through the PA to ZOBEL.

We stayed in the villages from June 2-4, 1995 and worked with farmers on assessment of potentials and constraints of crop production. The research topic is influenced by experts in the team and crop condition of the area.

Eventhough some participants have field experience in PRA approaches, the team was ready to learn DOING WITH FARMERS. It is useful to know the problem at the grass root level from the farmers and alleviate the problems with them as they are the decision makers.

OBJECTIVES

The following are the objectives of the study in conducting the ASSESSMENT OF POTENTIALS and CONSTRAINTS OF CROP PRODUCTION in these villages.

. To assess and know the crop potentials of the area
. To identify the major constraints of crop production

. Based on the potentials and constraints identified, recommend possible options /solutions/.

. To learn from the farmers and tap their INDIGENOUS TECHNICAL KNOWLEDGE (ITK)

1.0 PHYSICAL FEATURES OF THE STUDY AREA

1.1 LOCATION :
Mendefera /kidanenmhiret village(s) are found in PAOS /Mendefera. It is bordered by PA 07 in the north, PA 013 in the south-east, PA 012 in the East, PA 03 in north-west, and Dalecha village (in the same PA) in the south. The total area of the villages is about 1300 miles.

1.2 TOPOGRAPHY
The villages are characterized by small hills at the middle and vast, flat, and gently slope agricultural land (cultivated land) surrounding the village. Refer the transect where flat crop land is located.

1.3 SOIL

There are different kinds of soil in the village; but the main categories are BLACK (CLAY), SANDY,and LOAM soil. Farmers call the sandy loam soil as 'Keyate, referring to the reddish colour.

We observed most of the areas (flat) between the hills are made of clay soil. The hills are made up of sandy soil, and some are very rocky due to degradation and/or erosion. The sandy loam soil, brown in colour is found around the villages and is mainly an alluvial deposit. Such areas are referred as 'yewuha meret' which means run-on area (land) where the run-off (flood) from the Dega areas (high land) out side the PA is diverted and captured.

The flood from the neighbouring high land areas of Gidan woreda is a very important source of water (for irrigation in the rainy season) and soil (alluvial deposit). During the rainy seasons, the rain form these highlands is convoyed to the lowland areas. Farmers at Mendefera divert the flood into their sorghum fields for two reasons: to benefit the alluvial deposit and to alleviate the moisture stress.

1.4 WATER RESOURCE

As we have observed and learnt from the farmers, the biggest issue is the problem of drinking water for human and livestock. There are no surface or ground water like stream and springs in the village. Attempts by the government (EWWCA) were made to alleviate the problem by digging three deep wells out of which two were well functioning till recently. Farmers privately tried to dig about 40 hand-dug wells. Because of poor sanitation water born disease are affecting the villagers.

During our stay in the village, farmers insisted that we have a look at these wells. Due to time constraints we could not respond to their requests. The ponds constructed by FFW for the purpose of collecting rain water for livestock are also causing Malaria.

Farmers spend most of their time for fetching water, they have to walk more than 6 kms to purchase drinking water.

1.5 VEGETATION

The eminent trees species on the hills and scattered in the farm land indicates that the area was very rich in vegetation. After the establishment of the village and increase in population, the demand for farm land, construction and fuel wood had increased resulting in deforestation of the area.

There were many natural tree species, among these the following are present (we use local names): DORET, ADER,

GURBI, KURKURA (very rare), KORERA, BEDENA, KINCHIPT (euphorbia), GUMERO, WODI (cactus) and SUKOKE. Kinchipt and cactus are the dominant species found at present. Kinchipt, recently introduced to the village, is expanding very fast and make good fencing. Some times it is used for fuel but the smoke is very irritating and causes eye problem. As we have observed and heard from the farmers, there is no attempt towards afforestation by any organization.

2.0 SOCIO-ECONOMIC CONDITIONS

2.1 Population

The total population of the PA is 4990 (2092 male, 2898 female), out which there are 531 Male and 467 female heads of households.

2.2 Culture

Language : all villagers speak Amharic.

Religion : in the village there are two type of religions Christianity and Muslim.

Local/ cultural organizations there are 2 local cultural organizations in the village.

* "Abahaga" "kera" - local cultural committee which reconcile members of the community when they kill each other,

2. "Zeweld" - Local cultural committee which prevent villagers from revenging each other and make peace agrement between themselves.

2.3 Social Organizations and Institution.

These villages have direct or indirect relation with different organizations. With regard to the degree of importance of these institution to the community, the Service Cooperative stands first followed by, the Kobo Woreda Administration, the Agriculture Development Office, the Natural Resources Development and Environmental Protection respectively. More over the WFP which assist the school and EWWCA have some contact with the villagers.

On the other hand the intra village organisations, which are claimed to have greater importance than the ones out side, the "Zeweld", the PA office, the church and the mosque are equally important followed by "Aba haga" and the elementary school of the P.A. See the venn diagram.

2.4 Economic activities

Almost all the farmers are engaged in mixed farming. The major source of income of the villagers is from crop production; while miner in come is obtained from livestock, sale of firewood, cactus fruit and wage income.

3.0 Crop production

The interdependence of arable and livestock farming is a characteristic features of agriculture in the area (village). Arable farming provides basic food requirements with some surplus sold (traded) to meet additional food needs and other basic household commodities.

By diverting and collecting flood from the neighbouring highland villages of Gidan woreda (Lasta awraja), supplementary irrigation is used to a limited extent.

In Mendefera villages average land holding ranges between 1.75 to 2.0 ha. (Fig.4 land holding) Due to population increase in the villages, the average land holding per family is decreasing from time to time. This has forced the community to cultivate land which was reserved for communal grazing and natural forest.

3.1 Crop types

Teff and Sorghum are the major crops cultivated in the village. Maize, barley and chickpeas are minor crops in the area. This indicates that nearly all the crops cultivated are cereals except, an insignificant amount of chick peas. It is easy to conclude that there is no crop diversification in the village. (Refer to pervious ranking table Fig.5)

This type of cropping pattern may result in unbalanced diet and malnutrition. This requires further assessment and recommendation for diversification.

As the team was informed in the group interview, the average yield per hectare in the area seems good as compared to some of the regional and national average yield of farmers. This may be due to the fertile alluvial soils which is being transported from the highlands. Farmers practice crop rotation (sorghum & chick peas) in order to minimize infestation of some noxious weeds.

Belg (small rain season) cropping is insignificant in the village. This is mainly due to shortage of moisture and uneven rain fall distribution.

In the group interview, farmers explained that they do not use fertilizers, because the soil in low land that comes from the highlands of Gidan woreda is very fertile and don't respond to fertilizer application.

RAINFALL PATTERN

Effort was made to prepare a trend diagram showing rainfall pattern in Mendefera village over the past eleven years (1976-1986 EC). Fig. 6.

The diagram shows a quantitative and significant changes (variations) over the time.

CROPPING PATTERN

In like manner trend diagram for crop production pattern was prepared. It is easy to observe (note) that the increase or decrease of crop production is directly proportional to rain fall pattern. (Fig 7)

SEASONAL CALENDERS

In the seasonal calendar, the major farm activities in a year are indicated. It is possible to observe in the diagram that weeding and harvesting are activities that require much peak labour. (Fig. 8)

ACTIVITY PROFILE

Farm labour demand by gender is illustrated here. The community briefed the team that most farm operations are carried out by men, ie., women's participation is very low especially during land preparation and planting. But during peak labour demanding seasons (weeding and harvesting) the participation of women is relatively higher than in the previous month. (Fig. 9)

INCOME BY SOURCE (FIG.

Even though the major economic activity of the community is mixed farming the main source of income is crop production. Two groups of community members gave as two different proportional income source. The first group suggests that crop production contributes to around 50% of family income, while the second group suggested that it is more than 60%. (Fig.10)

Group Discussion on Problems Coping Mechanisms and Suggested Solutions

About 20 farmers and 3 women from the two villages were engaged in the group discussion.

The main problems of the area are:-

1. **Shortage of water:**

There is no river or spring which can be used for drinking (human, animal) and for irrigation purpose. People are walking 6kms away from their village to buy water.

Since there is no river or spring for irrigation, crop production is affected when shortage of rain or lack of flood irrigation occur.

To cope with the problems of drinking water, farmers privately constructed 40 hand dug wells, 6 ponds and 1 earth dam for collective use by human and animals. But the water is not enough and well protected.

In addition to this, 3 drill wells were dug by EWWCA. They are not functioning now due to damage.

For reconstruction they suggested the installation of motor-run water pipe system.

2. Crop pest:

There are different kinds of pests causing serious damage from trilling up to harvesting stage. There are army worms, grass hoppers, stalkborer, African ball worm, rodents, and birds.

Due to these pests serious damage on crop production occurs every year.

To overcome some of the problems, farmers are trying to kill pests by mechanical means and using cultural practice.

These methods couldn't solve the problem in the area. Therefore, supply of pesticides and sprayers from the gov't are suggested.

3. Drought:

Since 1965, recurrent drought is occurring in the area/villages due to lack of rainfall. Many people and cattle died and some people migrated. Other were settled in the Southern part of the country.

During the famine, farmers in the villages ate wild fruits such as figs and weed species. People sold wood and livestock to buy grain.

4. Shortage of Oxen and Farm tools:

As the result of recurrent droughts, oxen were either dead or sold to solve their food problems. Therefore lack of oxen and farm tools are major problems.

To cope with the problem, farmers either sell their labour for oxen owners, or call "debbo", a cultural practice of asking relatives friends to plough their land.

Farmers requested for tractors services by the government.

5. Weed:

In addition to crop pests, permanent and new weeds such as Haile Roba, Abeterh and Amikela are causing more damage in crop production and increased farm labour for land preparation.

Coping mechanisms carried by the farmers are repeated ploughing of the land, hand wedding, using clean seeds and crop rotation (test to chickpeas) couldn't tackle the problem. Therefore the ask for other technologies such as introduction of herbicides for niveous weeds.

6. Malaria:

Since the area is low land, malaria endemic is common. The infestation time is from May to November affecting production. Labour requirement is very high for ploughing, seeding wedding and harvesting during these periods.

To cope with this problem of Malaria, farmers drain swampy areas, clear unnecessary bushes and grasses around their homes. Sick people are treated with drinks extracted of aloe (Eret).

Farmers suggested spraying chemicals against mosquitos on time (May-June) by Malaria eradication service.

7. Animal disease:

Animals are affected by different types of diseases such as anthrax, render pest and exoparasites (ticks).

To decrease the number of infested animals, farmers practise isolation of diseased animals from healthy ones, branding and mechanical picking of ticks. They suggested spraying exoparasites with chemical against ticks, and timely vaccination by MOA as solutions.

8. Lack of Improved Seeds.

The annual rainfall in these villages most of the time is erratic and not enough for growing crops. Therefore, introduction of short varieties of sorghum that can resist drought should be supplied on time.

9. **Post Harvest damage:**
When there is good crop harvest, farmers practice storing different types of crop for consumption, marketing and seeds. At this time the stored crop is damaged by different pests and rodents.

To tackle these problems, farmers aerate and expose the crop to sunlight and wind. They mix teff with sorghum in the storage and fumigate the crop with panget pepper. The group suggest that rodentcides and chemicals should be supplied by MOA. Refer Fig. 11 for ranking of problems and opportunities.

SUMMARY AND RECOMMENDATION

The area, Mendefera, is among numerous villages found in Kobo woreda, North Wollo. According to the residents it was established by a person called Merew Adewa in 1937, mainly to satisfy the farm land demand of the time.

The village is located at about 5kms North of Kobo town and is characterised by undulated topography and drought prone nature. Its' altitude reaches about 1300m. The yearly pattern of rainfall is not uniform, one good rainfall year is always followed by another bad year.

The area is locally classified as lowland and highland depending on its soil nature and fertility. The low land soil is more fertile as compared to high land or the hill side.

With regard to social and economic service, the village is traversed by one dry season road, extending from Kobo town to Zoble, the neighbouring PA. There is also one elementary school established in 1971. Other social services like health, agricultural extension are provided from Kobo town. Besides Social organisations like "Abahage", "Zeweld" also play an important role along with governmental administration and justice structure.

The village has passed through various ecological economic and social changes. The residents, who mainly depend on traditional mixed farming had experienced good and bad times for the last 50 years.

Unwise use of natural resources had caused significant recurrent draught problem which resulted in major food shocks and massive population migration in 1965 and 1977 E.C.

However, due to the fact that there is productive and sufficient cultivable land allows good potential of crop production. At the present, the average land holding per family vary between 1.75 to 2 ha. Yield per/he. is estimated at 16, 36, 20 for teff, sorghum and chickpeas, respectively. Eventhough the area is ideal for a number of

food and cash crops, farmers only grow limited kinds of food crops. If there is sufficient rainfall or available water, the climatic condition allows production of crops three times a year. Crop cycle is shorter as compared to the Dega areas.

The current production of crops is very minimal owing to draught and lack of water sources, pest and weed problems and shortage of agricultural inputs. The lack of permanent water source in the area makes irrigation virtually non-existent and increases labour devoted to water collection. It might have been due to this problem, that women's participation is less in direct crop production activity. Lack of agricultural inputs like oxen, farm tools and seed are some of the major constraints.

Extension work so far has been minimal and some efforts like distributing improving seed is said to be not successful. This is probably due to persistent draught in the area. Likewise malaria and various livestock disease, pests also affect crop production. The new weed infestation and pest problem has become increasingly crucial.

In general, Mendefera village has good potential for crop production in terms of land availability and quality. Yet, rainfall and water problems has hindered increased production and made the community vulnerable to famine. To change this situation, the group would like to recommend the following:-

RECOMMENDATIONS

1. **To strength local efforts.**

   It is very important to examine the current local effort to cope with draught and shortage of water problem. Farmers have constructed ponds, hand dug wells and efforts are made to divert run off coming form the surrounding "Dega" areas. This should be encouraged.

2. **Introduce appropriate water harvesting techniques.**

   The introduction of water harvesting techniques is inevitable and important. Because the area is characterised by draught and erratic rainfall.

3. **To provide draught resistant and short cycle varieties.**

   According to the group discussions with key informants, farmers are aware of draught resistant varieties as appropriate for the area. There is a tendency to demand the provision of new varieties which stand the climatic situation of the area.

4. **Strength Extension Service.**

From the assessment made, it seems that the extension work done so far is not adequate. There is much demand in this respect.

5. **To strength conservation and afforestation work.**

Needless to say that, soil and water conservation practice have vital role in changing the environment to more conducive for crop production work. Much emphasis has to be pulled on soil water conservation endeavour.

ANNEXES

1. Sketch map of Mendefera PA 08
2. Transects
3. Venn Diagram showing relations between institutions
4. Pie chart indicating distance and fertility status
5. Pie chart indicating land distribution and soil fertility
6. Preference ranking for major crops
7. Trend diagram for rainfall pattern
8. Trend diagram for pattern of production
9. Seasonal Calender
10. Activity profile for two crops by sex
11. Pie chart for source of inc
12. Ranking of problems and opportunities

LIST OF GROUP MEMBERS

GROUP NAME - RAYA

MEMBERS - Ato Getachew Arage (GOG -MOA, Kobo)

" Jemal Berhe (Crop protection - PHC, KOMBOLCHA)

" Mekonnen Asrat (Plant Science - PEDD, WOLDIA)

" Tzeze Dessie (GAG. - MNRDEP, WOLDIA)

" Tenna Shitarek (Agri. Engeneering - SOS SAHEL(UK), MEKET

" Wondwossen Dellelegn (Agri. Econ. - SCF (UK) WOLDIA

" Yonnas Menamo (Plant Sc. - SCF (UK), WOLDIA)

FACILITATOR

Ato Asefa Tolosa

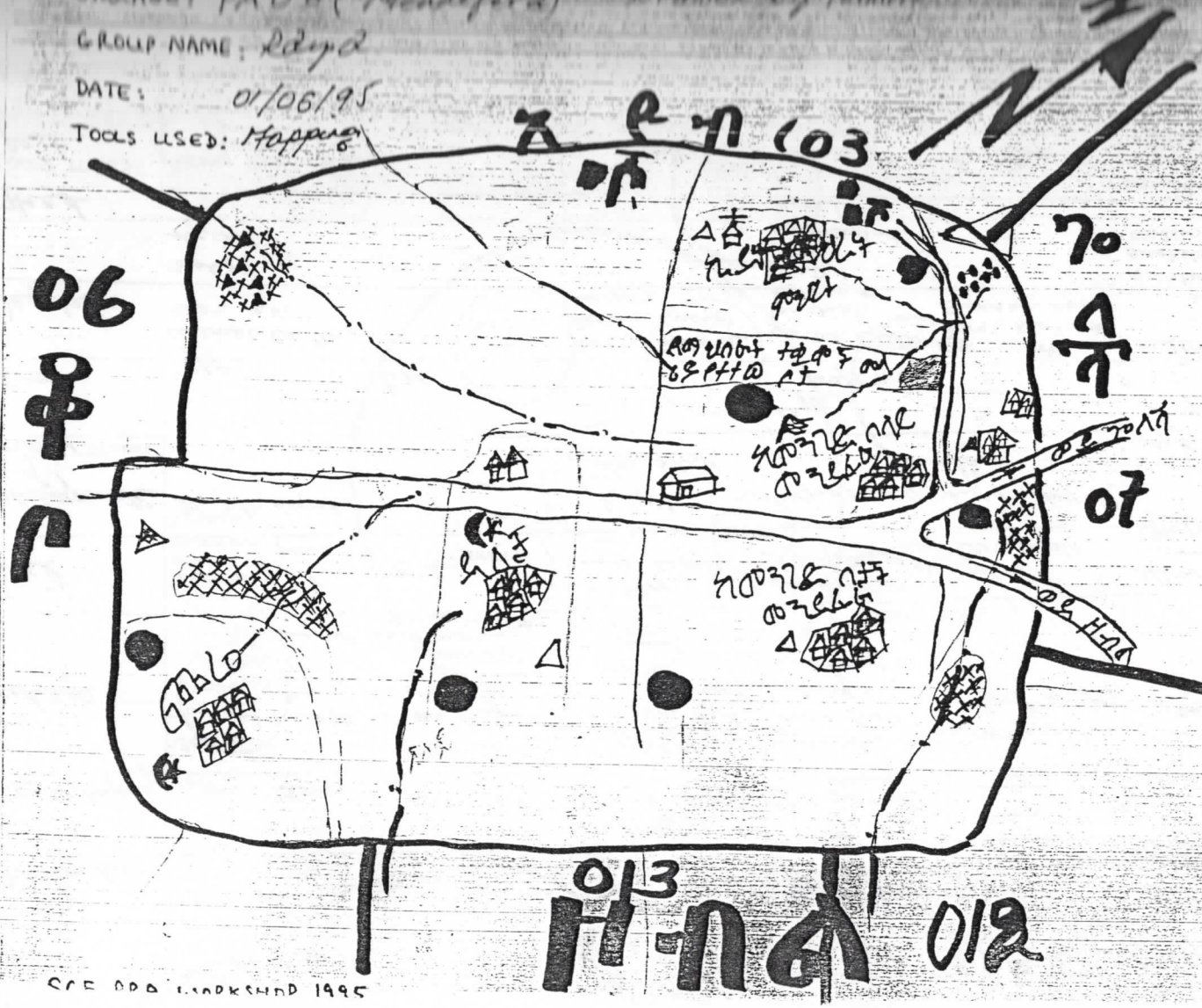
VILLAGE: PA 03 (Meadow 2)

GROUP NAME: Lalya2

DATE: 01/06/95

TOOLS USED: Mapping

Map (sketch) of PA 03 (Meadow 2)
drawn by farmers

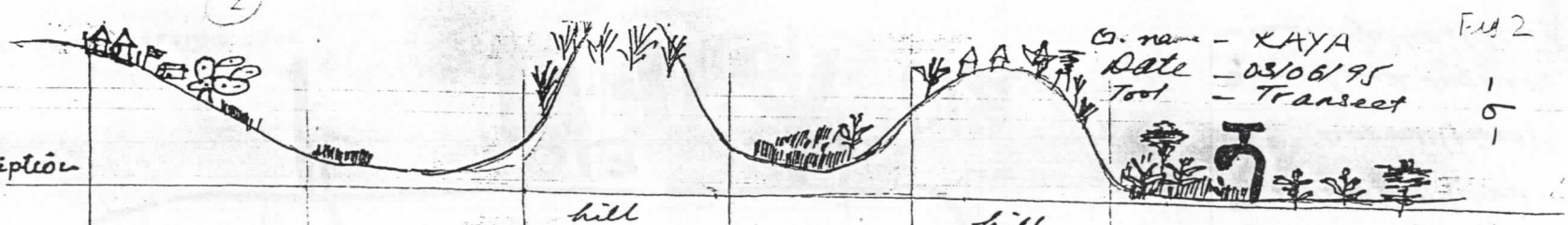


Key

- Settlement
- MOA D.A. office
- study area
- Church
- Mosque
- School
- road
- footpath
- boundary line between PAs
- Mountain/hills
- hills closed for grazing (only for oxen)
- Wood lot (Euc. globulus)
- grazing land (Guassa)
- Grazing + Euphorbia spp
- ponds
- deep well (closed)
- deep well (piped)
- hand dug wells
- gullies (dead)

SCF ARD WORKSHOP 1995

Trans- (2)



G. name - KAYA
Date - 03/06/95
Tool - Transect

Fig 2
1
5
1

Description						
Topography	gentle slope	flat	hill (steep slope)	flat and then rising	hill (steep)	flat
Landuse	- Settlement - Social Service - Agriculture off School - Grain mill	- grazing land - farm land - grazing site (open time) - Reserved for social service (Clinic marked	- Settlement - bushy and rough grazing land - Church	Cultivated land and rough grazing (bushy)	- Settlement - Rough grazing	- Cultivation land (sown / fallow)
Soil	Sandy	Clay	Rocky color - keyate	sandy (keyate - color)	Rocky color - keyate	alluvial deposit / Delel after / brown color (keyate) (Wofram meret - productive soil)
Land degradation & Soil erosion	Slightly degraded	—	highly degraded	moderate	highly degraded rilling	wind erosion
Crops	Teff	teff, sorghum	—	teff sorghum	—	sorghum, teff, maiz
Vegetation	Kinchipt, Cactus, Ader etc		Dorete, Sutoke, Bedera, Kinchipt Anchote	cactus, Kinkila Kinchipt, Gumero	Gurbi, Ader, Doret, Kurkura Euphorbia spp	scattered (Remnant) trees - Kurkura, Bedena, Kolara - Schinus molle
Weed	Tepatepi, nechilo	—	—	Tepatepi, Kirche Yaniya sirkurt Nechilo	—	Wottetia, Koshele, Haile roka (megale) amakela, mashle serdo, Gicha, Wotaro, Banje etc
Pest	Rodent Insects	Rodent insects	Rodent insects	Rodent	Rodent	Grasshopper spp. stock borer, Birds Rodent
Water Resource	—	—	—	—	—	non functional deep (piped) wells (3) - damaged
Livestock					Camel	sheep, cow, goat

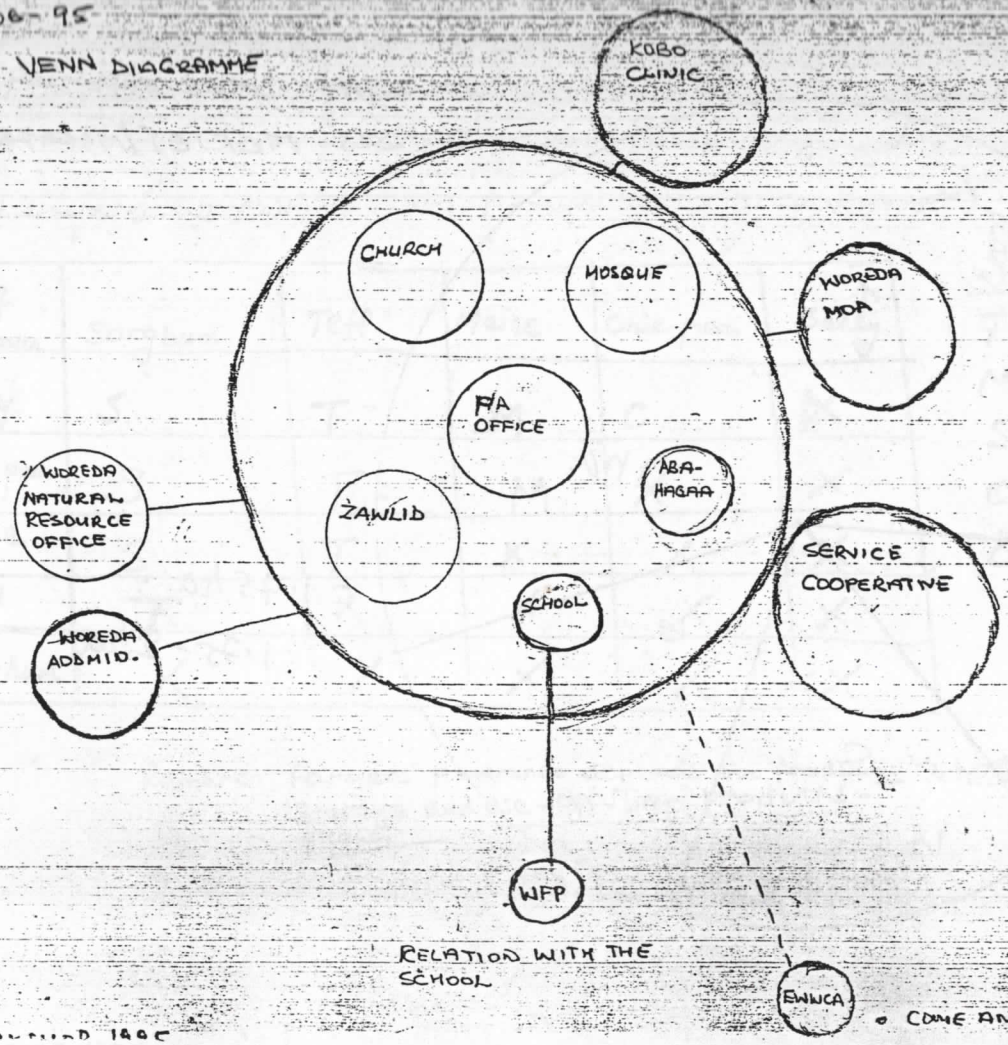
VILLAGE: MANDHERA

GROUP NAME: RAYA

DATE: 03-06-95

TOOLS USED: VENN DIAGRAMME

VENN DIAGRAMME INDICATING THE PERCEPTION AND IMPORTANCE OF INSTITUTIONS / ORGANIZATIONS TO COMMUNITIES OF MANDHERA.



RELATION WITH THE SCHOOL

- COME AND GO

VILLAGE PA 08 (MENDEFRA)

GROUP NAME RAYA

DATE 03/06/95

TOOLS USED PIE CHART

LAND HOLDING ACCORDING TO THE DISTACE AND FERTILITY STATUS.

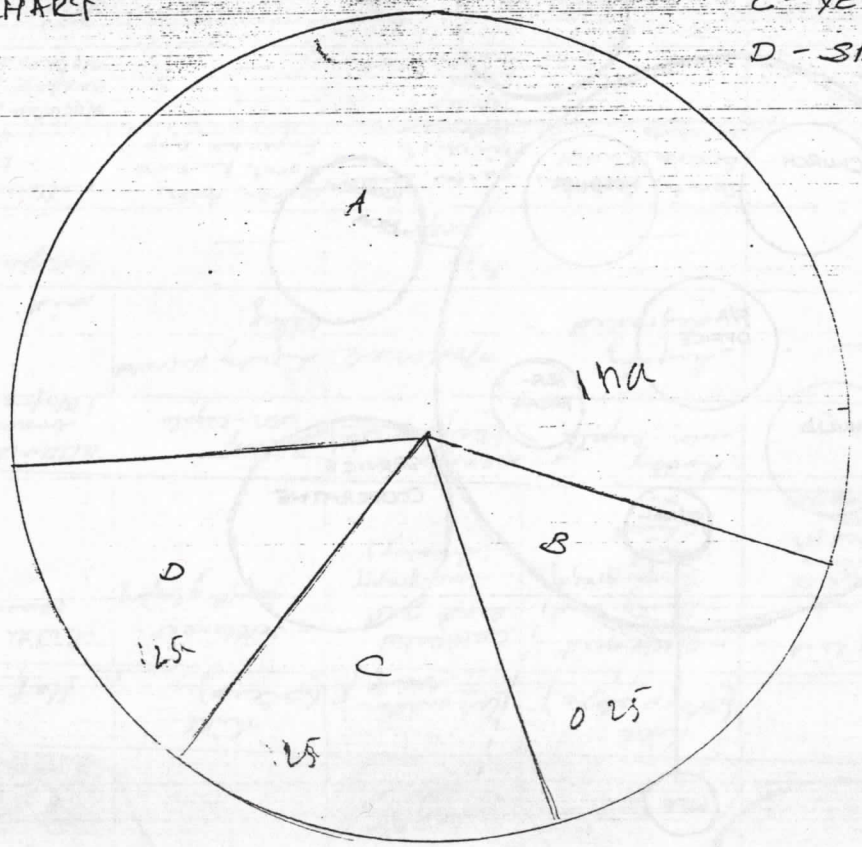
KEY

A - BEREHA MERIET

B - WEYED-MERIET

C - YEWHA MERIET

D - SIS MERIET/MAKAKESHA



= 1.75 ha..

1.75 - 2ha

Fig 4

table

VILLAGE: Mendefera

GROUP NAME: Raya

DATE: 2/6/1995

TOOLS USED: Pair-wise ranking to identify the priority of crops grown in the area

PERIORITY RANKING ON FIVE MAJOR CROPS IN MANDAFERA VILLAGE

Types of Crop grown	Sorghum	Teff	Maize	Chick-pea	Barley
Barley	S	T	M	C	X
Chick-pea	S	T	M	X	X
Maize	S	T	X	X	X
Teff	T	X	X	X	X
Sorghum	X	X	X	X	X

Crop	Score	Rank
T =	4	1st
M =	2	3rd
S =	3	2nd
C =	1	4th
B =	0	5th (least)

Remark: Farmers' preferance depends on productivity, household-Consumption Storage and use of by-products. quality

Fig 5

SCF PRA WORKSHOP 1995

Fig. — TREND DIAGRAMME SHOWING RAINFALL PATTERN IN MANDAFRA VILLAGE 1976-1987 E.C.

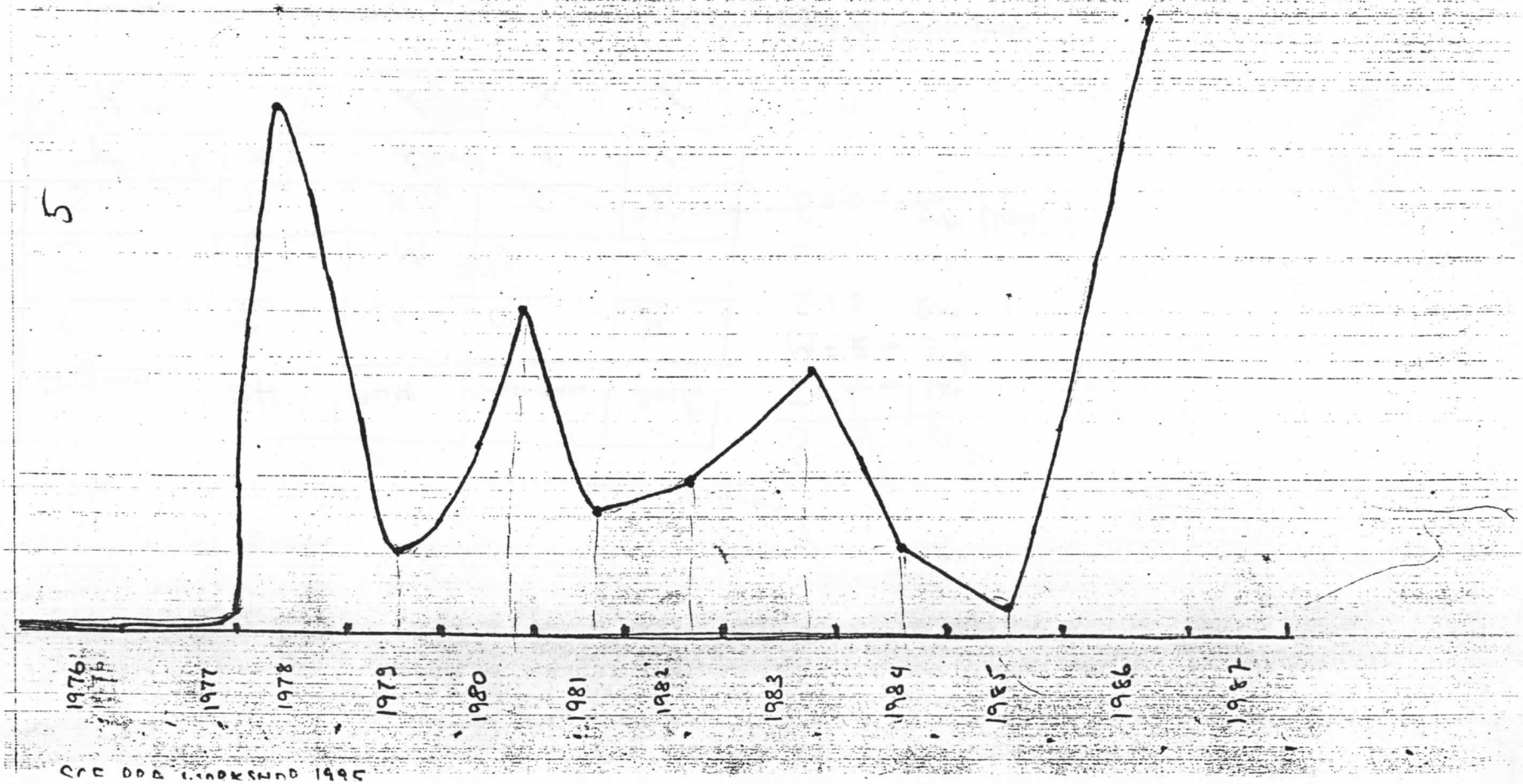
Fig 6

VILLAGE: MANDAFRA

GROUP NAME: RAYA

DATE: 03-06-95

TOOLS USED: TREND DIAGRAMME



CCE DDP WORKSHOP 1995

VILLAGE: Mendefera

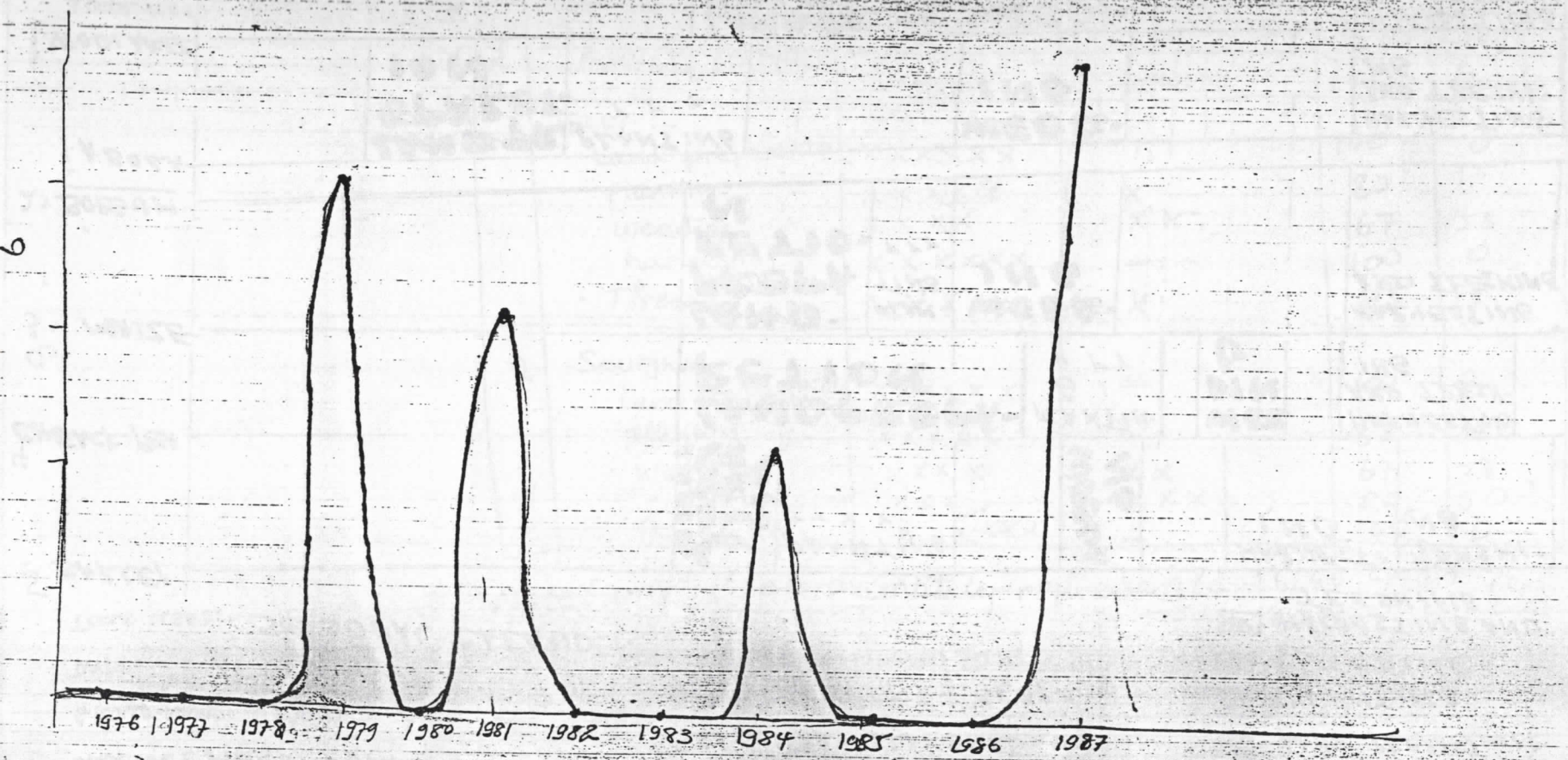
GROUP NAME: Kaya

DATE: 02/06/85

Tools used: Trend diagrame

Fig 7

TRYPANOSOMIASIS INFECTION PREVALENCE PATTERNS IN MENDEFERA WOREDA 1976-1987 EC



ORE DDD Workshop 1995

Fig 8

VILLAGE: MENDEFERA

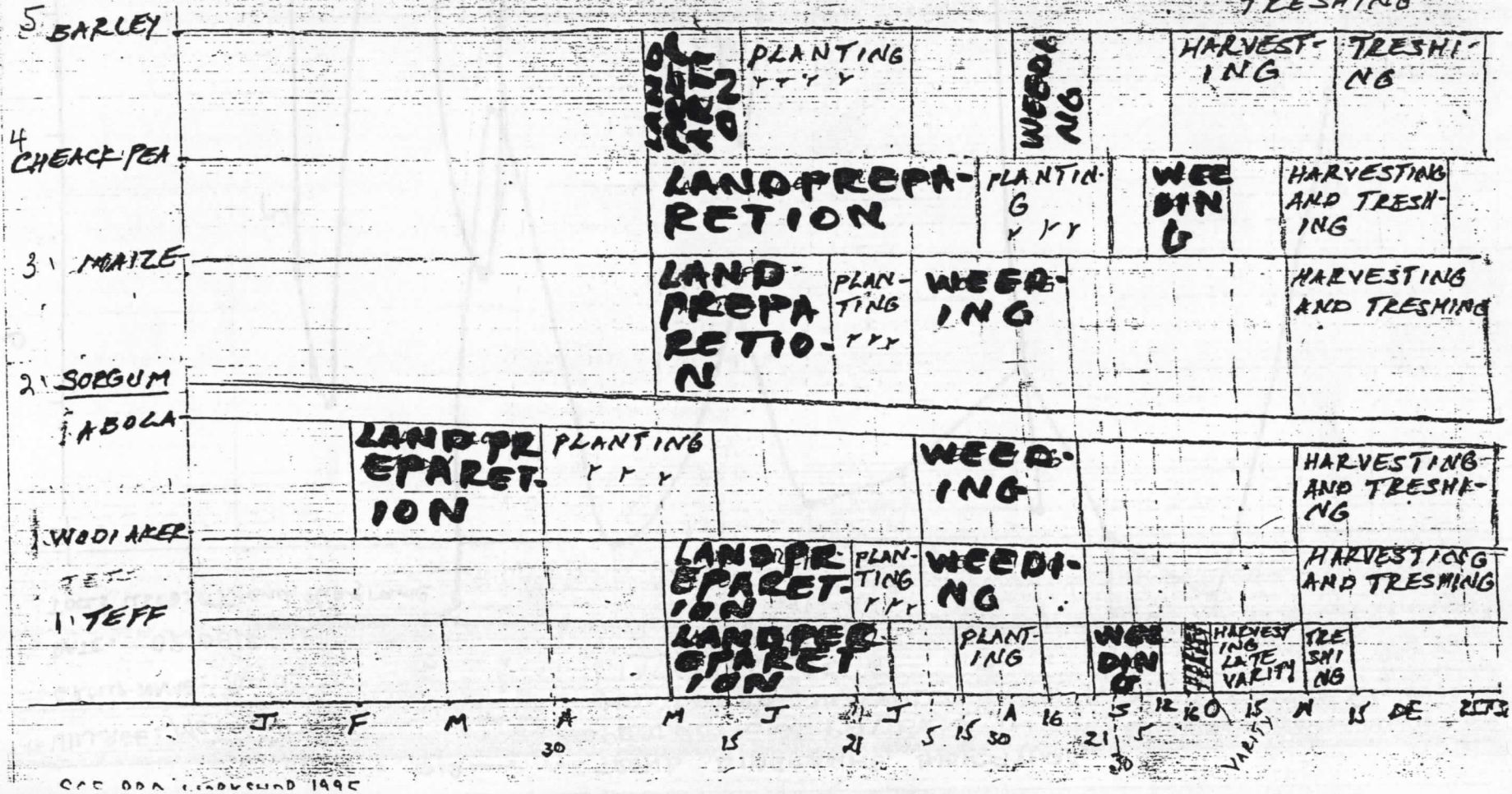
GROUP-NAME: KAYA

DATE: 03/06/95

TOOLS USED: SEASONAL CALANDER

SEASONAL CLANDER ON DIFFERENT CROPS

KEY
- LAND PREPARTION
- PLANTING
- WEEDING
- HARVESTING AND TRESHING



SAF ODA Workshop 1995

VILLAGE: MENDOSEFARA Fig

GROUP NAME: RAYA

DATE: 3/6/95

TOOLS USED: ACTIVITY PROFILE

Relative Contribution of male and female to tess and Sourghum production at Mendefara Village

S.No	Activity / crop	sex		by percentage	
		Male	female	Male	female
1	Tessi				
	Land preparation	XXXXXX	–	100	0
	planting	XXXXX	X	83	17
	Weeding	XXXX	XX	67	33
	harvesting	XXXXXX	–	100	0
	Threshing	XXXXX	X	83	17
2.	Sourghum				
	Land preparation	XXXXXX	–	100	0
	planting	XXXXX	X	83	17
	Weeding	XXXX	XX	67	33
	Cutting/harvest	XXX	XXX	50	50
	Threshing	XXXXXX	–	100	0

Note: one "x" approximately represents 16.66 22 17 %
six "x" " 100 %
of Labor Contribution to farm activities

Fig 9

VILLAGE: Mendefera

GROUP NAME: RAYA

DATE: 3/6/95

TOOLS USED: PIE-CHART

INCOME BY SOURCE IN GOOD PRODUCTION YEAR AS DRAWN BY TWO GROUPS OF FARMERS IN MANDAFERA VILLAGE

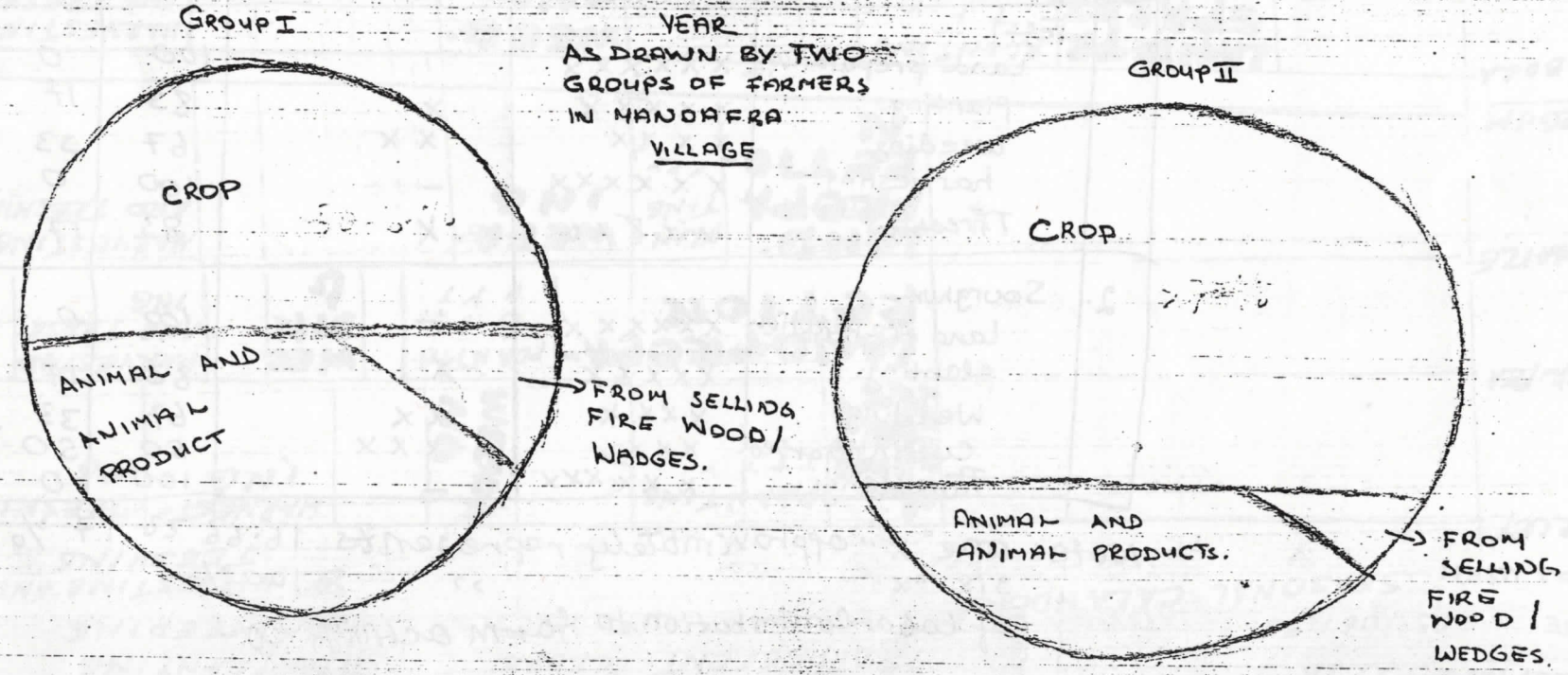


Fig 10

SCF PRA WORKSHOP 1995

VILLAGE: MONDELA

GROUP NAME: RAYA

DATE: 3/6/95

TOOLS USED: GROUP DISCUSSION.

GROUP DISCUSSION ON PROBLEMS, COPING MECHANISMS AND SUGGESTED SOLUTIONS.

Fig 11

	Problems	Coping Mechanisms.	Suggested solution	Development potential.
1	Shortage of water	have constructed hand-dug wells, ponds and small earth dams	~~installment~~ of water pipe system.	underground water is available in Low Lands
2	Crop pest (sample)	-Mechanical control (killing pest by campaigns -cultural practice	Distribution of pestcides on time.	availability of Labour
3	Draught	•Eating wild fruits (frs) weed App •cutting and selling wood •selling livestock •Migration-last resort	~~developing~~ saving mechanism by minimizing expenditures of festival	•Earthdam construction for irrigation • use of short seasoned Varieties.
4	Shortage of oxen and farm tools.	• hiring family labour for oxen owners • inviting relatives and friends using. using cultural grouping work (debo bjegie)	Supply of tractors. Servile.	
5	~~Weed (sample)~~	~~-cultural practice~~ ~~-mechanical control~~	use of herbicides for noxious weeds	It requires further study and recommendation.

SCE RAY WORKSHOP 1995

VILLAGE: Mendefera — F.G. — 2nd crop discussion (continued)

Fig 11

GROUP NAME: Raya

DATE: 3/6/95

TOOLS USED: Group discussion.

Problems	Copping mechanisms	Suggested Solution	Development potential
6. Malaria	-Draining swampy areas -Area sanitation -Drinking the extract of Euphrosia "Eref" aloe	-Spraying of chemicals against mosquitoes on time (May-June)	—
7. Animal diseases (parasite)	-Mechanical picking of ticks -Isolation of diseased animals	-Spraying ectoparasite chemicals against ticks -Timely vaccination	—
8. Lack of improved seeds	—	-Supply of recommended drought resistant varieties	—
9. Post-harvest damage	-aeration and exposing to sunlight and wind -Mixing sorghum with teff -fumigation with pungent pepper ~~feeding up the plant~~ -which is called "Ximtita"	-Supply of storage pesticide chemicals on time	—

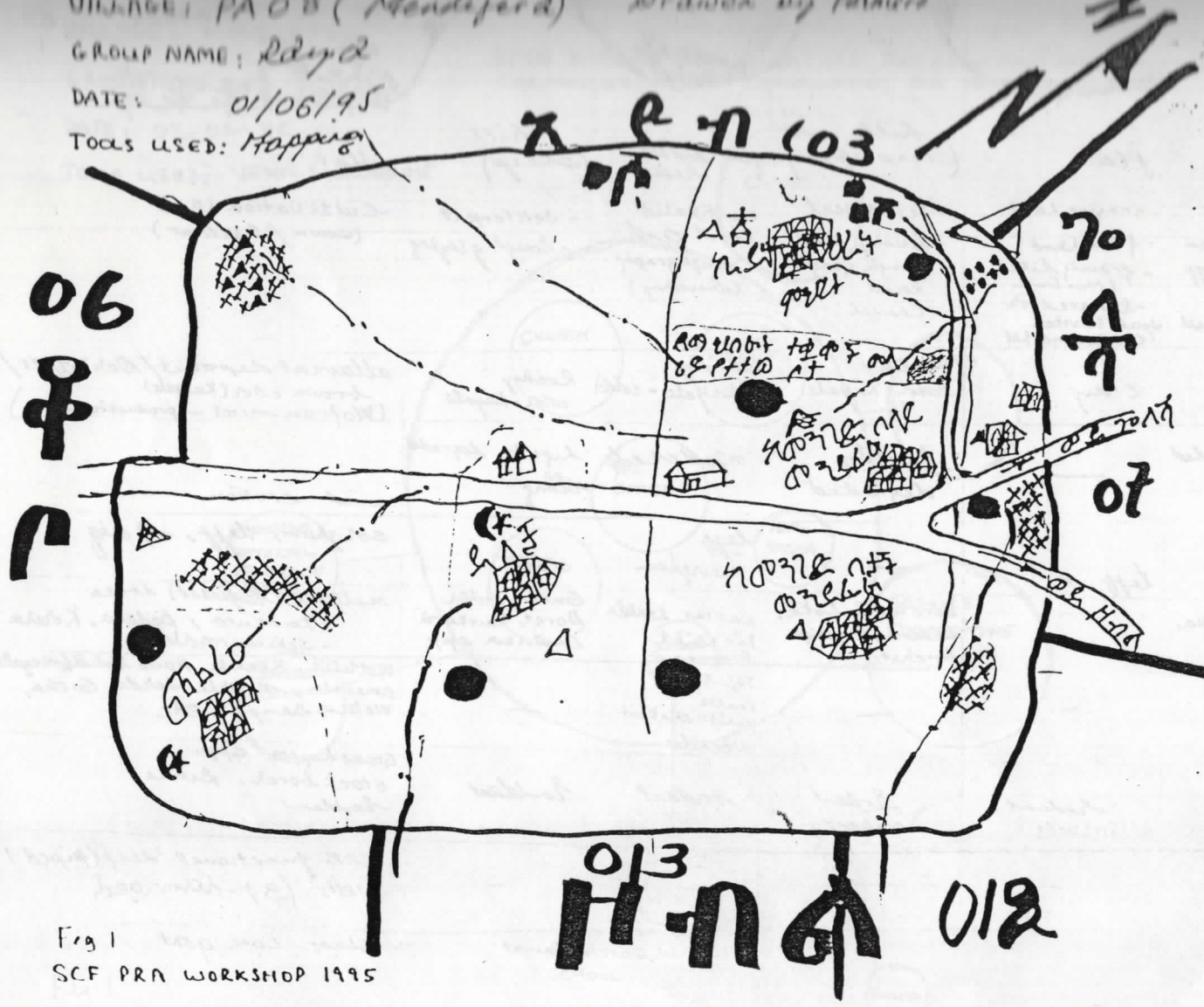
VILLAGE: PA 08 (Meadeferd)

GROUP NAME: Lelay 02

DATE: 01/06/95

TOOLS USED: Mapping

Map (sketch) of PA 08 (Meadeferd)
Drawn by farmers



Key

- Settlement
- MoA D.A. office
- study areas
- Church
- Mosque
- School
- Road
- footpath
- boundary line between PAs
- Mountain/hills
- hills closed for grazing (only for oxen)
- Wood lot (Euc. globulus)
- grazing land (Guassa)
- Grazing + Euphorbia spp
- ponds
- shop well (closed)
- shop well (piped)
- hand dug wells
- gullies (dead)
- area reserved for grazing (Muslims)

Fig 1
SCF PRA WORKSHOP 1995

Transect



Village – Hendefera
G. name – RAYA
Date – 03/06/95
Tool – Transect

1 of 1

Description						
Topography	gentle slope	flat	hill (steep slope)	flat and then rising	hill (steep)	flat
Landuse	- Settlement - Social Services - agriculture off - School - Grain mill	- grazing land - farm land - grazing site (this time) - Reserved for social services (Clinic, market	- Settlement - bushy and rough grazing land - Church	Cultivated land and rough grazing (bushy)	- Settlement - Rough grazing	- Cultivation land (sown / fallow)
Soil	Sandy	Clay	Rocky color keyate	sandy (Kelyale - color)	Rocky color - keyate	alluvial deposit / Delel Afer / brown color (keyale) (Wofram meret – productive soil)
Land degradation & Soil erosion	Slightly degraded	—	highly degraded	moderate	highly degraded rilling	wind erosion
Crops	Teff	teff,	—	teff sorghum	—	sorghum, teff, maiz
Vegetation	Teff Kinchipt, Cactus, Ader etc		Dorete, Sutoke, Bedera, Kinchipt Anchita	cactus, Kirkila Kinchipt, Gumero	Gurbi, Ader, Doret, Kurkurd Euphorbia spp	scattered (Ruminant) trees - kurkura, Bedena, Kolera - sclerus molle
Weed	Tepatept, nechilo	—	—	Tepatept, Kircha Yarija shirkurt Nechilo	—	Wottetia, Koshele, Haile Rokat (megale) amakela, mashle, serdo, Gicha, Wotero, Banje etc
pest	rodent Insects	rodent insects	Rodent insects	Rodent	Rodent	Grasshopper spp. stockborer, Birds Rodent
Water resource	—	—	—	—	—	Non functional deep (piped) wells (3) - damaged
Livestock					Camel	sheep, cow, goat

Fig 2

VILLAGE: MANDAFRA

GROUP NAME: RAYA

DATE: 03-06-95

TOOLS USED: VENN DIAGRAMME

VENN DIAGRAME INDICATING THE RELATION AND IMPORTANCE OF INSTITUTION / ORGANIZATIONS TO COMMUNITIES OF MANDAFRA.

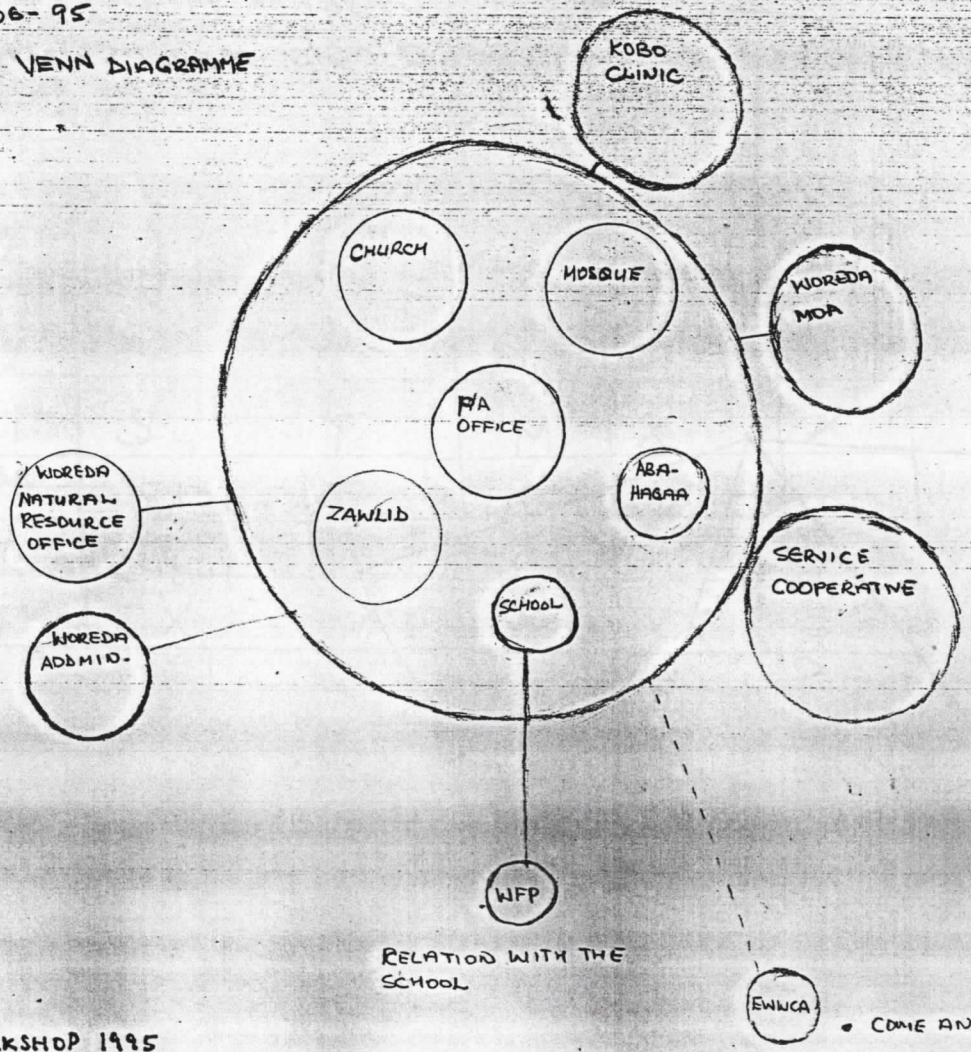


Fig 3

SCF PRA WORKSHOP 1995

VILLAGE PA 08 (MENDEFRA)

GROUP NAME RAYA

DATE 03 10 6 95

TOOLS USED PIE CHART

PIE CHART - SHOWS LAND HOLDING ACCORDING TO THE DISTACE AND FERTILITY STATUS.

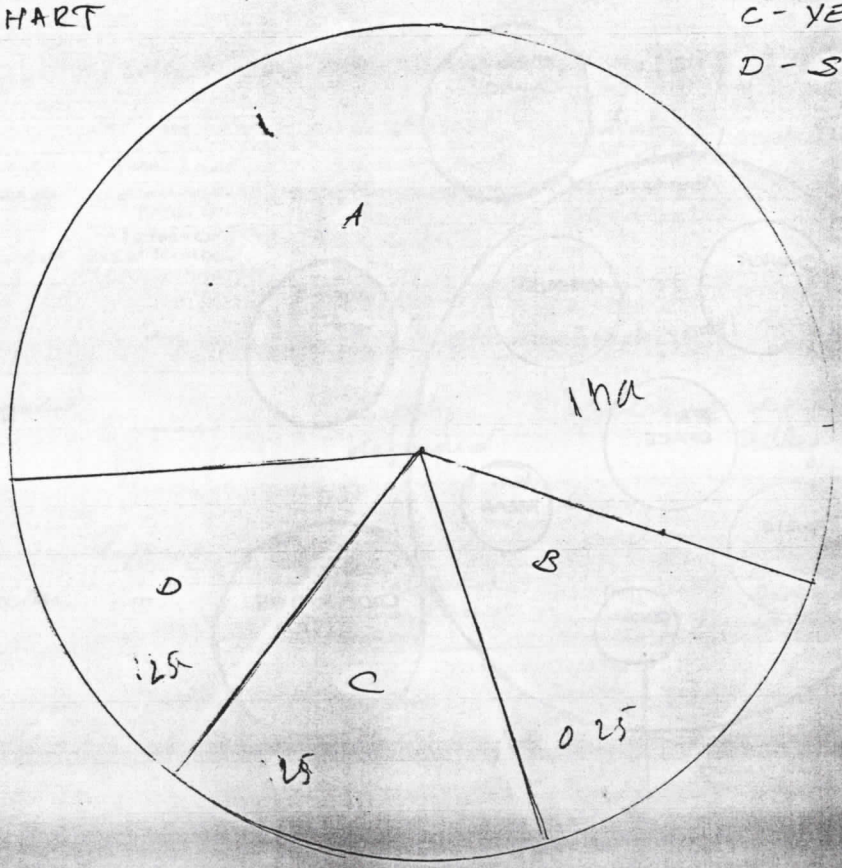
KEY

A - BEREHA MERIET

B - WEJED MERIET

C - YEWHA MERIET

D - SIS MERIET / MAKAKASHA



= 1.75 ha..

1.75 - 2 ha

Fig 4

table.

VILLAGE: Mendefera

GROUP NAME: Raya

DATE: 2/6/1995

TOOLS USED: Pair-wise ranking

PERIORITY RANKING ON FIVE MAJOR CROPS IN MANDAFRA VILLAGE

Types of Crop grown	Sorghum	Teff	Maize	Chick-pea	Barly
Barly	S	T	M	C	X
Chick-pea	S	T	M	X	X
Maize	S	T	X	X	X
Teff	T	X	X	X	X
Sorghum	X	X	X	X	X

Crop	score	Rank
T =	4 -	1st
M =	2 -	3rd
S =	3	2nd
C =	1	4th
B =	0	5th (least)

Remark: Farmers' preferance depends on productivity, house hold consumption Storage and use of by-products. quality

Fig. 5

SCF PRA WORKSHOP 1995

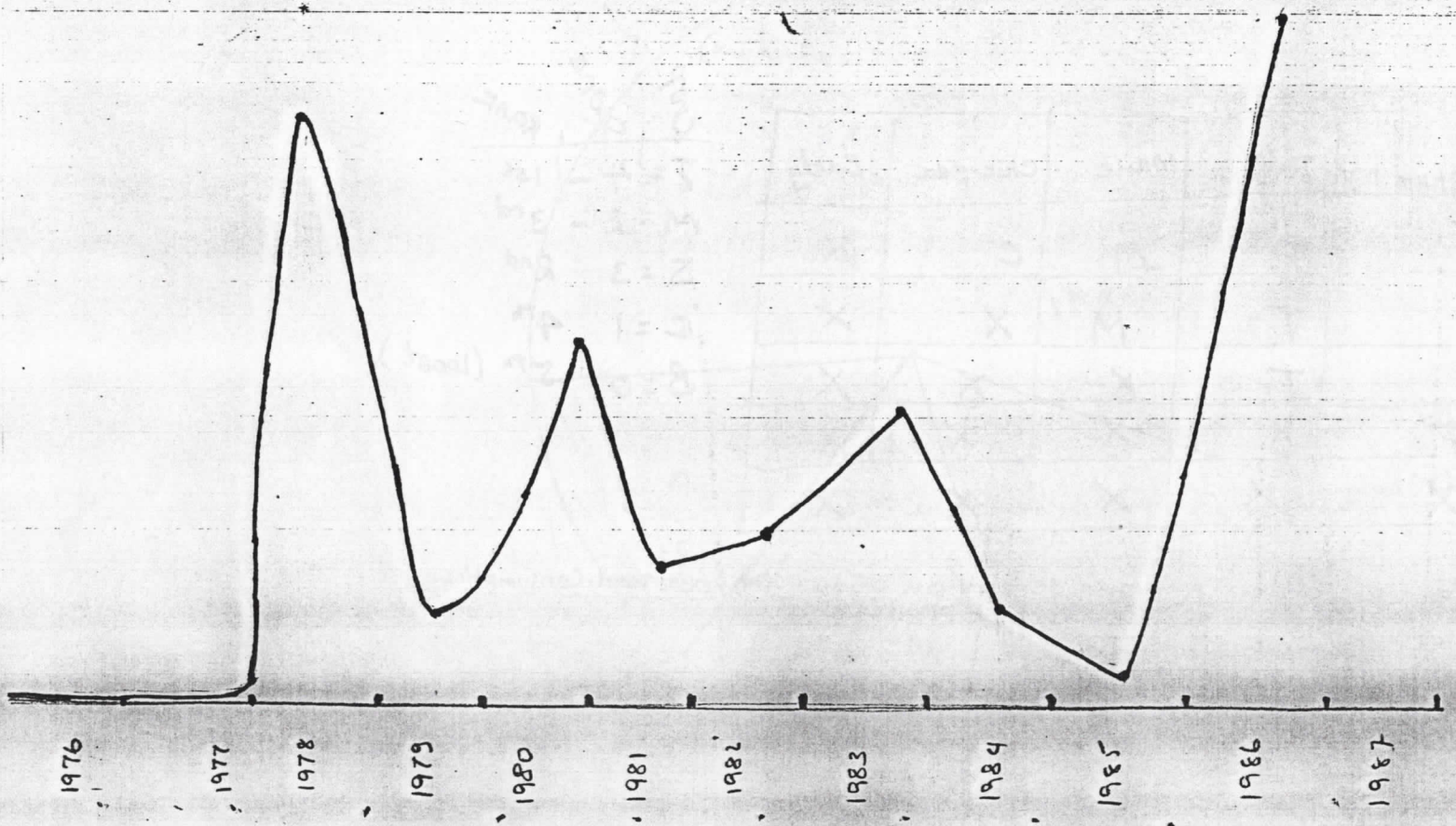
VILLAGE: MANDAFRA

GROUP NAME: RAYA

DATE: 03-06-95

TOOLS USED: TREND DIAGRAMME

TREND DIAGRAMME SHOWING
RAINFALL PATTERN IN
MANDAFRA VILLAGE
1976 - 1987 EC.



SCF PRA WORKSHOP 1995

Fig. 6

VILLAGE: Mendefera

GROUP NAME: Raya

DATE: 02/06/85

TOOLS USED: Trend diagrame

TREND DIAGRAMME INDICATING PRODUCTION PATTERN IN MANDAFRA VILLAGE 1976-1987 EC

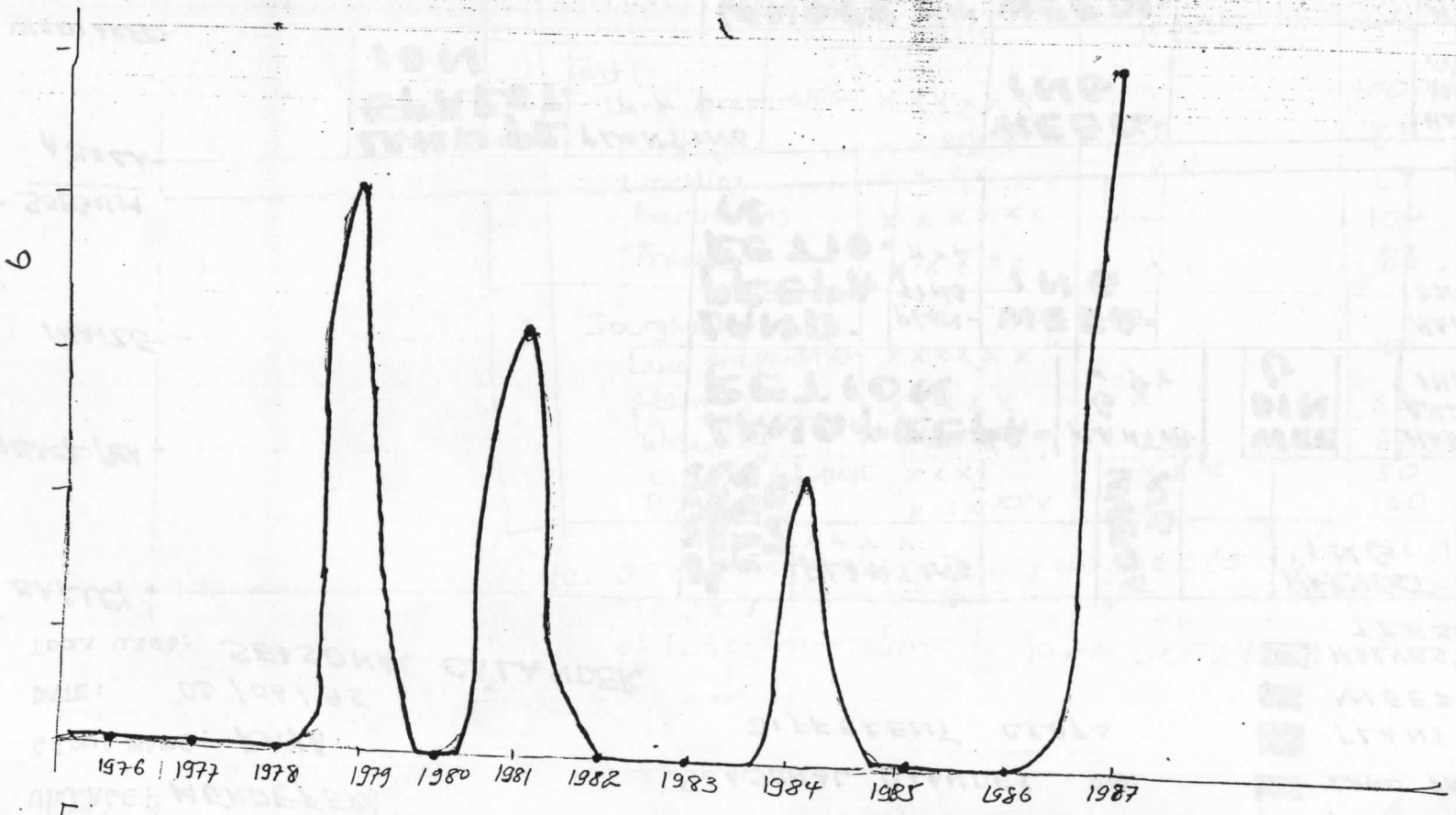


Fig. 7

SCF PRA WORKSHOP 1995

VILLAGE: MENDEFERA

GROUP NAME: RAYA

DATE: 03/06/95

TOOLS USED: SEASONAL CALANDER

SEASONAL CLANDER ON DIFFERENT CROPS

KEY

- LAND PREPARTION
- PLANTING
- WEEDING
- HARVESTING AND TRESHING

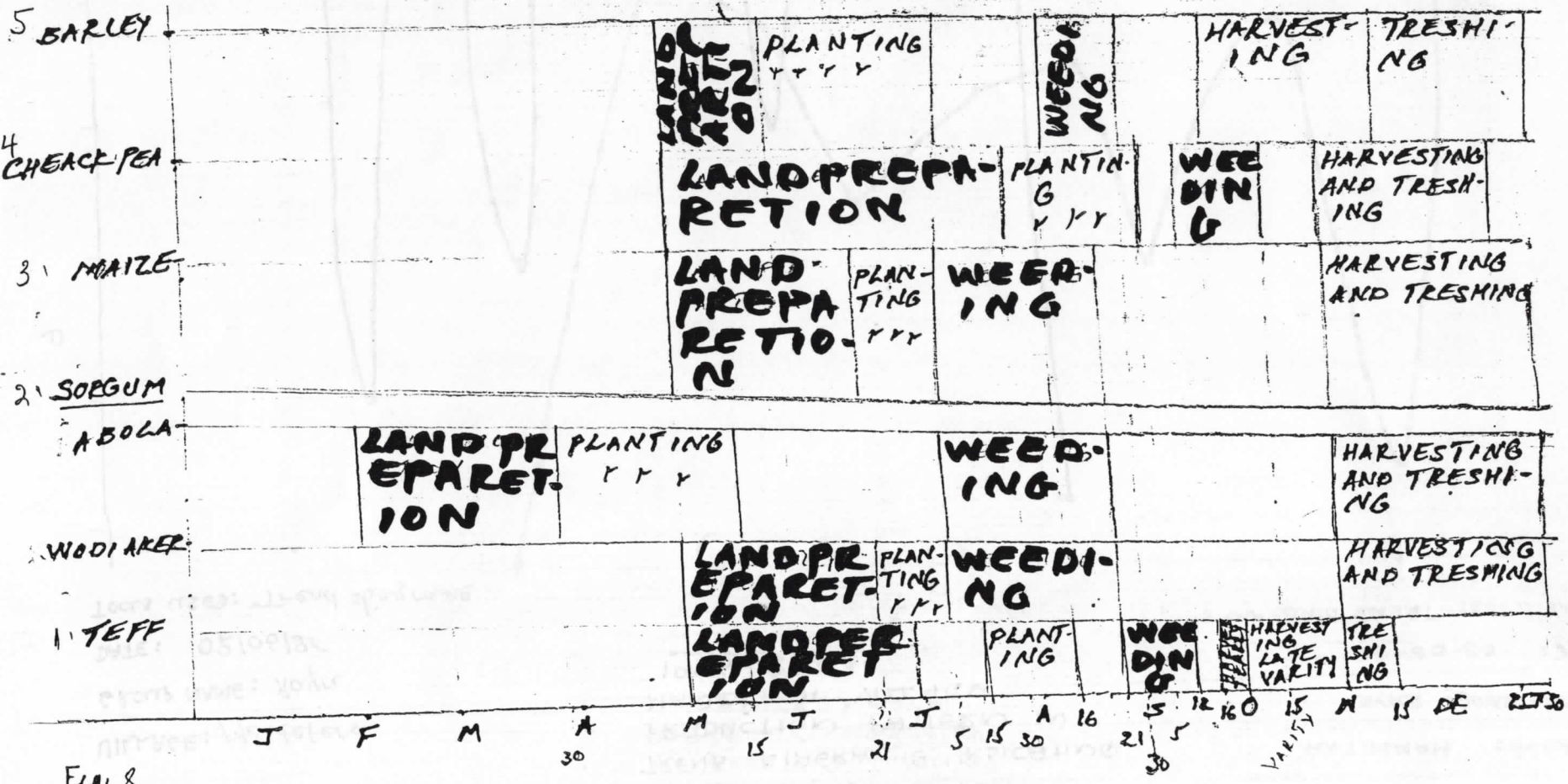


Fig. 8
SCF PRA WORKSHOP 1995

VILLAGE: MENDEFERA Fig —

GROUP NAME: RAYA

DATE: 3/6/95

TOOLS USED: ACTIVITY PROFILE

Relative Contribution of male and female to teff and Sourghum production at Mendefera Village

S.No	Activity / crop	sex		by percentage	
		Male	female	Male	female
1	Teff				
	Land preparation	XXXXXX	—	100	0
	planting	XXXXX	X	83	17
	Weeding	XXXX	XX	67	33
	harvesting	XXXXXX	—	100	0
	Threshing	XXXXX	X	83	17
2.	Sourghum				
	Land preparation	XXXXXX	—	100	0
	planting	XXXXX	X	83	17
	Weeding	XXXX	XX	67	33
	Cutting/harvest	XXX	XXX	50	50
	Threshing	XXXXXX	—	100	0

Note: one "x" approximately represents 16.66 ≈ 17 %
six "x" " 100 %
of Labor Contribution to farm activities -

Fig. 9

SCF PRA WORKSHOP 1995

VILLAGE: Mendefera

GROUP NAME: RAYA

DATE: 3/6/95

TOOLS USED: PIE-CHART

INCOME BY SOURCE IN GOOD PRODUCTION YEAR AS DRAWN BY TWO GROUPS OF FARMERS IN MANDAFRA VILLAGE

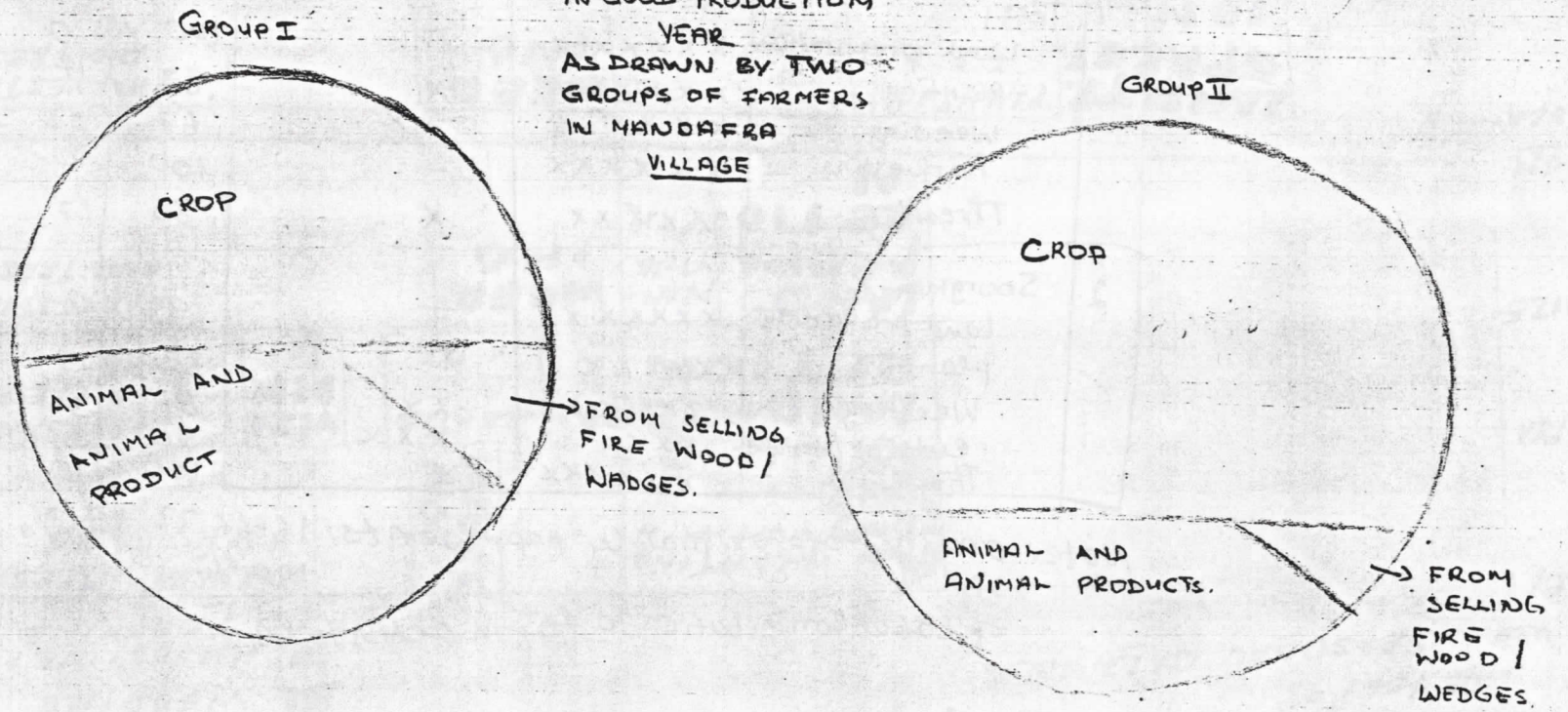


Fig. 10

SCF PRA WORKSHOP 1995

VILLAGE: Mendefera (Group discussion / continued)

GROUP NAME: Raya

DATE: 3/6/95

TOOLS USED: Group discussion

Problems	Copping mechanisms	Suggested Solution	Development potential
6. Malaria	-Draining swampy areas -Area sanitation -Drinking the extract of Euphurbia "Eref" aloe	-Spraying of chemicals against mosquitoes on time (May-June)	—
7. Animal diseases (parasite)	-Mechanical picking of ticks -isolation of diseased animals	-Spraying ectoparasite chemicals against ticks -Timely vaccination	—
8 Lack of improved seeds		-supply of recommended drought resistant varieties	
9. Post harvest damage	-aeration and exposing to sunlight and wind -Mixing Sorghum with teff -fumigation with pungent pepper -tearing up the plant which is called "Kimtita"	-supply of storage pesticide chemicals on time	

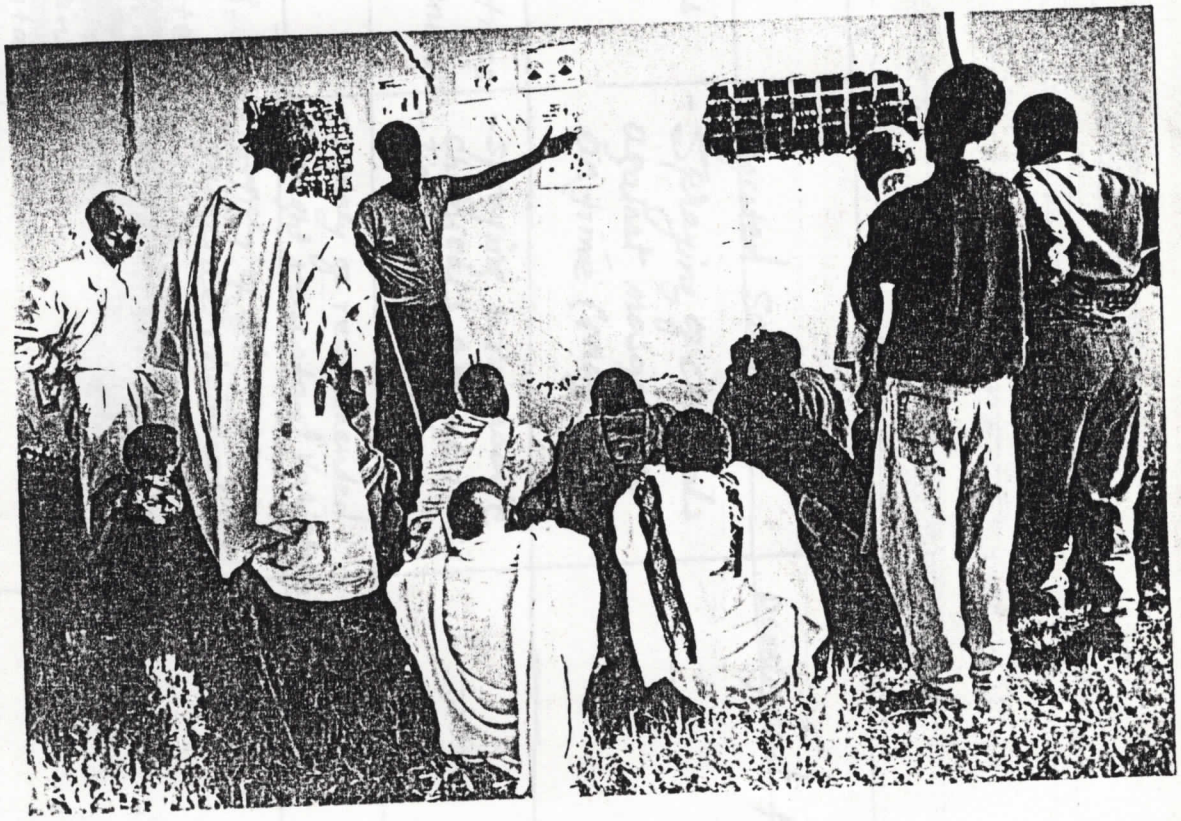
Fig. 11
SCF PRA WORKSHOP 1995

FIELD TRAINING REPORT

ON

PARTICIPATORY RURAL APPRAISAL

AT BUFEYELIC VILLAGE, JAROTA KEBELLE & KOBO WOREDA, N.WOLLO



Participatory Rural Appraisal

Field Training

Bufeyilie village, Jarota kebele (Kobo woreda)

From June 2 - 4/1995

A. General:

The field training programme was organized and facilitated by trainers from Save the Children Fund(UK) organization. This report is the product of 7 days field training work was written by the participants of Bee-group. The members of the team were drawn from:-

- Ministry of Agriculture (MOA)
  ,, of National Resource (NR)
- Institute of Agri. research (IAR)

B. Objectives: To find out production constraints of the village.

C. Action plan:

1. Organization of the team (Team contract)

Team leader	Ato	Engdawork Tadesse (NR)
Secretary	,,	Gobena Abate (MOA)
Gate keeper	,,	Adane Legas
Note taker	,,	Indris Fentaw
Listner	,,	Tezera Awoke
,,	,,	G/Egziabher G/Amlak
,,	,,	Sitotaw Tafesse
Facilitator		Habtemariam Kassa

2. Facilitate pre conditions of the survey.

   Informed arrival and objective to the woreda kebele offices.

   Develop our survey action plan.

3. Introduce our team to the PAS leaders and defining our objectives by the group leader.

. Interviewing /SSI/
    Key informants
    Groups
    Individuals
    Focus

. Historical profiling
    Elders
    Mixed groups

. Livelihood analysis
. Historical transacts
    Crop production
    Livestock production etc

. Seasonal calender of diff. agricultural activities.
. Mapping
    Participatory mapping

5. Finding out the Agricultural Constraints.
PRA tools to be used.
. Interviewing /SSI/
    = Different social groups
    = Key informants
    = Individuals
    = Focus groups

. Secondary data.
. Transects /Geographical transects/

6. Prioritizing Agricultural Constraints.
PRA tools to be used.
. Ranking:
    = Pair wise
    = preference ranking
    = preferable
    = Direct matrix

D. Check list of variables to be looked into and the corresponding PRA tools to be used.

1. <u>Land use:</u>
Land types. Pie chart
Changes in land use overtime. Historical transect
Land use trends of individual

8. Major Income sources — Group interview

9. Soil and Water Conservation

Erosion pattern	Transect/mapping
Fertility	Transect/farm map
Water harvesting	Transect

10. Forestry & wild life:

Natural forests	Group interview/ Transect
Man made	,,
Wild life	Crop interview

E. Findings

Introductory Back Ground

Bufeyelie is located in Kobo woreda about 20 km South East of Kobo town. The estimated house hold is 300 with average family size of six. The dwellers are followers of Christian 50% and Muslim religion 50%.

The people of the surrounding area live in concentrated village. The village is structured traditionally and stayed for many years. Settlement sites are situated on the flat land. (See map 1)

The topography of the village is largely flat. As a result, everything was relatively homogeneous. After having drawn a participatory village map, then a transect walk was made and revealed relatively homogenous set up.

Most of the farm land is covered with fertile soil that is deposited by flood from the nearly high land of Lasta. The farm land soil texture is sandy loam soil.

The vegetation cover is very scanty and is largely bushy. Only few tree species are observed around the village. Indigenous forest trees are already depleted.

The main food crops cultivated in the area; in order of their importance are Sorghum, teff, maize and chick peas. They use chain crop production for home consumption and partially for covering other expenditures of the family.

In addition to crop production there is also livestock production. Cattle, Sheep, Goat, Equines and Camels respectively are the most important livestock species raised in the area. Among the livestock reared, Cattles are highly preferred by the villagers.

There exists various problems which are bottle-necks of agricultural production in the area. Some of these problems include, drought, lack of ploughing oxen, shortage of grazing land, absence of credit supply and agriculture inputs specially seed.

1. LAND TENURE:

The team tried very much to know the various systems; by SSI for the following 3 regimes these are:-

a. H/Selassie regime
b. Derg regime
c. and the Transitional Government

A. The H/Selassie era:

In this period land was owned largely by the land lords. But there were communal grazing and forest land for the villagers. In general the system was characterized by land lord-tenant relation.

B. The Derg period:

Land was distributed to all peasants according to their number of family. During the Derg regime not only sale of land but also transferring land had been forbidden by the rules of the regime.

C. Transitional Government Period:

In the existing Transitional Government the land tenure arranged in such a manner:-

i. Land is distributed to all farmers equally based on their family size.
ii. Land was distributed to farmers by measuring it using ropes.

2. Human Settlement:

People live in concentrated villages. Most houses are huts constructed from wood and grass having similar shape. They are very small in size and are not constructed well. The reason why they use these small and not well constructed is because farmers are increasingly unable to construct bigger huts because of limitations in wood.

3. Infrastructures and Institutions:

In Bufayelie infrastructures such as market, clinic, school, shop, etc. are not available. They fetch water from the river which is 3 km far away and outside their village. Previously they used to get drinking water from hand pump which was constructed by Kombolcha E.W.C.A. office. But now

D. Farm inputs.

Farmers don't fertilize their plots.Silitation is considered it to be the best and commonly used practice.

e. Tools

Farmers use traditional farm tools. Among these kembber, plough, mofer, wegel, dgre, maresha, mergeth, mewajo, lada, tuleta, sickle, gejemo, axe, machate, hoe, etc are the most commonly used ones.

Most of the ploughing activity is carried out by using oxen plough. They use hoe and machete for gardening hot pepper and hoeing. The most common agricultural activities to seasons of operation for different crops are illustrated in diagram 8.

5. Live stock.

a. Species composition:

The major livestock species present in the area according to their importance are cattle, sheep, donkeys, goats, camels. (See diagram 9). As compared to the past more sheep and camel are coming into the picture. But still the most dominant are cattle.

b. Feeds:

The major feed sources for livestock are crop residue, bushes, weeds and grasses grown on their farm strip. When drought occurs farmers mostly sale animals cheaply. Some migrate with their herds to the surrounding lowland of Afar areas.

c. Diseases:

The most common diseases prevailing in the area are:-

1. Render pest
2. Sheep pox
3. Oxedeosis
4. Black leg
5. Korretu (Local name) having a sign of swelling of the skin.

Earlier, before, widespread vaccination programs, farmers described how traditionally they do "vaccinate" their livestock from already infected ones.

6. <u>Division of Labour.</u>

The activities such as ploughing, sowing, weeding, harvesting and trashing are largely duties of men. Most activities like food preparation, house cleaning, water flitching, collecting fuel wood, etc are entirely duties of

females. In the area women are not expected to be seen in farm plots.

Children of the village are largely engaged in activities looking after livestock, wedding, fuel wood gathering, etc.

In general it seems that men often have more work load and responsibilities than women and children.

7. Income source.

The farmers get their income largely from crop production and from livestock (Refer to diagram 10). This seems to be in line with the current land use pattern of the village.

8. Expenditure.

Even though there is continuous expenditure for food and health coverage through out the year, the villagers greater expenditure appears in January and February because of wedding, clothing for holidays, buying farm tools, labour cost, tax payment, house construction and repair. (Please see diagram 11).

9. Soil and water conservation.

In the village there is no problem of erosion but their main problem in this aspect is that they are highly dependant on flood irrigation that comes from the highlands of Lasta.

The flood, besides irrigating the arable farm, covers it with silt and sand sediments. This, depending in the type of deposits it is considered increasing fertility. When stones and gravel, cover the soil, it hence devastate the field.

For this reason farmers use flood water coming through Gobu valley very cautiously to met their need of additional irrigation and fertility increase.

Now a days however the valley of Gobu Gorge broken on the upper month of it, where by the volume of irrigable flood water decreased very highly. (Map 1).

This flood water decrement forced farmers for additional expenditures to clean water ways and make down annually.

10. Forestry and wild life.

Some 30 years back the village was full of different indigenous trees such as WACHO, BEDENNA, KURKURA, GERBI, ARENGEBA, KELEKECHA, KEMEJELIE, BELES, ENKOY, AGAM, GURBI, BAMBOO. SUKEKIE, MENTERO, AGOBDI, SEFA, MEWATA. DORET, ACACIA, etc,. But at present due to improper use of forest

and expantion of cropland into forest land some indigenous tree special like, AGO BDIE, SEFA, MEWATA, AREN GEBA, ADER, KELEKESHA, AND BAMBOO TREES HAD BEEN TOTALLY EXTINCT.

In the same manner wild life species such as DIKULLA, FEIKO, MIDAKO, GOGORRI, TIGER, FOX TORTOISE, JART, ABOLDEGESSA, APE, RABBIT, ZENDO AND SNAKE were present in great numbers previously.

Deforestation and improper use of forest land make them to loose their natural home and actions such as hunting forced them to migrate. As a result they are no more present in the area particularly Dikula, Feiko, Tigurt, Sessa, Tiger, Kerkero, Ape, and Zendo.

To reaforestrate the area again farmers prefer to have the species particularly kurkura, bamboo, and eucalyptus tree seedlings in the descending order of preference.

11. Major problems.

From the above mentioned physical socio economic information and history of the village the main agricultural production constraints are in their descending order of importance.

1. Drought problem
2. Shortage of improved and early maturing varieties of sorghum teff and maize, and
3. Grazing land shortages respectively.

However the relative importance of each problem varies for different social strata (poor, medium and rich).
For example drought is the major problem for all but lack of credit is particularly important for the poorest section of the society.

Village: Bufeyelie

Group name: Bee

Date: 27/09/87

- Tools used: Pair-wise ranking of Agricultural problems

Problems	Drought	Oxen	Improved Variety	Grazing Land
Drought:				
Poor	X	Oxen	Drought	Drought
Middle income	X	Drought	Drought	Drought
Rich	X	Drought	Drought	Drought
Oxen:				
Poor	X	X	Oxen	Oxen
Middle income	X	X	Oxen	Oxen
Poor	X	X	Im. variety	Gr. land
Improved variety:				
Poor	X	X	X	Im. variety
Middle income	X	X	X	Im. variety
Rich	X	X	X	Gr. Land
Grazing land:				
Poor	X	X	X	X
Middle income	X	X	X	X
Rich:	X	X	X	X

Parameters of wealth

1. Poor = Those who have one and less than one oxen.
2. Middle income = Those who have 2 - 3 oxen and other animals except camel.
3. Rich = Those who have > 4 oxen and other animals including camel.

Frequency
Drought

Poor = 2
Middle income = 3
Rich = 3

Ploughing oxen

Poor = 3
Middle income = 2
Rich = 5

Improved variety

Poor = 1
Middle income = 1
Rich = 1 = 3

Grazing land

Poor =
Middle income =
Rich = 2 = 2

Bank based up on
Wealth group

(1) For poor-groups
Oxen = 1
Drought = 2
Im. variety = 3
Gr. Land = 4

(2) For middle income groups
Drought = 1
Oxen = 2
Im. variety = 3
Gr. land = 4

(3) Rich groups
Drought = 1
Gr. land = 2
Im. variety = 3
Oxen = 4

Bank based up on
Total frequency

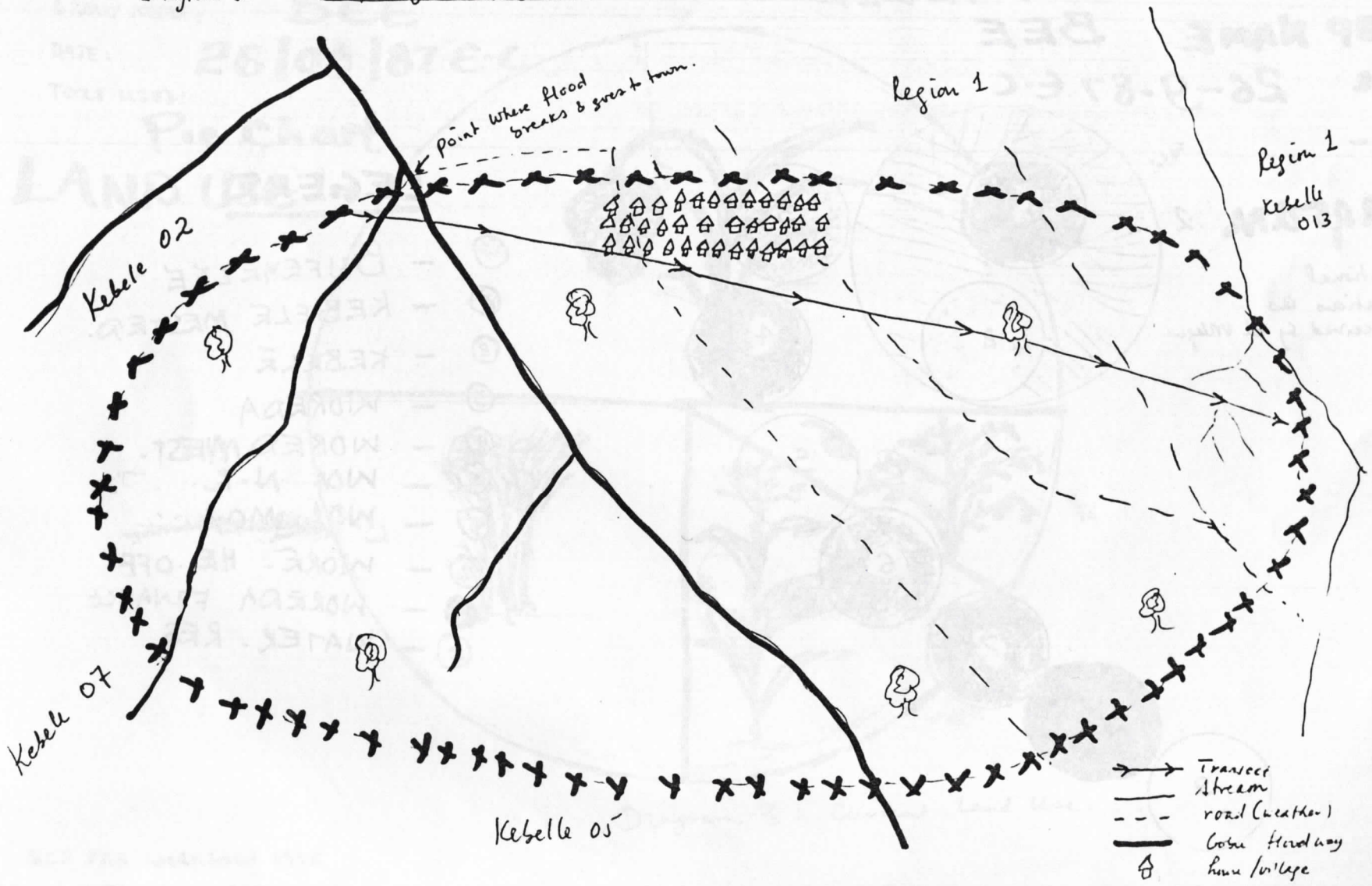
Drought = 1
Pl. oxen = 2
Im variety = 3
Gr. land = 4

12. Conclusion and Recommendation

The village is entirely dependant on rainfall and particular highland flood to irrigate and fertilize their pilots. B currently as the flood way is not properly maintained, the fl devastates the nearby town and surrounding area, and heavi silts crop lands with sands and grasses while many other are could get a drop of water. The cleaning of water ways a constitution of diversion walls have become beyond the reach farmers in the village and the nearby beneficiary farmers. Her further studies into the socio-economic and technical aspect it is necessary and concrete action to solve the same imperative if food security problem in the villages are to tackled seriously. To this end the community is very mu determined to mobilize all its resources.

Besides, making feasible credit mechanism that enables po farmers to purchase ploughing oxen and other necessary inpu needs to be worked out.

Diagram 1. Map of Bufeyelie Village



VILLAGE - BUFEYELIE

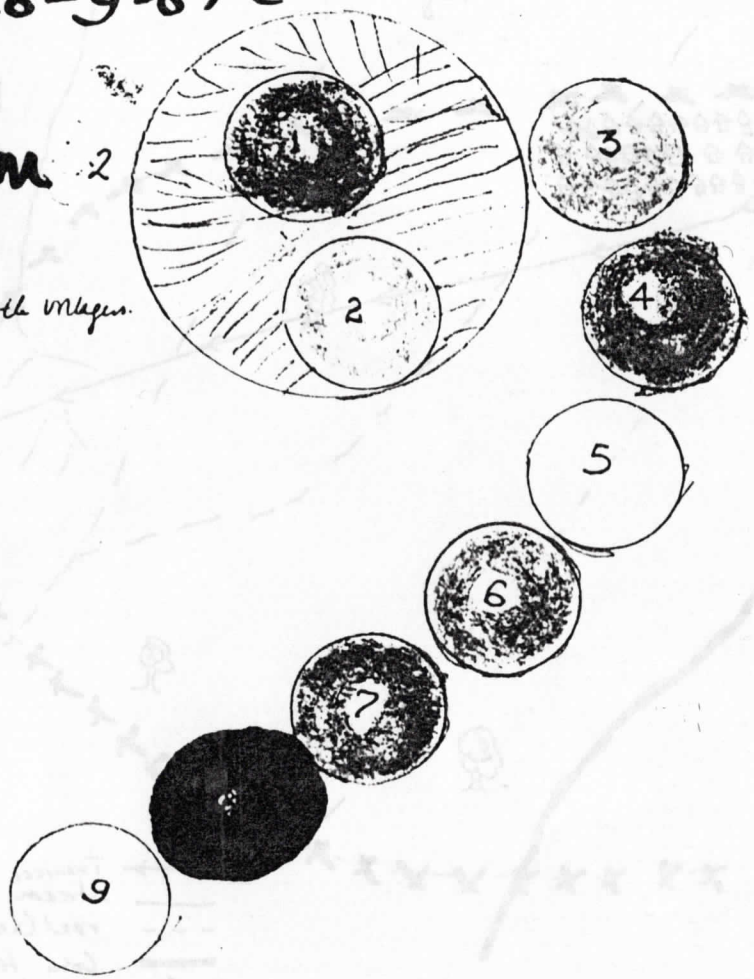
GROUP NAME BEE

Date 26-9-87 E.C

TOOL-

Diagram 2

Institutional Relations as perceived by the villagers.



LEGEND

1 - BUFEYELIE

1' - KEBELE MESTER.

2 - KEBELE

3 - WOREDA

4 - WORED WEST.

5 - WOR N.R.

6 - WOL MOA

7 - WORE. HE. OFF

8 - WOREDA FINANCE

9 - WATER. RES.

VILLAGE: BUFEKELLE

GROUP NAME: BEE

DATE: 26/09/87 E-C

TOOLS USED:

Pie Chart

LAND USE

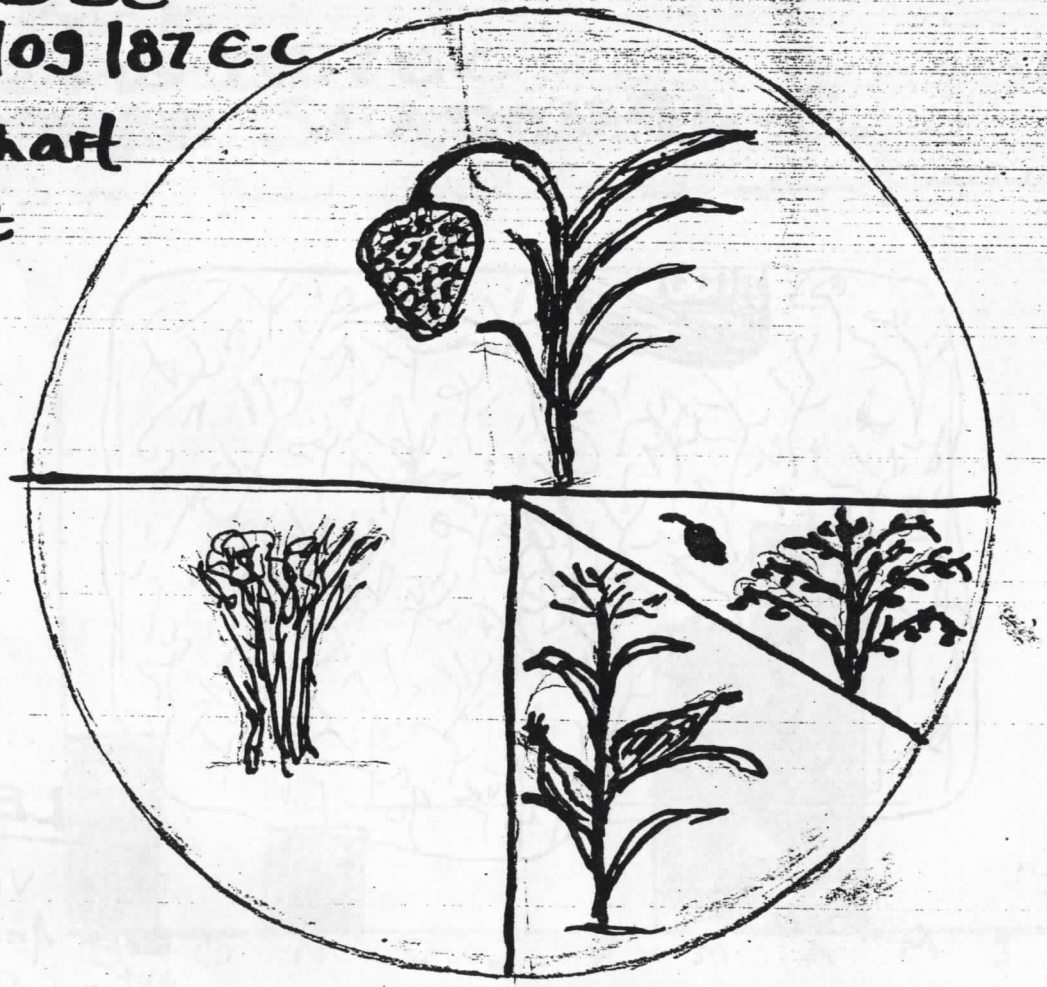


Diagram 3: Current Land Use.

SCF PRA WORKSHOP 1995

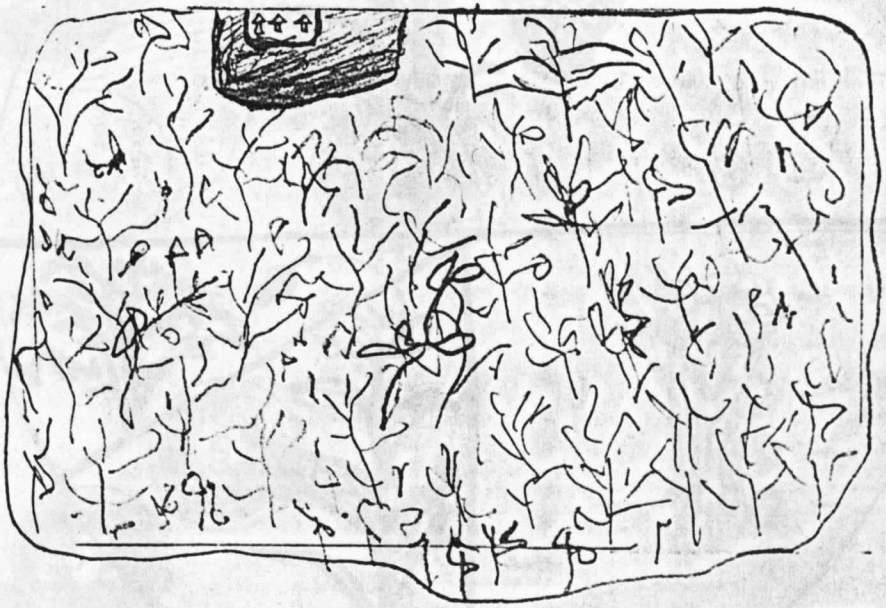
-Village BUFORLNIC

Bidup Dec

Date 26/09/87

Diagram 4

LAND USE Before 30 years ago.



LEGEND

- VILLAGE
- Arable LAND
- FOREST & Grazingland

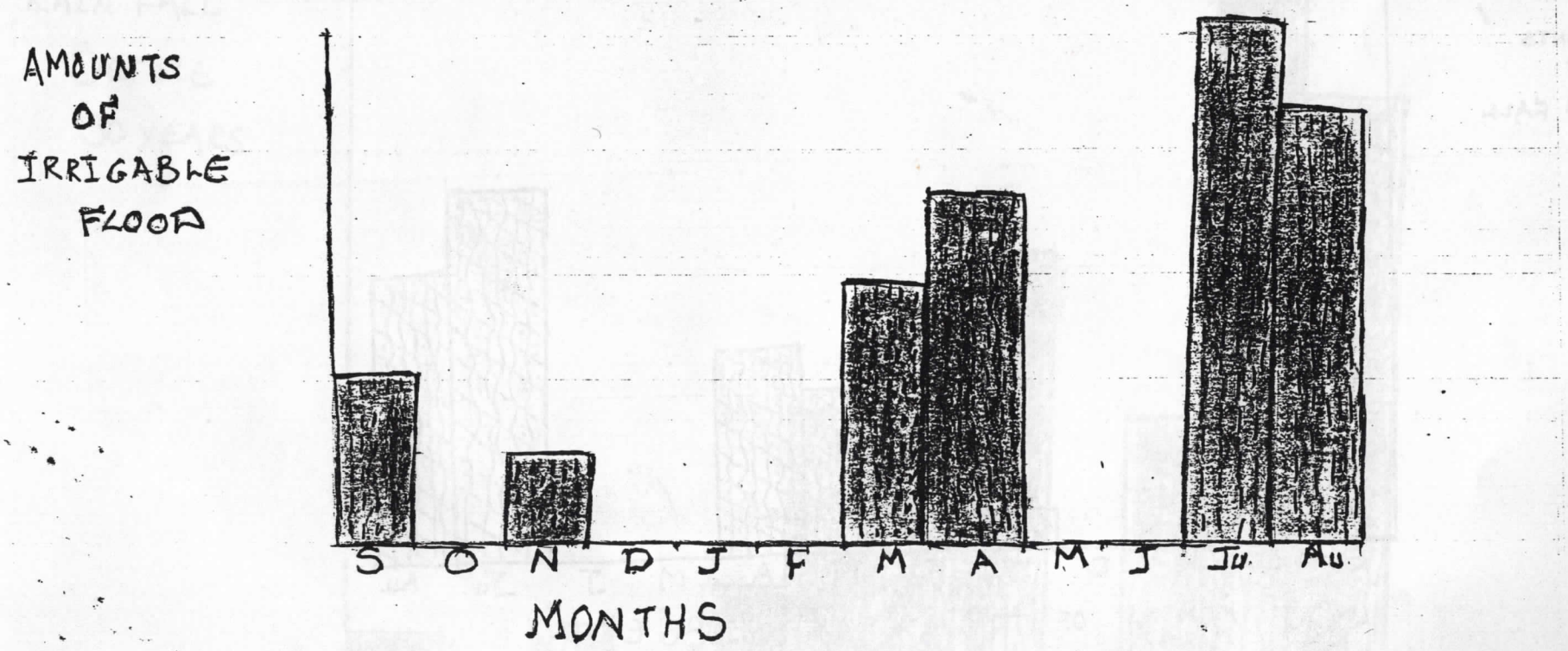
VILLAGE: BUFEYELIE

GROUP NAME: BEE

DATE: 24-09-1987 E.C

TOOLS USED: [redacted] SEASONAL-C.

Diagram 5. Seasonal distribution of ~~flooding~~ ~~experience~~ of crop lands.



SCF PRA WORKSHOP 1995

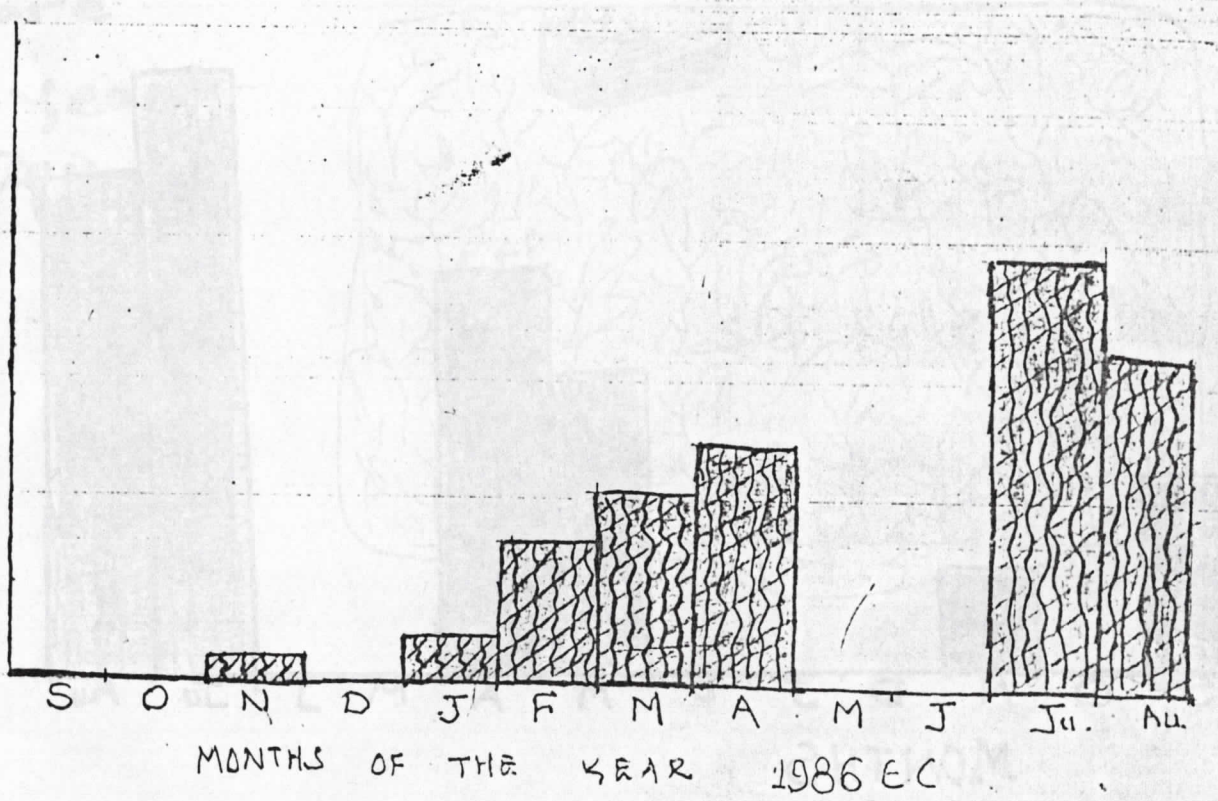
VILLAGE: BUFE YELIE

GROUP NAME: BEE

DATE: 24-09-87 E.C

TOOLS USED: Diagram 6.

SEASONAL CALENDAR OF RAIN FALL



SCF PRA WORKSHOP 1995

1986

VILLAGE: BUFEYELIE

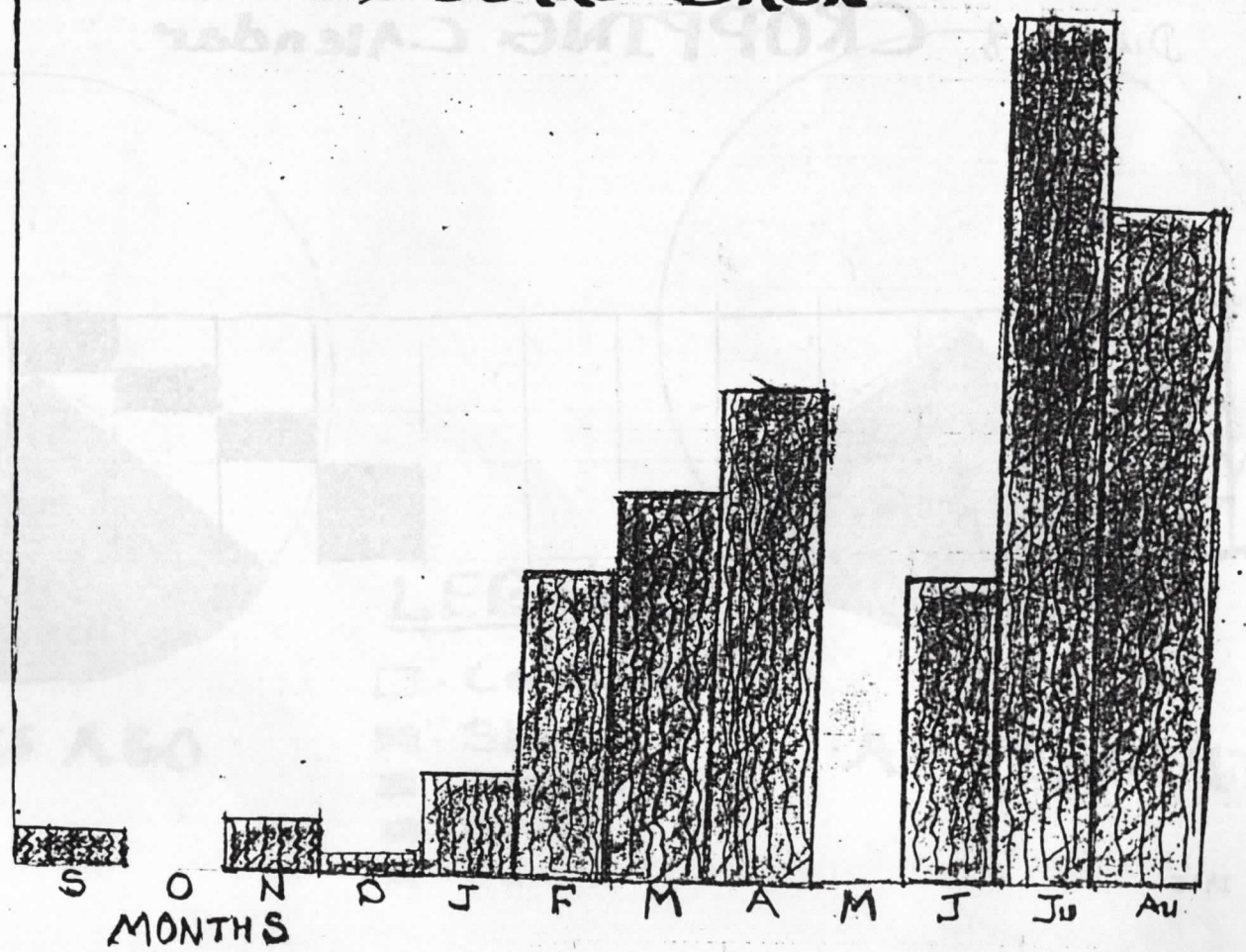
GROUP NAME: BEE

DATE: 24-09-87 E.C

TOOLS USED: SEASONAL CALENDAR OF RAIN FALL 30 YEARS BACK

Diagram 7

AMOUNTS OF RAIN FALL BEFORE 30 YEARS



VILLAGE: BUFEYELIE

GROUP NAME: BEE

DATE: 27-09-87

TOOLS USED:

SEASONAL Calendar

Diagram 8 CROPPING Calendar

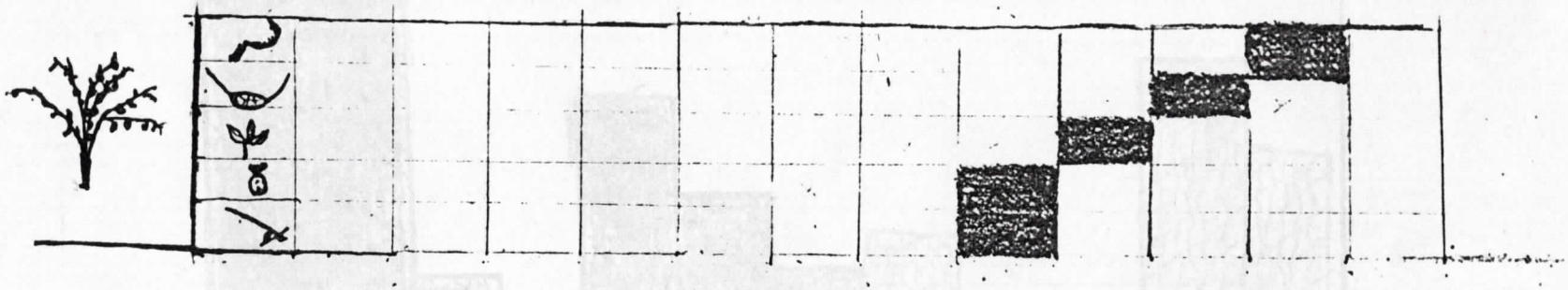


Diagram 9

LIVE STOCK COMPOSITION.

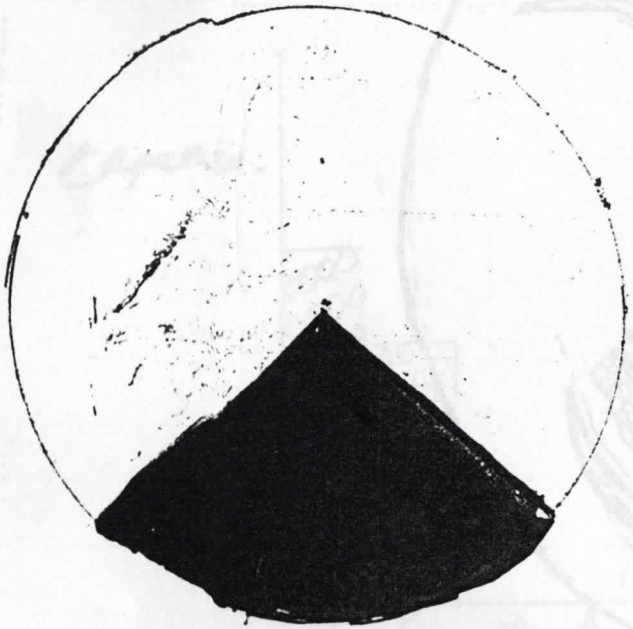
Species

VILLAGE: BUFEYELIE

GROUP NAME: BEE

DATE: 26-09-1987 E.C

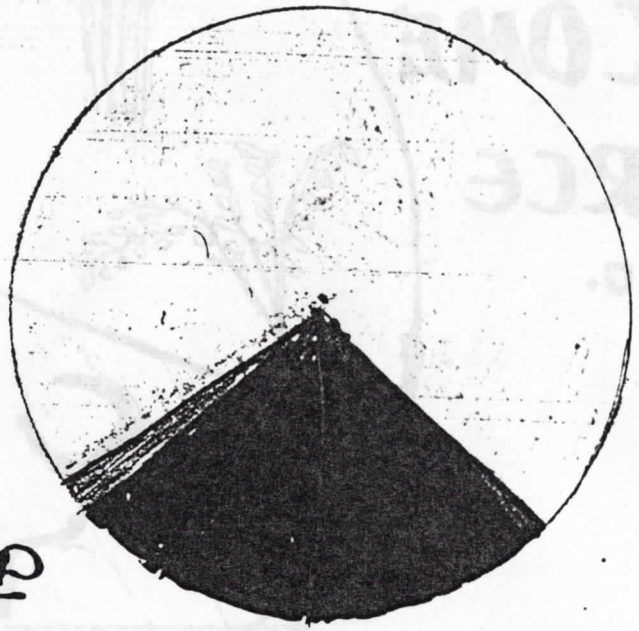
TOOLS USED: Pie Chart



30 YEARS AGO

LEGEND

- Cattle
- Sheep
- Donkey
- Goat
- Camel



AT PRESENT

SCF PRA WORKSHOP 1995

VILLAGE: BUFEKELIE

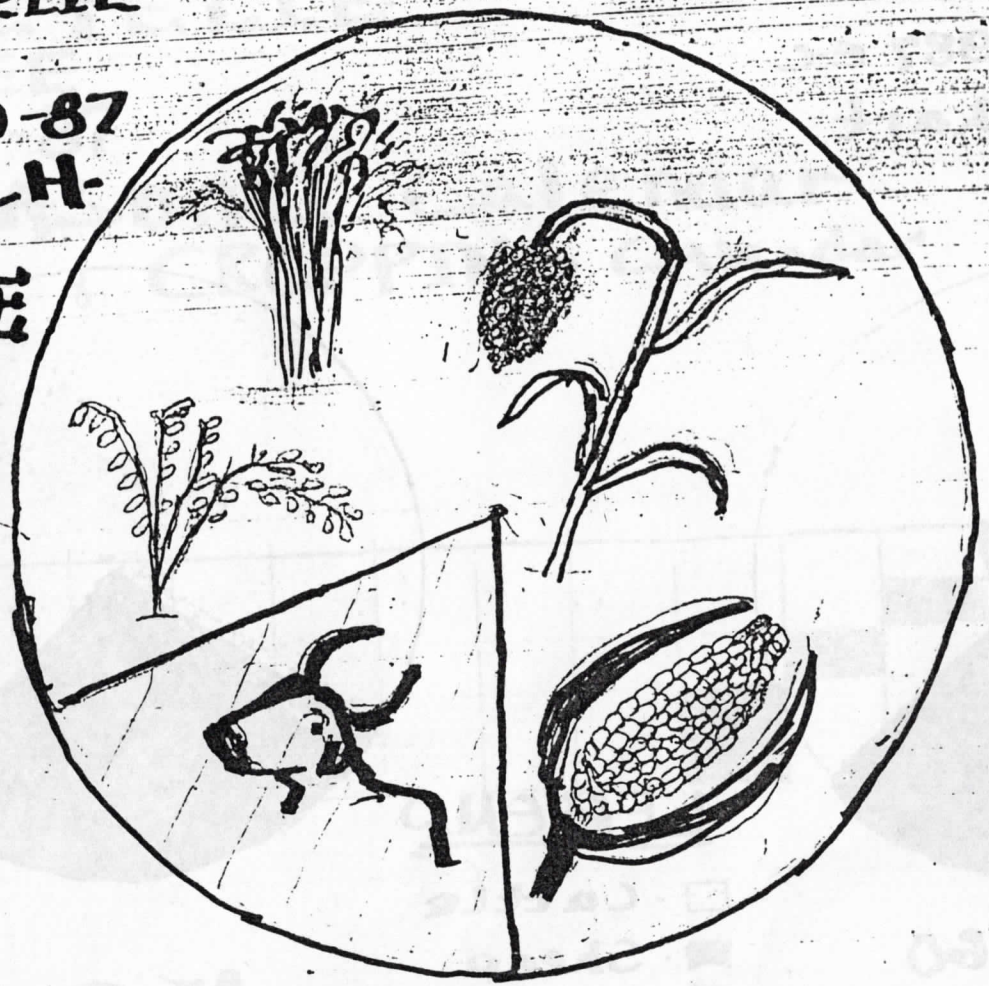
GROUP NAME: BEE

DATE: 25-09-87

TOOLS USED: PIECH-

INCOME SOURCE

Digra 10.



VILLAGE - BURGHLIE
GROUP. - Bee
Date - 26/09/87 Ec

Diagram 11. Seasonal Pattern of Expenditure.

