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CARE - MOZAMBIQUE

BASELINE SURVEY REPORT

FOR

OIL PRESS ENTERPRISES IN NAMPULA PROJECT

Under PVO Support Project, 656-0217
(USAID/MOZAMBIQUE)

Grant No. 656-0217-6-00-5001-00

January 1996

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LIST OF ABBREVIATIONS

- DDA District Department of Agriculture
- DPA Provincial Department of Agriculture
- FSP Food Security Project [co-implemented by MOA/MSU]
- GOM Government of Mozambique
- HH Household
- HHH Head of Household
- JVC Joint Venture Company [refers to multi-national/GOM agribusiness companies. Principal products: cotton and tobacco]
- MOA Ministry of Agriculture
- MSU Michigan State University
- OPEN Oil Press Enterprises in Nampula Project

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EXECUTIVE SUMMARY

The key findings of the baseline survey are:

. Lack of land or labor are not perceived by farmers as major constraints in the cultivation of oilseed. Seed and markets were the constraints identified by smallholders as reasons why they did not produce oilseed crops.

. Only 17% of households surveyed consumed cooking oil from April 1994 to March 1995.

. First year adopters of the project tend to have more income and on-farm labor relative to non-participants. They also showed a greater increase in the amount of land they cultivated from 1994 to 1995 than did non-participants in the project.

Hypotheses drawn from the data, and which require further research are the following:

. Oilseed fits well into the existing farming systems. This hypothesis is based on oilseeds cropping cycle, small labor requirements, and tolerance for inter-cropping.

. CARE is directly addressing the two key constraints for the development of the oil sub-sector by supplying improved seed and providing a local pressing capacity.

The survey will be of immediate use in the following areas:

. The content of extension messages transmitted by OPEN field staff in the upcoming agricultural campaign.

. Identification of new project sites to be included in the second cropping cycle to be in January, 1996.

INTRODUCTION

The Nampula Sub-Office of CARE Mozambique initiated the Oil Press Enterprises in Nampula Project (OPEN) in October 1994 in four districts within the province of Nampula: Namapa, Malema, Mecuburi and Ribae.

The project's goal and intermediate objectives are:

Project Goal:

To increase the income of 76 press owners and 1,500 small-scale oilseed growers in the project area, and provide 15,200 rural and urban consumers renewed access to high quality, low-cost cooking oil in 4 districts of Nampula Province by March 1998.

Intermediate Goal 1:

76 viable oil pressing enterprises utilizing ram-press technology functioning in Nampula Province by March 1998.

Intermediate Goal 2:

A viable Mozambican institution providing support services to 76 entrepreneurs and 1,500 oilseed growers by March 1998.

Intermediate Goal 3:

1,500 farmers in Nampula Province are producing oilseed profitably on an ongoing basis by March 1998.

As part of the project design, a baseline survey was conducted with the joint goals of:

- 1) providing a benchmark against which follow-up evaluation would be able to measure the project's impact with respect to the aforementioned goals; and
- 2) to provide project management and staff with descriptive information about agricultural practices and socio-economic conditions in areas where the project is operating in order to improve project implementation.

This report documents the methods used and synthesizes statistical results from the baseline survey conducted in six of the 15 villages in which OPEN is functioning. It is organized into the following sections:

Section I	Overview of the Agricultural Economy of OPEN Districts
Section II	Methodology
Section III	Descriptive Statistical Results and Analysis
Section IV	Conclusions and Programming Recommendations

SECTION I - OVERVIEW OF THE AGRICULTURAL ECONOMY OF OPEN DISTRICTS

I.1 OVERVIEW OF THE ECONOMY OF OPEN DISTRICTS

Nampula Province, in terms of its agro-ecological characteristics, is divided from east to west between a coastal and interior zone, with a transitional zone separating the two. Approximately 80 percent of the Province's population lives in rural areas. The interior and intermediate zones, with often rich red and black clay soils, are often considered the "breadbasket" of the province. Sales of surplus smallholder cereals production (mainly maize and sorghum) has a long history. Cassava and rice are the chief staple crops produced in the coastal zone. Also, on the coast there is a strong tradition of fishing and producing salt. In the colonial period an important trading network developed through which residents in the interior traded their excess cereals to those on the coast while salt and dried fish were sold from the coastal zone to the interior.

The interior of Nampula Province was the last area of Mozambique to come under the effective control of the Portuguese Empire. A fundamental economic motivation of the Portuguese colonial state in these zones was to encourage smallholder and plantation production of cotton and tobacco. Smallholders were forced by the state and its surrogates to cultivate these export crops. Cashew nut was also an important export crop in the colonial economy, and provided important cash earnings to smallholders.

An industrial cooking oil extraction industry developed during the colonial period in Monapo. Sunflower and sesame, grown by smallholders throughout the intermediate and interior zones (including OPEN districts), were two of the primary sources of raw

material for the factory. For those oilseed growers, these crops provided a source of cash income. Further, for the broader economy, domestically produced oil constituted an important source of domestic consumption.

Thus, there exists a long history of smallholder integration in the cash economy in the OPEN districts. As a result of the war and the post-independence centrally planned economy policy, however, the commercial network in rural areas came to a near standstill. In the post-war era, residents of OPEN areas confront limited opportunities for commercialization of their agricultural production, though smallholder have increased marketing of maize, peanuts, beans and other food crops in some areas.

Cotton and tobacco represent the primary source of cash income for smallholders. These cash crops, in the smallholder sector, are organized around joint venture companies (JVCs). Each JVC is jointly owned by an international firm and the Government. These JVCs took the place of bankrupt state industries in the late 1980s/early 1990s, and generally are dominant firms in the economy of those areas in which they operate, and in which they are the legalized sole buyer of cotton or tobacco.¹

I.2 FOOD SECURITY AND SMALLHOLDER INCOME SOURCES IN THE POST-WAR ECONOMY

The food security situation throughout the OPEN districts varies. Information gathered during the project development phase of OPEN showed that, to varying degrees, the bulk of smallholders in each district could be characterized by the following:

1. Reliance on own-food production in meeting basic consumption needs. The commercial system has re-emerged to a limited extent, with traditionally purchased food items such as cooking oil, dried fish, salt and sugar being traded from the coast inland. Research by CARE prior to the beginning of OPEN found cooking oil (and other commodities) to be markedly absent from most of the project sites. In some cases, the closest market in which cooking oil was available was 80 to

In OPEN project areas, three JVC's responsible for support smallholder cotton production and marketing are present. The largest of these is SODAN (Sociedade de Desenvolvimento Algodoeiro de Namialo) whose parent, MNF, is Grupo Commercial Joao Ferreira dos Santos (JFS). This firm operates in Namapa District. Cimpofim and Eduardo Pinto are the other two firms involved in smallholder cotton (Mecuburi and Ribaue Districts). For a more complete description and analysis of the role of cotton in the smallholder economy in rural Nampula, see FSP Working Paper No. 16.

100 kms away, with no public transportation available.

2. As noted, among those households with agricultural sales; cotton, tobacco and to a lesser extent cashew nut, were the most important sources of cash income. While some smallholder reported sales of food crops (chiefly maize, beans, and groundnuts), markets were characterized by few buyers and constrained by limited transportation for smallholders to market their production away from their own villages. In 1995, excess maize rotted in Malema District for lack of buyers while free food distributions were conducted in coastal districts of the province.

3. Off-farm earnings, whether in agriculture or non-agricultural enterprises, represent a small portion of smallholder income.

I.3 ROLE OF THE EDIBLE OILS SECTOR IN THE SMALLHOLDER ECONOMY AND FOOD SECURITY

Smallholders in OPEN districts produced relatively large amounts of sunflower and sesame during the colonial period. This production was typically sold in rural stores at fixed prices and processed at the industrial oil factory in Monapo. These same rural stores also sold smallholders basic consumer items, such as cooking oil, salt, sugar and dried fish.

Given the breakdown of the colonial system of rural stores during the post-independence era, smallholder production of these oilseeds declined and, in some cases, disappeared completely. Smallholders ceased producing oilseeds for the market as there were few buyers for their production.

Among the few farmers who still grew oilseed prior to OPEN, sesame was produced mostly for consumption as a condiment and sunflower for extraction of oil by traditional methods.

The advantages of oilseed for smallholders are the following:

1. They require relatively little labor compared to other crops; especially cotton and tobacco.
2. The labor they do require is primarily during periods of low labor demand in competing crops.
3. They are almost universally inter-cropped and therefore do not require additional land resources.

I.4 THE RURAL COMMERCIAL AND TRANSPORTATION NETWORK IN THE POST-WAR ERA

The road network in rural Nampula Province is poor. During the rainy season (from December to April), roads in many OPEN areas are nearly or completely impassable. Poor road conditions compelled the project to exclude one village which the project management had intended to include in this survey. This discourages urban merchants from re-establishing trade networks for the purchase of domestic production and to make products available to rural residents.

Excess production is therefore frequently unmarketable. Coupled with the inadequacy of storage capacities, this results in the inability of farmers to sell their surpluses. For example, in August 1995 smallholders in Malema burned excess maize still unsold from the 1994 season.

Distances from the major market, Nampula City, are large. Three of OPEN's four districts are accessible only by dirt road. During the rainy seasons, the principal road is cut due to fallen bridges, "lakes" which form in low points, and gullies carved by runoff. Distances to district capitals are listed in the table below.

DISTRICT	DISTANCE TO NAMPULA	TYPE OF ROAD
Malema	235	Dirt; on principal road
Ribaue	135	Dirt; on principal road
Mecuburi	80	Dirt - 45 kms off the principal road
Namapa	235	Paved

Poor roads and the lack of a well developed transport network imply few income earning options for smallholders. In part of the project area the cotton and tobacco companies purchase in rural areas and provide some maintenance of the rural roads between their processing facilities and the villages. This is the case for five of the fifteen current project sites. One of these sites, Ratane, is included in this survey. This is not true for other crops.

SECTION II - BASELINE METHODOLOGY

II.1 CARE Collaboration with MA/MSU Food Security Project

Since 1991, the Ministry of Agriculture/Michigan State University Food Security Project (FSP) has been conducting research about the smallholder economy in selected areas of Nampula Province. In April 1994, an 18 month data collection strategy was begun with the purpose of trying to improve understanding of the relationship between smallholder cotton, food cropping, food security and income growth. The FSP's research design includes repeat visit interviews with a sample of cotton-growers and non-growers in the areas of influence of the three largest JVCs in the north of Mozambique: SODAN, Sociedade de Desenvolvimento Algodoeiro de Namialo, (SAMO), and Lomaco (in Montepuez). Specific focus is placed within this design on trying to understand the differences between the institutional arrangements which characterize smallholder/JVC relations in the three areas where these concessionary companies operate.

FSP and CARE recognized a mutual interest in collaboration on the OPEN baseline. The FSP was interested in understanding the range of cotton schemes operating in the OPEN districts (outside its previously defined area of data collection) as well as understanding the dynamics of the initial stage of the OPEN Project. Thus, the design and implementation of the baseline study was a collaborative effort between the two institutions, with the data collected being available for use by both. The FSP completed a second visit (after the 1994/95 harvest) in order to develop a data set more compatible with the data being collected in the SODAN, SAMO, and Lomaco areas.

To summarize, as of this date, two rounds of interviews have been completed with the bulk of households in the baseline sample. For the purpose of this baseline report, however, data from only the first round is used. FSP will make available this second round of data to CARE for further analytical purposes, and for use in the project impact evaluation at the end of Phase Two of the project.

II.2 HOUSEHOLDS INTERVIEWED

Table 1 lists the 15 villages, by district, included in the project, the number of households, and the number of participating

households in the OPEN project in each community.² Village codes are also indicated for the purposes of the baseline survey.

List of OPEN Villages and Population

District/Village	Village Code	Population (# of Households)	# of Care HH's
RIBAUE			
Namuali	501	503	218
Colemeia	504	340	128
Jacina Machel	502	580	234
Mucolova	503	279	203
District Total		1702	783
MALEMA			
Muanona	401	210	167
Nataleia	402	489	202
Murralelo	403	648	200
Total		1347	569
MECUBURI			
Namina	601	2016	279
Momane	602	463	239
Ratane	603	123	82
Inchua	604	230	78
Total		2832	678
NAMAPA			
Muanona	704	252	167
Nametimula	701	1633	199

² Participant is defined throughout this document as a household which received sunflower and/or sesame seed from CARE during the initial year of the OPEN project.

District/Village	Village Code	Population (# of Households)	# of CARE HH's
Jacoco	702	375	185
Odinepa	703	275	75
Total		2535	626
OVERALL TOTALS		8416	2656

II.3 SAMPLING

Selection of Villages

The sampling procedures adopted in the baseline survey attempted to provide a data set which would be statistically representative of OPEN participants and non-participants in the project area overall. A sizable group within each category was intended within each village to provide the maximum variation possible throughout the sample, and ensure representativity.

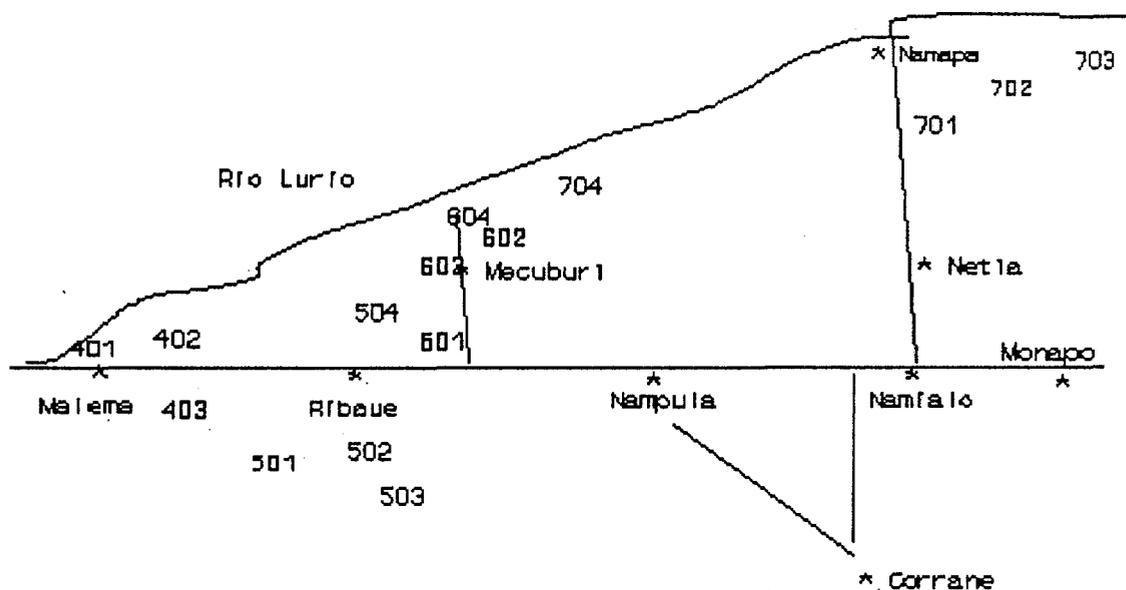
Of the fifteen villages in which OPEN operated during its first year, six were chosen as sites for the baseline. The selection of these six villages, while essentially random, took into consideration the following constraints:

1. Road conditions made 5 villages inaccessible at the time of the survey.
2. The desire to include at least one village from each of the four districts; thus, a maximum of two villages per district was allowed.

Selection of households within the selected villages

To be as representative as possible of participants and non-participants, a census of the population in each village was conducted. This was accomplished with the cooperation of village leaders. Leaders listed all heads of household in the village. A member of the survey team then made a random selection of 35-50 households in each village. The survey team interviewed twice as many participants as non-participants in order to provide a larger sample size of participants because information about existing

O.P.E.N. PROJECT SITES



agronomic practices used for oilseed was an important objective of the survey and could only be gathered from participants.

A number of households higher than the desired number to be interviewed was scheduled for interviewing, given the likelihood of absenteeism on the day that the survey team would be in the village. In fact, absenteeism was found to be significantly higher in the non-participant category. This is probably due to the fact that participants had a vested interest in participating in the survey as they had received seeds and technical support from the project. A certain amount of survey and meeting "burnout" exists

due to multiple meetings called by NGO's and government.

II.4 FIELDWORK

Ten enumerators (eight men, two women) were selected from the FSP staff. All had at least one year of experience with the FSP methods and were provided with a two-day training by FSP and CARE personnel in Nampula City immediately prior to the field work. The enumerators reside in Monapo, Meconta, and Ribaué districts. Two FSP field supervisors were also employed to manage administrative and technical issues related to the conduct of fieldwork. Further supervision was provided by FSP and CARE management in several of the villages selected.

The fieldwork was conducted between March 3 - March 10, 1995. All of the enumerators were present as a group in each of the villages. Local leaders provided assistance in organizing the persons selected for interviews. CARE extension staff provided logistical and organizational assistance as well. A total of 241 interviews were conducted. Interviews typically required about one hour to complete. Table 2 provides a complete list, by category of OPEN participation, of village populations and sampled households.

Baseline Sample by Village

District	Village	# HH Pop.	OPEN Participants		Non-Participants	
			Pop.	Interview	Pop.	Interview
Ribaué	Namuali	503	218	36	285	3
Malema	Manhame	210	167	35	43	15
Mecuburi	Namina	700	279	27	421	18
	Ratane	123	82	22	41	13
Namapa	Nametimula	600	199	23	401	11
	Jacoco	375	185	16	190	22
Total		2511	1130	159	1381	82

II.5 THE QUESTIONNAIRE

The objectives of the research are clearly reflected in the design of the survey form. An example of the questionnaire instrument is found in Annex 3. The questionnaire concentrated on six categories of information:

1. demographic characteristics of the family;
2. land use characteristics and the size of cultivated fields;
3. characteristics of agricultural production, specific attention was focused on sesame and sunflower history, agronomic practices and technology used in production and storage;
4. agricultural sales of food and non-food products
5. purchasing behavior, including cooking oil
6. off farm income
7. role of extension services and technology dissemination in the area.

Questionnaire Content and the Period of Reference

The survey was conducted in March 1995. Questions related to land use, production and sales was related to the previous year's crop (and the current year's crop, not yet harvested).

II.6 DATA PROCESSING

Data processing included three separate procedures: post-coding, data entry, and data cleaning. The post-coding of the questionnaires was done by CARE staff with supervision by an FSP supervisor and the OPEN Project Manager. Data entry, utilizing SPSS/PC+ was done by CARE staff with technical input from the FSP project manager and supervision provided by the OPEN project manager. FSP staff assisted in the data cleaning and its organization.

SECTION III - STATISTICAL RESULTS AND ANALYSIS

GENERAL COMMENTS

The reader should refer to the statistical tables (Annex 2) for details regarding the observations made in this section and other statistical information which is not included in this section.

The tables show that there is little difference on most of the variables between participants of OPEN and non-participants. One notable exception is income as participants report more income than non-participants.

The survey was conducted two months after oilseed was distributed. The only table which may have been affected by conducting the survey at this point, rather than prior to project start up, is farm size. Some of the participants opened new fields to plant sunflower and/or sesame.

If a profile of a "typical" household can be drawn, it would show the following characteristics.

- . Age of head of household: late 30's
- . Family size: 4.6
- . Native to the area
- . More than 90% of head of HH are men
- . A minority of HH are polygamous (8%)
- . Household Farm Size: 2.5 hectares
- . Farm Size per Adult Equivalent: .85 hectare
- . The majority grow cassava, maize, and sorghum. About one third grow ground nuts.
- . Just over half of the children attend school
- . One out of five grow the following cash crops (cotton, tobacco, oilseed)

III.1 GENDER ISSUES

Because only heads of households were interviewed in this survey, the women interviewed are by definition heads of households. This is only one specific category of women, and should be kept in mind when interpreting the data disaggregated by gender. This would especially effect information about farm size by gender and number of on-farm laborers.

Gender specific issues investigated in the survey included:

- . Percent of Female Headed Households
- . Farm size
- . Number of On-Farm Laborers
- . Labor Division on Oilseed Crops

Female head of households constituted 5.83% of the households interviewed in the survey. The percent of total household headed by women varied considerably within the six villages included in the survey. In Mecuburi, 12% of the households were headed by women, while in Nametimula and Jacoco, zero were interviewed.

Women head of households totaled 4% of the participant group while female headed household constituted 7.6% of the non-participant group.

Farm sizes were consistently smaller in female headed households than in male headed households. When average farm size is broken down into quartiles, the vast majority of the households headed by women fell into the two smallest quartiles with average land area cultivated between .27 and .43 of an hectare (85%). Only in Ratane (Mecuburi), did some female headed households fall into the highest quartile of cultivated land (1.79 hectares or more). These women represent 8.7 percent of the total women interviewed.

A further interpretation from the data is that female headed households tend to have more resident members, and therefore more consumption requirements. The table below shows resident members per household by land cultivated. Eighty five percent of female headed households fall into the two lowest quartiles.

QUARTILE by Average Amount of Land Cultivated	Average Number of Residents
.27	5.69
.43	4.98
.56	4.18
.92	3.36

Although households headed by women have more requirements for food, they also have more labor with which to produce on-farm income. The following data illustrate this point.

Land Cultivated by Quartile	Average No. of On-Farm Laborers
.27	3.69
.43	3.29
.56	2.55
1.92	2.61

III.2 DEMOGRAPHIC CHARACTERISTICS

In general, the demographic characteristics of both groups are not significantly different. Notable differences only appeared in the numbers of on and off farm laborers and percent of polygamous families that each category reported. For more detailed information and a village by village breakdown, see Annex Two.

III.2.1 HOUSEHOLD FAMILY CHARACTERISTICS

The average number of residents per HH for both groups combined is 4.62. There is no large difference between the participant group and the non-participant group.

DEMOGRAPHIC CHARACTERS OF POPULATION
 MEANS

CATEGORY	RESIDENT MEMBERS	AGE HEAD OF HH	POLYGAMOUS	NATIVE HEAD HH
PARTICIPANT	4.67	40	13	93
NON PARTICIPANT	4.50	36	4	92

School attendance for children ages 7-15 averaged 55% for the population as a whole. However, when the data is dis-aggregated for by village, the Jacoco data skews the average. Only 24% of school age children in Jacoco attend school. When Jacoco is excluded, the average of children attending school increases to 63%.

III.2.2 FARM SIZE

Household farm size for both groups combined was 3.22 hectares. The difference in farm size between participants and non-participants was quite small (.16 hectare). Farm size per adult equivalent was also very similar, especially when one considers the relative larger increase of area cultivated by participants in the 1995 season.

Household Farm Size and Adult Equivalent³
 1993/4 and 1994/5

CATEGORY	Farm Size 93/94	Farm Size per AE 93/94	Farm Size 94/95	Farm Size per AE 94/95
PART	2.56	.82	3.14	1
NON PART	2.74	.88	3.30	1.05

The amount of land cultivated increased for both groups from the agricultural campaign of 1994/95. The participant group showed a higher increase. While the participant group, taken as a whole, increased the amount of land cultivated by 20%, the non-participant group marked an increase of 6%. In two of the villages, the non-participant group decreased cultivated land slightly. All of the villages in the participant group marked increases.

The higher increase in cultivated land on the part of the participants is probably due to the opening of new fields for oil crops.

Figure 1 illustrates the changes in farm size from 1993/4 to 1994/5.

III.2.3 LAND PER ADULT EQUIVALENT

Participants cultivate more land than non-participants per AE. They also showed a higher increase in cultivated land per AE in 1995 than the non-participant group.

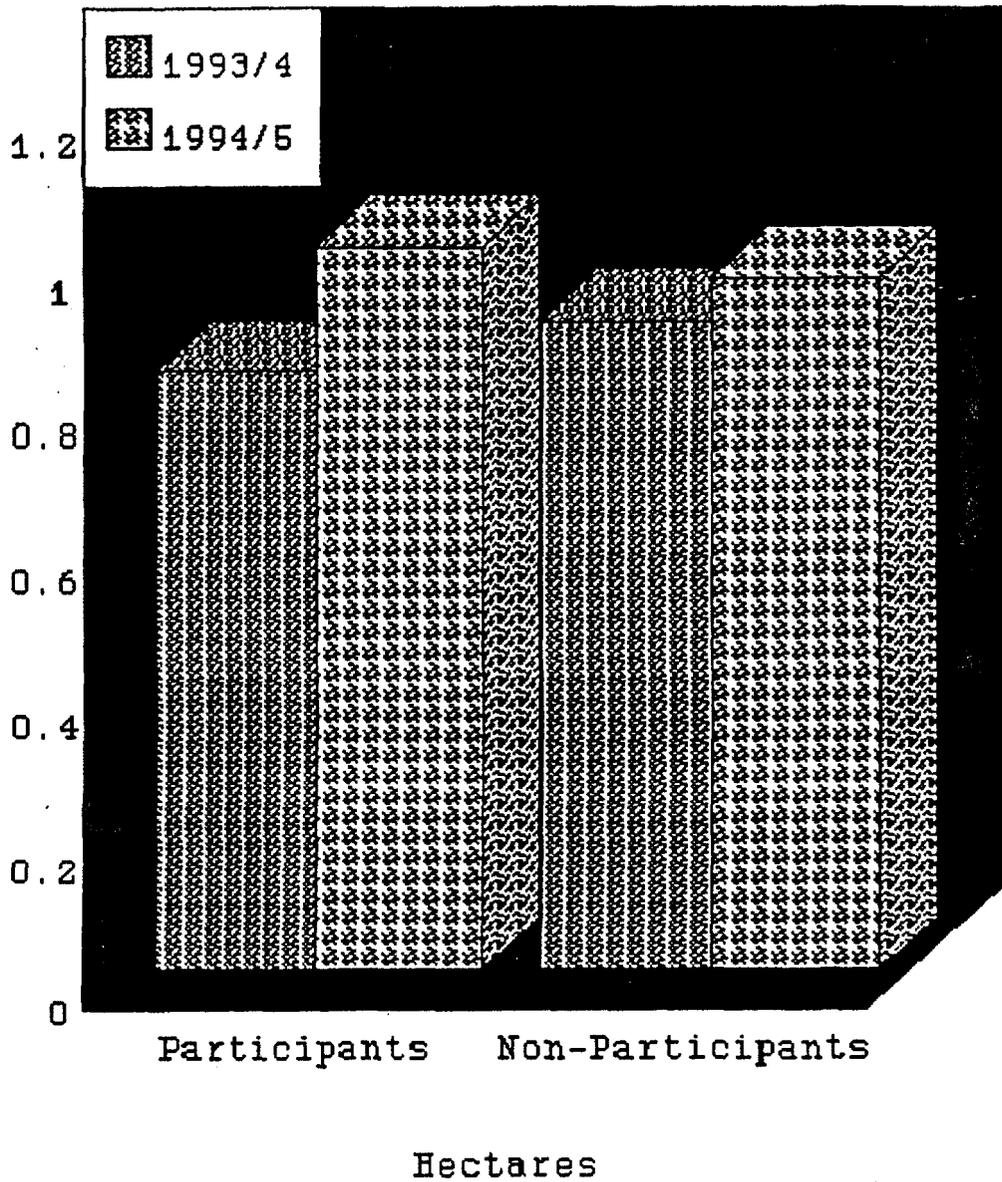
Namina, on the main road to Malawi and on the railway line, (and relatively close to Nampula City) showed the most significant increase. The non-participant group increased land under

³See Annex One for definition of Adult Equivalent (AE).

Figure 1

Household Farm Size

1993/4 vs 1994/5



cultivation by 28% while the participant group increased land under cultivation by 42%.

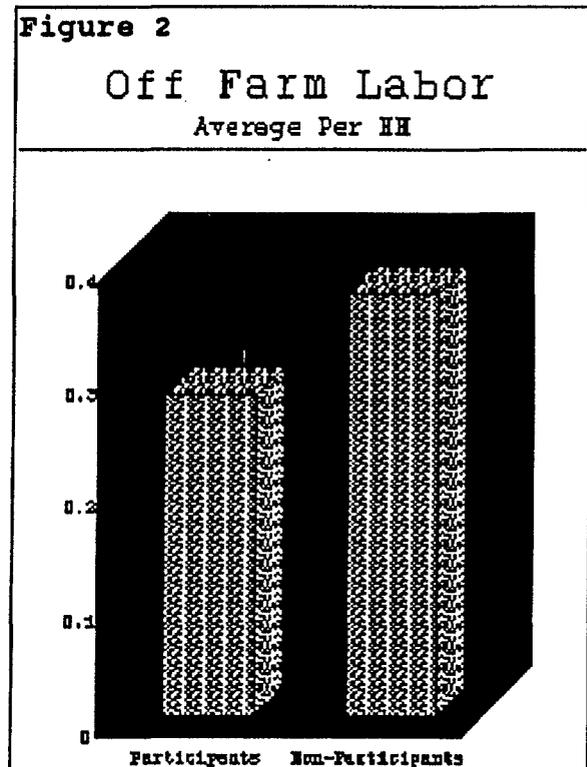
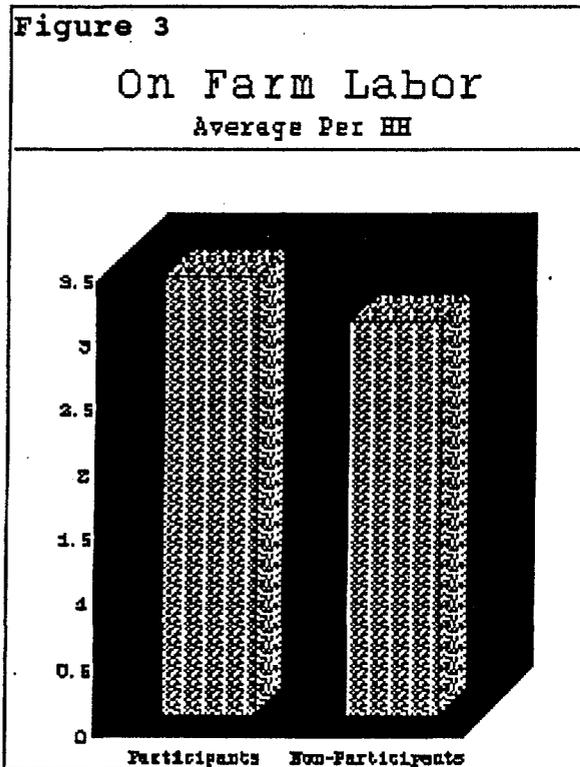
III.2.4 ON-FARM LABOR

The number of on-farm laborers per HH, overall, is 3.20. Participants have a larger average of laborers per household; 3.37 for participants and 3.02 for non-participants. Thus, the survey shows that participants have an average of 8.4% more labor available per households. See Figure 2.

III.2.5 OFF-FARM LABOR

Off-farm labor includes work done for a cotton or tobacco company or on another households fields. The later is common in the area. It is sometimes paid in cash and sometimes paid in-kind.

The average number of off-farm laborers per HH in all the villages for both categories is 0.28. The mean for participants was 23% lower than the non-participants (.28 vs .37). See Figure 3.



SECTION III.3 OILSEED

Results of the survey demonstrate the following:

1. Forty five percent of the population in the six villages surveyed have cultivated sunflower and/or sesame at least once in their lives.
2. Seventeen percent of the population in the area surveyed purchased cooking oil from April 1994 to March 1995.
3. Participants in the first year of OPEN were more likely to have cultivated oilseed in the past than non-participants.
4. In only one village (in Ribaue) did farmers sell sunflower seed in the 1993/4 season. The sale and cultivation of sesame seed was more commonly carried out by farmers prior to the initiation of OPEN.

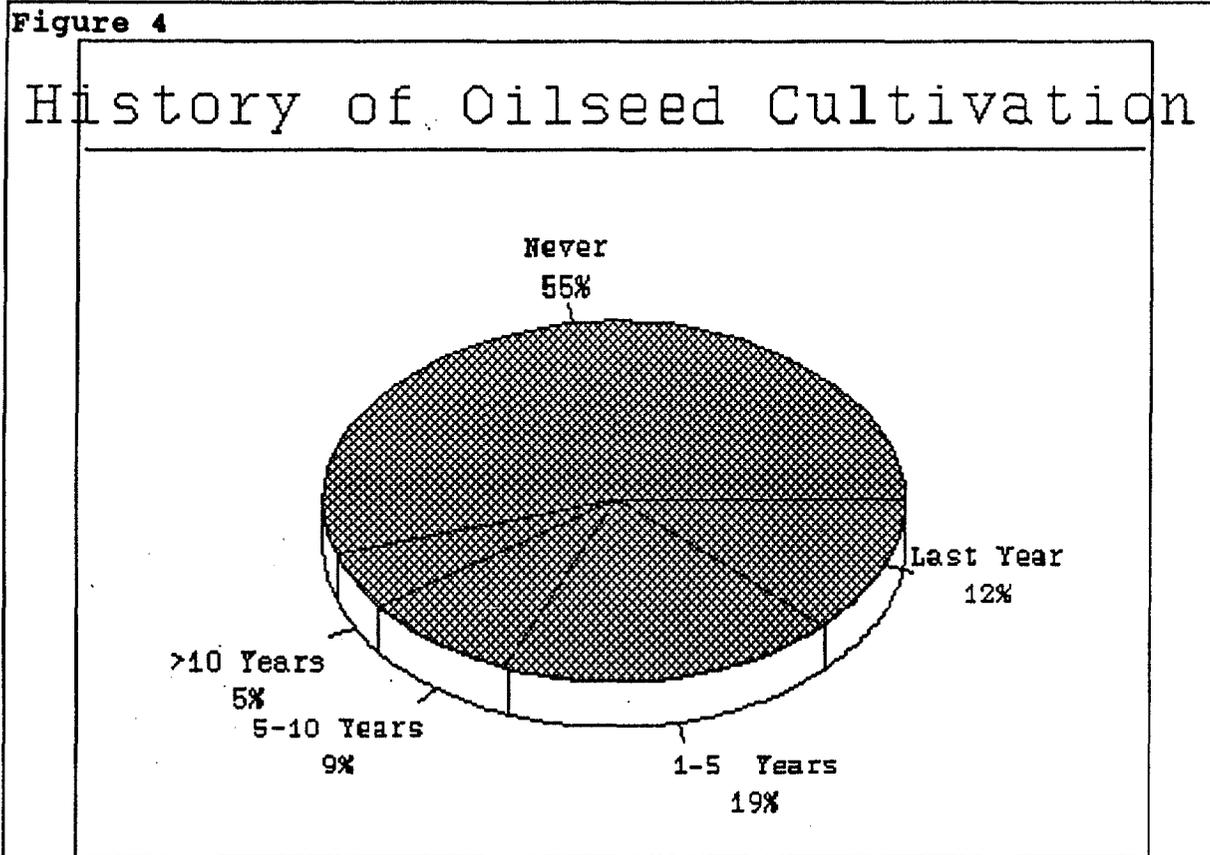
III.3.1 SMALLHOLDER HISTORY OF OILSEED CULTIVATION

There is a clear tradition of oilseed production in the project area. Forty five percent of all respondents, including those not participating in OPEN, have grown either sunflower or sesame at some time. Of these 31% have grown an oil crop in the last five years. Experience with oilseed production varies widely over the project area, from a high of 71% to a low of 24%.

The table to follow presents the combined responses of both groups when asked if they had grown oilseed and when.

When dis-aggregated by village, the data shows that the majority of the surveyed population in Ribaue have experience with sunflower over the last 10 years (62%). Of these, 28% planted in the last year. Similarly, residents of both villages surveyed in Namapa District have had experience with oilseed (sesame) over the last ten years (71% in Nametimula and 58% in Jacoco).

The villages with the least experience cultivating oilseed are located in Malema and Mecuburi. In Manhame (Malema) only 24% have planted the crop (76% responded they have never produced oilseed). In Ratane (Mecuburi) 71% do not have experience with oilseed.



Village	Never	> 10 Years	5-10 Years	1-5 Years	Last Year
Percent	55	5	9	19	12

III.3.2 CULTIVATION OF SESAME SEED

Sesame, unlike sunflower, never lost its market. It was sold to traders and used for in-kind trade for products and labor in Namapa and Mecuburi Districts in the 1993/4 season. However, sesame was far more prevalent in Namapa. Prior to the project, 20% of the population in Namapa District cultivated the crop. In Mecuburi, only 5.5% of the population grew the crop. The data from Ribaue and Malema Districts indicate that there was no cultivation of sesame prior to OPEN.

A comparison of participants to non-participants indicates that those who cultivated the crop prior to OPEN, were more likely to be participants in the project. The table below supports this conclusion. The data excludes Malema and Ribaue Districts where there was no cultivation by either of the groups.

CULTIVATION OF SESAME
 1993/4

GROUP	% CULTIVATED 93/94
Participant	16.25
Non-Participant	9.5

Income from the sale of sesame was significant in only one village, Jakoko (Namapa District). In that village, the mean income from sales of sesame was 834,000 meticaïs among the participants and 69,000 meticaïs among the non-participants. Overall averages for the villages producing sesame are shown below.

GROUP	MEAN INCOME
Participants	318,000
Non-Participants	23,000

III.3.3 CULTIVATION OF SUNFLOWER SEED

Prior to OPEN, sunflower was grown in small quantities in four of the six villages surveyed. Although very little was sold, some farmers grew sunflower for processing via traditional methods or for other reasons not captured in this survey.

Namwali (Ribaue) showed the strongest tradition. This is a verification of field observations made by project personnel. The table to follow details the percentage of those who grew sunflower in the year prior to OPEN's initiation.

VILLAGE	% GROWING IN 1993/4
Manhame (Malema)	2
Namwali (Ribaue)	12

VILLAGE	% GROWING IN 1993/4
Namina (Mecuburi)	2
Ratane (Mecuburi)	0
Nametimula (Namapa)	0
Jakoko (Namapa)	4
OVERALL AVERAGE	3.3

Income from sunflower seeds (1994) was reported in only one village; Namwali, and this was only among participants.

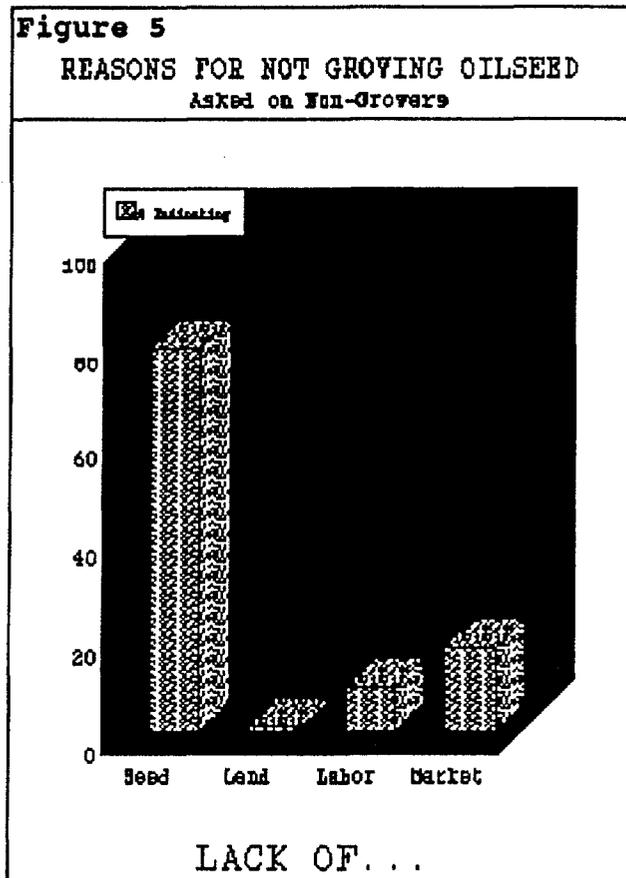
III.3.4 REASONS FOR NOT GROWING OILSEED CROPS

Figure 5 is a graphic representation of responses by interviewees as to why they did not grow oilseed.

For the purposes of this question, "non-grower" is defined as all respondents who have not grown one of the crops in the last year. The table summarizes responses to the question, "Why don't you grow oilseed?"

The data shows that 78% of the "non-growers" cite "lack of seed" as the reason for not producing oilseed. Caution need to exercised when viewing these responses. The respondents were acutely aware that CARE was asking the questions and that CARE had distributed free oilseed two months prior to the survey. The data for history of oilseed production from Ribaué and Namapa indicates that there is seed in these districts.

Lack of market was the next most frequently cited reason for not



growing oilseed crops. Non-baseline interviews conducted prior and during the implementation of OPEN, strongly indicated that this is a very important reason for farmers to choose other crops than oilseed.

Only 10 of the 241 respondents reported selling oilseed in the 1994/5 season (4%). The quantities sold were quite small. The range varied between "a small basket full" to 90 kilograms. In all cases, sesame was sold to rural stores and sunflower was sold to neighbors. The average weight of seeds sold was 40 kilograms, or 400 kilograms for the four districts combined.

REASON	Lack Seed	Lack Land	Lack Labor	No Market
PERCENT	78	1	9	17

Both the lack of labor (9%) and the lack of land (1%) were not important reasons according to the respondents of the survey for not growing oilseed. Both sunflower and sesame are low labor input crops and they can be, and usually are, inter-cropped with food crops. It is interesting and useful to compare sunflower and sesame in this context with the two major cash crops in the project area; cotton and tobacco. The responses for cotton and tobacco are a mirror image of the responses for oilseed. Please see table below.⁴

Reasons for Not Growing Cotton

REASON	Lack Seed	Lack Land	Lack Labor	Lack Market
PERCENT	0	12	88	0

III.3.5 OIL PURCHASES

Only 17% of all respondents said they had purchased cooking oil from April, 1994 until March 1995. For the purposes of this report, oil purchase is considered an indicator of oil consumption.

⁴Source: MSU, Montepuez and Monapo/Meconta. 1995

There was little difference in the frequency of oil purchases between the participants and non-participants. However, the survey showed oil purchases were far more common in villages close to markets. The following data support this assertion.

VILLAGE	PERCENT WHO PURCHASED OIL	DISTANCE FROM CLOSEST MARKET
Manhame	30	4
Namina	24	0
Nametimula	21	10
Namuali	8	24
Ratane	13	60
Jacoco	3	50
MEAN	17	

Observe that higher income does not seem to indicate higher consumption. The table below compares the ranking of the six villages in terms of cash income with their ranking in the frequency of purchase of oil. Consumption seems to be more linked to availability.

VILLAGE	INCOME RANKING (HIGH TO LOW)	FREQUENCY OF OIL PURCHASE (HIGH TO LOW)
Ratane	1	4
Jakoko	2	6
Namuali	3	5
Nametimula	4	3
Manhame	5	1
Namina	6	3

It was not possible to obtain reliable information on the amount of oil consumed. This was due to the difficulty of obtaining accurate information on purchases made up to a year before. Respondents had a difficulty in remembering when and how much oil they had purchased several months before. Therefore, this information is

not reported in this report but will be available in 1996 when FSP publishes a consumption survey completed in four of the six villages included in this survey. The field work for the study was completed in July/August, 1995.

SECTION III.4 CASH INCOME

III.4.1 SUMMARY

The data in this section does not represent total income. If total income were to be accurately calculated, the value of non-cash production and remittances need to be included. This was not possible in this survey. Total income will be possible to calculate with data from FSP's follow-up survey which was completed in August, 1995. The final report will be issued in 1996. This information should be incorporated in the follow up survey executed for the Phase Two evaluation (impact evaluation).

Some of the more important findings of the OPEN survey:

- . Participants have a higher average income than non-participants.
- . Oilseed sales constituted roughly 1% of the rural population's income prior to OPEN's first harvest.
- . Cash crop income, mostly cotton income, is the most important single source of income in the project area.

Participants reported higher incomes than non-participants. Cash income for participants as a group was 31% higher than the cash income of non-participants. When dis-aggregated by locality, these figures vary widely. Figure 4 compares sources and total for each source of cash income for the two groups.

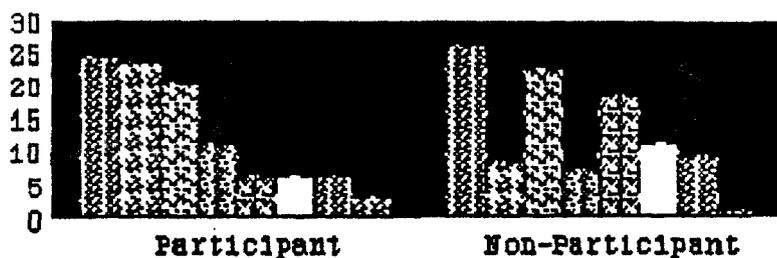
Cash crops represented the highest single source of income for both groups. Cotton (tobacco was not a common source of income) constituted 24% of the cash income for the participant group and 26 for the non-participant group.

As can be seen in Figure 4, the ranking of the sources of income for the participant group and the non-participant group were similar but not identical. Off-farm income was not an important source of income for the non-participant group while it provided 44% of the participant group's income.

The two tables below provide detail for both groups by source, total income from 1993/4, and the percentage of the total income for the average household in the group.

Figure 6

Sources of Cash Income By Percent of Total



	Participant	Non-Participant
Cotton	24	26
Off-Farm/Non-Ag	23	8
Ag Sales	20	22
Off Farm/Ag	11	7
Animal Sales	6	18
Veg Sales	6	11
Fruit Sales	6	9
Oilseed	3	1

OPEN PARTICIPANTS SOURCES OF CASH INCOME 1993-4

SOURCE	VALUE IN '000s METICAIS	PERCENT OF TOTAL
Cotton/Tobacco	354	24
Off Farm/Non-Ag	339	23
Ag Sales	294	20
Off Farm/Ag	163	11

SOURCE	VALUE IN '000S METICAIS	PERCENT OF TOTAL
Animal Sales	91	6
Vegetable Sales	86	6
Fruit Sales	84	6
Sunflower Seed Sales	28	2
Sesame Seed Sales	20	1
TOTAL	1459	100

NON-PARTICIPANTS OF OPEN
 SOURCES OF CASH INCOME
 1993/4

SOURCE	VALUE IN METICAIS '000s	PERCENT OF TOTAL
Cotton/Tobacco	293	26
Ag Sales	240	22
Animal Sales	198	18
Vegetable Sales	126	11
Fruit Sales	104	9
Off Farm/Non-Ag	88	8
Off Farm/Ag	52	7
Sesame Sales	12	1
Sunflower Sales	0	0
TOTAL	1113	100

The table below shows the ranking for sources of income in both aggregated form (mean for all villages) and then disaggregates income sources by village.

Income by Village	Cash Crops	Food Crops	Off-Farm	Animal	Total
Manhame	0	132	249	370	751

Income by Village	Cash Crops	Food Crops	Off-Farm	Animal	Total
Namualli	363	350	98	113	923
Namina	200	144	325	72	740
Ratane	618	136	96	205	1054
Nametimula	563	185	70	28	846
Jakoko	452	346	100	93	990
Sub Totals	2195	1291	937	880	5303
Percent of Total	41.39	24.35	17.67	16.60	

Notice what while cash crop income is by a large margin the major source of income overall, in Manhame none of the respondents reported any income from cash crops. However, their off-farm income may come from working on a nearby tobacco plantation.

III.4.2 CASH CROPS

In this survey cash crops are defined as cotton, tobacco, and oilseed. Income from cashew is included as part of agricultural sales. In the case of all three categories, participants generated more income from cash crops than did non-participants.

The table below compares the two group's averages of those who plant the cash crops. A striking difference appears only with the cultivation of sesame.

Principal Cash Crop Production % of those with

CATEGORY	COTTON	TOBACCO	SESAME	SUNFLOWER
PART	25	2	15	2
NON PART	22	1	1	2

COTTON

Cotton is a key cash crop in some OPEN districts. In others, there is little or none. In Manhame (Malema District), no persons reported growing cotton. In contrast, 100% of the participant

group in Ratane grow cotton. Combined averages of HH's which planted cotton in 1994/5 are shown in the table below by village.

Village	% with Cotton
Manhame	0
Namwali	20
Namina	28
Ratane	88
Nametimula	3
Jacoco	0

Notable differences between the categories in the same villages did appear. In some cases participants grew cotton more frequently while in other cases non-participants planted cotton more frequently. Refer to Table XX in Annex Two for details. The project wide average for participants was 25% while the average for non-participants was 22%.

Within "cotton areas", the average amount of land planted in cotton was .95 hectares. Participants averaged .83 ha while non participants averaged 1.06 ha.

TOBACCO

Tobacco is less important in the project area than is cotton. In 1993/4 it was grown only in Jakoko. In 1994/5 respondents from Manhame, Namwali, and Jakoko were planting tobacco. Still, in 1994/5 only 4% of the respondents planted the crop.

OILSEED

Oilseed sales were not an important source of cash income.

In a few cases, participants reported receiving income from sunflower in 1993/94. Non-participants reported none. Sesame was sold by a relatively larger number of HH's in 1993/4 but still was a minor source of income. Both crops were planted for household use in small quantities.

In Jakoko (Namapa District), 31% of the participants and 24% of the non-participants reported growing sesame. The participant group reported a good price from the crop as compared with maize. This observation is supported by the fact that merchants in both Namapa

and Mecuburi were purchasing sesame seed at relatively high prices in August and September, 1995.

Project wide, sesame constituted only 2% of the total cash income reported by respondents to the survey while sunflower constituted 3% of the 1993/4 cash income.

In only one area, Ribaue, was income reported from sunflower in 1993/4. However, some sunflower was planted in four of the six villages included in the survey.

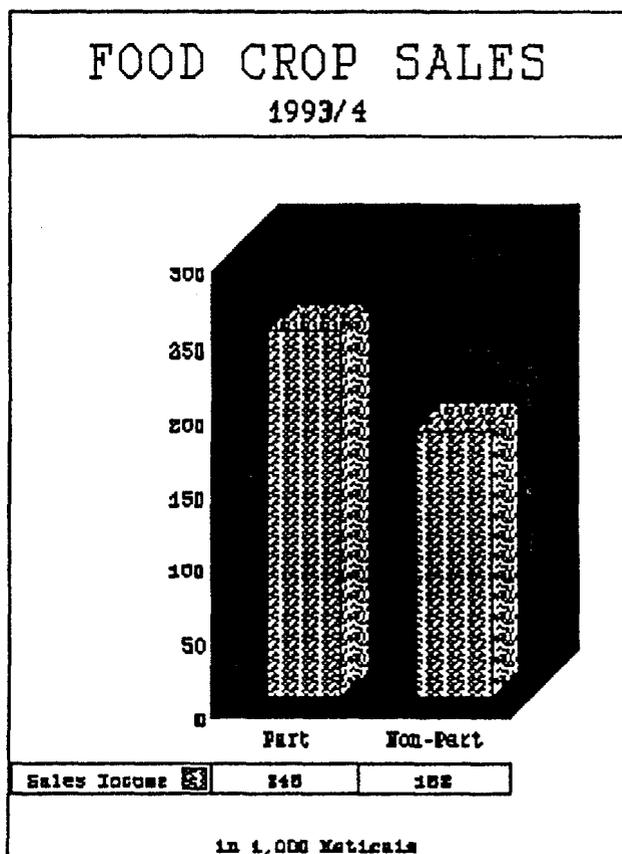
III.4.3 FOOD CROP SALES

Food crop sales constitute the second largest source of income for participants and the third for non-participants. Food crops represent all agricultural sales excluding animals, fruits and vegetables. Cashew nut sales are included in this grouping.

Approximately the same average in both groups had food crop sales in the 1993/4 season. Within the participant group 62% reported sales while in the non-participant group 63% of those interviewed reported sales from the period.

The average of those who sold food crops varied greatly between the villages but between categories used in this survey, it appeared to be random. (See Table 10, Annex 2).

In general those villages included in the survey located far from a major road sold more food items than those located near a principal road, a surprising result. This may be the result of cotton company activities. Further research is required. The data shows the following for 1993/4:



CATEGORY	AVERAGE VALUE OF FOOD CROP SALES; GROUPS COMBINED
Near a Principal Road	153,000
Distant from a Principal Road	277,000

MAIZE SALES

Farmers in all the villages sold maize in both years of the survey. Within the category Food Crop Sales, maize represents the most important crop in terms of revenue. Percentages of those who sold maize in 1993/4 varies widely between the sites surveyed but the overall percentages are 37% for participants and 38% for non-participants. Of all food crops sold, maize accounted for approximately 80% of all sales.

GROUND NUT SALES

Ground nuts constitute the other primary source of food crop sales. Interestingly, in contrast with maize, ground nut sales were principally confined to those areas near major roads. Again, further investigation is necessary to determine why. One possibility could be that the Nampula based traders purchasing ground nuts with the same trucks they send to supply the rural stores in the district capitals.

There was little difference between the participant group and the non-participant group either in the percentage of the group who sold the crop or in the income generated by the sales.

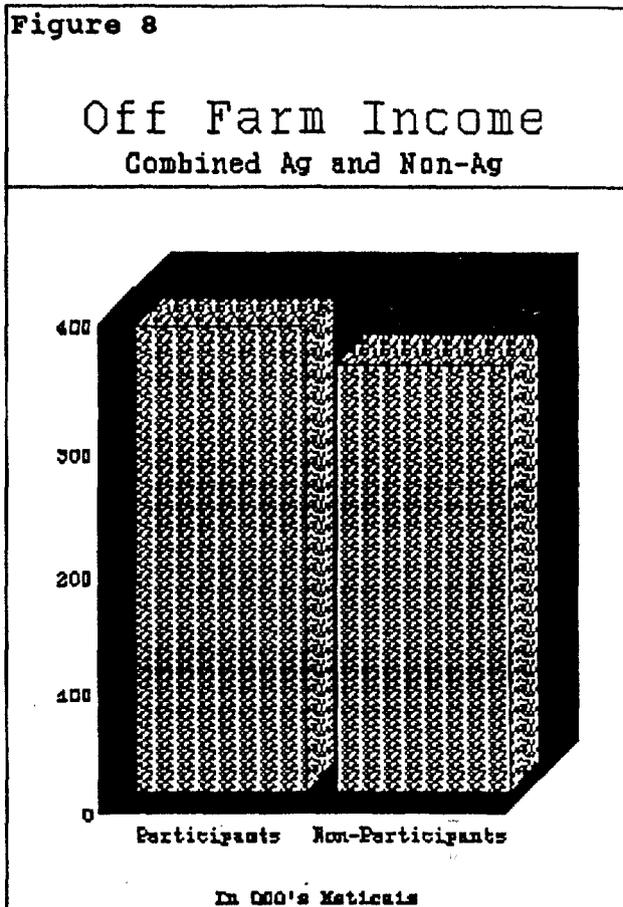
III.4.4 OFF FARM INCOME

Off-farm income is separated into two categories for the purpose of the survey; agricultural and non-agricultural. Non-agricultural off farm income includes income derived from various sources. This would include sales of cashew nut drinks, road side sales and sales to neighbors, carpentry, handicrafts and farm instruments, and the like. Agricultural off-farm income is paid labor on another's farm or a cotton/tobacco plantation.

The table below shows reported agricultural and non-agricultural income. It displays the percentage of each group that confirmed income from each of the sources. It is interesting to note that

for participants, off-farm income, both agricultural and non-agricultural were important income sources for the household. The two combined total 44% of the total cash income for the household. Non-participants report that the two sources combined total only 15% of total cash income.

Carpentry appears to be a common source of income for the rural population. Twenty two percent of both groups earned income (mean: 67,000 meticaís) from house construction. Another common source of off-farm (non-agricultural) income was the production and sales of an alcoholic drink made from cashew. Eleven percent of the respondents reported earning income from this source.



Off Farm Income: Total (Ag and Non-Ag)
 9/94-3/95

CATEGORY	OFF FARM NON-AG	VALUE	AGRIC OFF FARM INCOME	VALUE/AG
PART	49	238	14	142
NON PART	54	168	17	78

III.4.5 ANIMAL SALES

Animal sales represent 18% of the non-participant's cash income and 6% of the participants. Animal sales occurred in all villages with the exception of non-participants in Nametimula (Namapa). In Manhane, Malema District, animal sales were the largest single source of reported cash income.

Seventy seven percent of both groups report having animals stock (chickens, goats, and pigs). Twenty percent of the participant group had sales in 1993/4 while 14% of the non-participant group sold animals in the same year.

III.4.6 FRUIT AND VEGETABLE SALES

Together, fruit and vegetable sales represented approximately 10-14% of farmers cash income. Fruit sales provided slightly more income for a larger group of people than did vegetable sales.

Fruit and Vegetable Sales
 1993/4
 In 1,000's Meticaís

CATEGORY	FRUIT SALES	VALUE	VEGETABLE SALES	VALUE
PARTICIPANT	23	84	5	86
NON-PARTICIPANT	18	126	12	104

SECTION III.5 FOOD CROPS

It is noted that some "food crops" can also be defined as cash crops. Maize and groundnuts are two examples. Maize is an important source of income in the household economies of all the villages. Sorghum is the only food crop which is not purchased by traders.

FOOD CROP PRODUCTION - 1993/4

An increase in the production of all of the major food crops (except groundnuts) was reported from the 1993/4 season to the 1994/5 season. Groundnut production was reported at 1% below last year.

The table below illustrates the relative importance of the major food crops in the OPEN districts. The statistics are those of all respondents combined as the differences between the two categories are not significant.

FOOD CROPS/THOSE WHO CULTIVATE
 1994/5

AVERAGE	MAIZE	SORGHUM	CASSAVA	GD NUTS
MEAN	78	88	84	36

Percentages of those planting food crops increased in the 1994/5 from the previous year by these percentages.

CROP	PERCENT INCREASE
Maize	8
Sorghum	5.5
Cassava	8.6
GroundNuts	-1.6

Wide variations appeared between villages. For example, the range in the number of HH's growing groundnuts varied from a low of 1.5% in Malema District to a high of 85% in Nametimula (Namapa District). See Table 4, Annex 2 for details.

Villages that are close to major roads grew more groundnuts. As discussed in the section discussing cash income, groundnut sales are common at "on-road" sites.

The difference in percent of those growing these crops, disaggregated by the survey categories, is shown below. There is no significant difference between the two groups.

Food Crop Production, % Producing
 1993/4

CATEGORY	MAIZE	SORGHUM	CASSAVA	GD NUTS
PART	81	87	81	38
NON PART	78	88	83	34

Average annual production weights for the 1993/4 season are reported below. The numbers are the combined means of both groups.

CROP	MAIZE	SORGHUM	CASSAVA	GD NUTS
AVERAGE KGS	465	376	391	134

The table to follow dis-aggregates the above information into the two categories. Significant to note is that the participant group out produces the other group in all categories except sorghum. This may be significant because sorghum is the only food crop which has no market. Another observation is that 18% more of the population of the participant group produces groundnuts. Of the four food crops presented, groundnuts are the more marketable.

Food Crop Production, Mean Production of those with
1993/4

CATEGORY	MAIZE	SORGHUM	CASSAVA	GD NUTS
PART	476	369	425	157
NON PART	453	381	358	110
% DIFFERENCE	5	3	19	43

SECTION III.6 AGRONOMIC PRACTICES

The questionnaire included questions about planting techniques, number of seeds planted per station, number of plants allowed to remain after thinning, and distances between rows and plants.

III.6.1 SESAME

METHOD OF PLANTING

The majority of interviewees (51%) indicated that they planted in stations, and 38% report that they plant by broadcasting.

PLANTS PER STATION

Recommendations are to allow 2-3 plants to grow to maturity per station. Forty six percent of respondents reported that they follow this practice. Others leave more plants at each station. This decreases productivity. Recommendations for this aspect of production should be strengthened in the coming year.

III.6.2 SUNFLOWER

SEEDS PLANTED PER STATION

The recommendation is to place two or three seeds per station. Results of the survey indicate that farmers are using more seed than is necessary, resulting in increased costs and a decrease in production.

PLANTS PER STATION

The recommendation for the number plants per station after thinning is one. Less than two percent of the respondents follow this practice. Most farmers leave three to six. As in the case of sesame, extensionists will focus on this extension message in the 1996 campaign.

# Plants Remain Post Thinning	Percent
1	1.4
2	27.5
3	33.1
4	26.1
5	7
>5	2.8

SPACING

Recommendations for spacing provided by the project were (a) between plants: 30 cm (b) between rows: 90-100 cm. Wider spacing will produce a lower plant population and therefore a lower yield. Closer spacing also reduces yields due to competition between plants for nutrients and water. Responses are shown below.

BETWEEN PLANTS	PERCENT	BETWEEN ROWS	PERCENT
10	7	10-20	9.8

BETWEEN PLANTS	PERCENT	BETWEEN ROWS	PERCENT
20	7	30-40	16.9
30	33.1	50-60	17
40	14.1	70-80	23.3
50	31.7	80-100	13.4
60-80	11.9	>100	2.8
90 AND >	3.5		

III.6.3 PESTS AND STORAGE

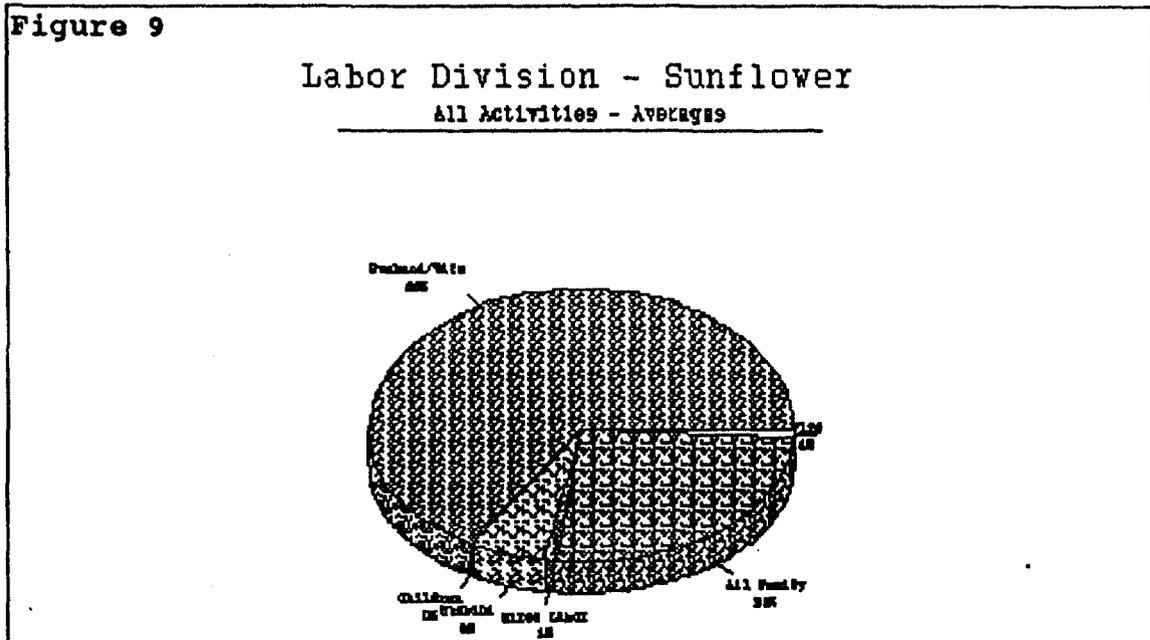
Responses regarding pests overwhelmingly identified rats as the major post harvest pest. Experience in the fields after the first harvest strongly supports this perception. This will form the basis of an extension focus for the 1996 season.

The most common pest while the crops are ripening are birds. In Manhame pigs destroyed several farmers' fields prior to harvest. In that village, animal sales (primarily pigs) were the primary source of cash income. Insects are not reported as a serious threat to either of the oilseed crops.

Storage methods varied widely but the most common method was in sacks, usually kept in the house.

III.6.4 DIVISION OF LABOR BY GENDER

Results of the baseline indicate that in all the activities involved in producing crops of both sunflower and sesame, the vast majority of the work is done by the husband and wife together or the entire family works on the crop.



III.6.5 AGRICULTURAL EXTENSION SERVICES

The mean of the sample shows that 29% of all HH's received an extension visit in the 1993-1994 agricultural season. A low of 8% was reported in Jacoco (Namapa District). The village with the best extension coverage was Namulai where 54% of the HH's had been visited during the season. This is probably attributable to the fact that Ribaué District is included in a World Bank extension project.

Other areas with relatively high extension visit rates are cotton intensive zones such as Ratane and Namina where company extensionists provide services.

Village	Percent HH Received an Extension Visit/93-94
Manhame	14
Namuali	54
Namina	33
Ratane	49
Nametimula	15

Village	Percent HH Received an Extension Visit/93-94
Jacoco	8
Project Average	29

The source of the extension visits are detailed in the table below. The households reporting visits by CARE extensionists received the extension service from a previous CARE project.

Source of Extension Visit	Percent
DDA	44.9
CARE	20.5
German Agro Action	1.3
Cotton Companies	23.1
Not Known	10.3

Percent Owning Radios/Listen to Agricultural Extension Programming

The baseline survey included questions about ownership of radios (and if they functioned or not) for extension planning purposes. Responses to the survey indicate a high percentage of radio coverage. Radio programming reaches more HHs than those who own radios as neighbors frequently join together to listen to the radio.

Seventy five percent of those reporting the ownership of a radio reported that it is functioning.

Village	Percent HH's Own Radios
Manhame	24
Namuali	25.6
Namina	15.5

Village	Percent HH's Own Radios
Ratane	28.5
Nametimula	11.7
Jacoco	7.8
Mean	18.8

SECTION IV. CONCLUSIONS AND
RECOMMENDATIONS

PRELIMINARY CONCLUSIONS

1. Land and labor are not perceived by farmers as a major constraint regarding crop choice of oilseeds.

Only 1% of the respondents identified land as a reason for not growing oilseed. Participants in OPEN expanded the amount of land that they cultivated by a larger amount than did non-participants. In addition, a large percentage of the sunflower crop in 1995 was inter-cropped with food crops. It is planted in the same fields at a later time in the year.

Nine percent identified lack of labor as a constraint. The late planting date and short cycle of oilseed indicate a good "fit" within the existing farming system; avoiding competition for labor with other food and cash crops. Oilseed requires less labor and at a different period of the year than either cotton or tobacco.

2. CARE is directly addressing two key constraints in the development of the sector by (a) making improved seed available and (b) providing access to local pressing capacity which contributes immediately to developing a market for cooking oil. Point (b) requires further research.
3. The demand for cooking oil is greater than the supply, therefore consumption of cooking oil will increase as the project continues to produce and expand.

This conclusion is supported by the finding that where oil was available, purchases were the highest. Where available, purchases of oil were double or more than in those areas where markets were distant. Important to note is that cash income was not correlated to the frequency of oil purchases. The three highest ranked villages in terms of cash income rank as the lowest three in terms of oil purchases. They were also the most isolated.

4. There is a great deal of experience with oilseed crops in project area. Forty five percent of all the respondents to the questionnaire had experience with oilseed crops at some time in their lives. Thirty one percent had grown an oilseed crop in the last five years.
5. The order of importance of the four major sources of cash income across all villages and incorporating all respondents to the survey is shown below from the highest to the lowest. (Figures include only the four highest sources.)

SOURCE	PERCENT OF TOTAL
CASH CROPS	41
FOOD CROPS	24
OFF FARM INCOME	18
ANIMAL INCOME	17

That fact that cash crops are, by a large margin, the single largest source of income would indicate that the project is directly addressing its goal of increasing incomes by promoting an additional cash crop for smallholders. The impact survey at the end of Phase Two should focus on this issue.

IMPLICATIONS FOR THE PROJECT

1. **EXPANSION:** Areas where there is a low availability of oil. Zones with these conditions should have a high demand for oil.

2. **EXTENSION SERVICE RECOMMENDATIONS**

Extension recommendations for the 1995-6 season will include the reduction of the number of seed planted per station and closer spacing. This is intended to increase production, reduce costs for farmers, and increase the area planted.

An effective means of disseminating extension messages would be through radio as approximately 75% of the rural population has access to radio programming.

3. FEMALE HEADED HOUSEHOLDS

Female headed households reported a larger number of resident members (and a larger number of on-farm laborers). They also ranked in the lower percentiles in terms of cash income. The project should take advantage of the larger amount of labor and encourage production of oilseed to increase income of the group.

Annexes

**Adult Equivalent
Definition and Calculation of Adult Equivalent**

The term and statistical value Adult Equivalent is used through this study. A definition and explanation of how the value is derived is presented here.

AE is an adjustment made to the number of person's in the household. The number is based on the amount of food/resources each person consumes within the household. A child will consume less than an adult. An adult who eats in the household infrequently will consume less (and there is calculated as less than 1 AE). The table below demonstration the values from which the AE is calculated.

AE is arrived at by multiplying the values for sex, age, and the frequency which the person eats in the household.

SEX	VALUE	AGE	VALUE	FREQ EAT IN HH	VALUE
MALE	1	0-3	.3	ALWAYS	.1
FEMALE	2	3-8	.5	SOMETIMES	.6
		8-13	.8	RARELY	.2
		13-18	.9		
		18-50	.1		
		>50	.8		

CARE INTERNACIONAL - MOCAMBIQUE
PROJECTO DE PRODUCAO DE OLEOS

BASELINE/INQUERITO
CARE - NAMPULA

AVISO

O Sr(a). tem direito a não participar nesta entrevista. A sua participação é inteiramente voluntária. No entanto vale a pena indicar que, caso do Sr(a). participar na entrevista, toda a informação recolhida será completamente confidencial - em nenhuma circunstancia o seu nome será associado a nenhuma resposta.

Nome do Entrevistado/a

Número do Agregado
Aldeia
Distrito
Categoria
Nome do Inquiridor

NOME E
AF
ALD
DIS
CARE=1 ALG/TAB=2 NAO=3
INQ

CONTROLE DE QUALIDADE

	Data
Entrevista programada para	
Revisão de campo	
Pos-codificacao A	
Pos-codificacao B	

100
codificacao
C

5011

I. CARACTERÍSTICAS DA FAMÍLIA

AF1 _____ Normalmente prepara-se e consome-se alimentos na sua casa?

- 0 Não
- 1 Sim (--> Tabela I)

AF2 _____ Porque não? _____

--> ACABAR COM A ENTREVISTA

AF3 __ Desde o início da campanha quantas pessoas costumam comer nesta casa?

- Gostaríamos de fazer algumas perguntas sobre cada uma destas pessoas que costumam comer na sua casa desde o início da campanha agrícola?

Tabela I. Pessoas que costumam comer na casa desde o início da campanha agrícola

Nome	No.	Relação ao chefe	Idade	Sexo	Nível de escolaridade	Esta pessoa está actualmente a frequentar escola?	Estado civil	Esta pessoa é nativa desta aldeia?	Esta pessoa reside nesta casa?	Desde o início da campanha agrícola até agora, esta pessoa costuma comer nesta casa:	Desde o início da campanha agrícola, esta pessoa tem trabalhado nas machambas da família?	Desde o início da campanha agrícola até agora, esta pessoa tem feito trabalho fora da machamba da família?
		1 chefe 2 esposa/o 3 filha/o 4 pai/mãe 5 outra fam. 6 outro (esp)		1 m 2 f	(entrar o último ano completado, OU) 0 analfabeto 12 após décima primeira 98 nenhuma escola mas sabe ler e escrever	0 não 1 sim	1 monógama/o 2 polígama/o 3 solteira/o 4 viúva/o 5 divorciada/o 6 esposa de emigrante (esposo fora mais de 6 meses)	0 não 1 sim	0 não 1 sim	1 sim 2 de vez em quando 3 não	0 não 1 sim	0 não 1 sim
NOME	MEM	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											

II. HISTORIA DA FAMILIA

Tabela II. História do chefe de agregado e esposa/o

MEM	Quantas esposas tem? (só para homem chefe de agregado)	E nativo desta aldeia? 0 não 1 sim	Se nao, em que ano chegou à aldeia?	Porque vieram morar aqui nesta aldeia? 1 guerra 2 conflitos com autoridades na aldeia de origem 3 org. das aldeias comunais 4 obter mais terra 5 obter emprego 6 casamento 7 outro (esp)
MEM	II1	II2	II3	II4
1=Chefe agregado				
2=Esposa				

AF4 Alguma vez sua familia foi inscrita como "deslocada"?

- 0 Não
- 1 Sim

AF5 Tem algum plano actual para deixar a aldeia (ir viver na outra área)?

- 0 Não (--> página 4)
- 1 Sim

AF6 Porque pretende deixar esta área? _____

6/1

IV. TERRA CULTIVADA NO ANO PASSADO E NESTE ANO

AF7 _____ Quantas machambas a sua família cultivou durante a campanha passada?

AF8 _____ Quantas machambas a sua família esta a cultivar durante esta campanha?

- Gostaríamos de lhe fazer algumas perguntas referentes a cada uma das machambas

Tabela IV. Terra Cultivada Na Campanha Passada e Nesta Campanha

Mach	Distância da casa (entre número de minutos para caminhar até a machamba)	Area na campanha passada (em hectares)	Culturas na machamba na ultima campanha		Tipo de terra		A terra é: 1 fértil 2 regular 3 cansada	Area cultivada desta machamba nesta campanha (em hectares ou 0 se não esta cultivada)	Culturas na machamba nesta campanha		Quem decide a semear esta cultura?	Proveniencia de sementes da cultura principal
		Qt.	1 milho 2 feijões 3 mandioca 4 arroz 5 algodão 6 amendoim	7 bat. doce 8 mapira 9 tabaco 10 gergelim 11 girassol 12 outro 100 pousio	1 pesado 2 normal 3 arenoso	1 vermelho 2 escuro 3 branco			1 milho 2 feijões 3 mandioca 4 arroz 5 algodão 6 amendoim	7 bat. doce 8 mapira 9 tabaco 10 gergelim 11 girassol 12 outro (esp)		
MACH	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10	IV11	IV11
1												
2												
3												
4												
5												
6												
7												
8												

5

VI.

PARA PRODUTORES DE GERGELIM E/OU GIRASSOL DO ANO PASSADO

TABELA VI.

Cultura	Ja cultivou na sua vida a cultura de?	Quando e a ultima campanha que cultivou esta cultura?	Porque nao estava a cultivar esta cultura?	Qual e sua opiniao de Projecto de Care
	0 nao 1 sim	1 ha mais de 10 anos 2 ha 5-10 anos 3 ha 1-5 anos 4 na ultima campanha (passe para proxima cultura)	1 falta de semente 2 falta de terra 3 falta de mao-de-obra 4 falta de colocação 5 outro (esp.)	
VI1	VI2	VI3	VI4	VI5
10=Gergelim				
11=Girassol				

Cultura	Cultivou no ano passado	Quais pessoas participaram na preparacao da terra?	Quais pessoas participaram na sementeira da terra?	Quais pessoas participaram na sacha?	Quais pessoas participaram na colheita?	A machamba desta cultura sofreu de:	No armazenament o, perdeu sementes devido a:
	0 nao (passa para proxima cultura) 1 sim	(ESCREVA TODAS QUE APLICAM)	(ESCREVA TODAS QUE APLICAM)	ESCREVA TODAS QUE APLICAM)	ESCREVA TODAS QUE APLICAM)	1 doencas 2 bichos 3 passarinhos 4 outro (esp.)	1 bichos 2 passarinhos 3 ...
		1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa		
VI1	VI6	VI7	VI8	VI9	VI10	VI11	VI12

10-Gergelim							
11-Girassol							
Cultura	Tem producao neste ano? 0 nao 1 sim	Provenencia de Sementes 1 CARE 2 outro (esp.)	Quais pessoas participaram na preparacao da terra? (ESCREVA TODAS QUE APLICAM) 1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	Quais pessoas participaram na sementeira da terra? (ESCREVA TODAS QUE APLICAM) 1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	Quais pessoas vao fazer as sachas? ESCREVA TODAS QUE APLICAM) 1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	Quais pessoas vao fazer a colheita? ESCREVA TODAS QUE APLICAM) 1 chefe de agregado 2 esposa 3 criancas 4 pessoas nao-residente em casa	
VI1	VI13	VI14	VI15	VI16	VI17	VI18	
10-Gergelim							
11-Girassol							

Cultura	Qual e o metodo de semear? 1 Lanco (passa para proxima cultura) 2 Semeam em covacho	Quantas sementes collocam em cada covacho?	Quantas plantas deixam a crescer em cada covacho?	Qual e o compasso que usa entre as linhas? (em cms)	Qual e o intervalo que deixa entre plantas? (em cms)
VI1	VI19	VI20	VI21	VI22	VI23
10-Gergelim					
11-Girassol					

52

20-Cast de
caju

--	--	--	--	--	--	--	--	--

IX. ACTIVIDADES A CONTA PROPRIA

INSTRUÇÕES

Pergunta o entrevistado sobre *cada tipo* de trabalho alistado na tabela.

- Queremos fazer algumas perguntas sobre outras actividades (trabalho a contra propria) da familia que deram algum rendimento desde o começo da campanha agrícola até agora

Actividade	A familia ganhou algum dinheiro (o género) através desta actividade desde o começo da campanha agrícola? 0 não (passe para próxima actividade) 1 sim	Quem é o principal responsável na execucao do trabalho?	Quem guardou o dinheiro ganho desta actividade?	Pagamento			
				Total de Meticais	Se recebeu géneros ...		
					Quantidade	Unidade	Tipo de Genero
IX1	IX2	IX3	IX4	IX5	IX6	IX7	IX8
10-Producao de oleo de _____ (esp.)							
1=Compra/venda de grãos básicos							
2=Compra/venda de outros productos							
3=Compra/venda de roupa							
4=Artesanato (esp) _____							
5=Produzir bebida de _____							
6=Carpintaria (esp) _____							
7=Transporte							
8=Venda de comida preparada							

10

9=Outra actividade (esp)							
--------------------------	--	--	--	--	--	--	--

X. HORTAS/ARVORES DE FRUTA

Favor indicar as duas hortícolas mais importantes na horta e a sua produção desde o começo da campanha agrícola.

Hortícola		Como obteve as sementes?	Vendas totais desde o começo da campanha agrícola
20 feijões (só folhas)	26 cebola	1=Guardou	Meticais
21 tomate	27 repolho	2=DDA	
22 alface	28 pimentao	3=Visao Mundial	
23 abóbora	29 pepino	4=Care	
24 piri-piri	30 couve	5=Accao Agraria Alema	
25 alho	31 outro (esp)	6=Org. Religiosa	
		7=Vizinho	
		8=SEMOC	
		9=Outro (esp.)	
XA1		XA2	XA3

Tipo de árvore		No. actual	No. explorado	Vendas totais desde o começo da campanha agrícola (em Meticais)
1 bananeira	6 coqueiro			
2 laranjeira	7 dateira			
3 papaeira	8			
4 limoeiro	mangueira			
5 abacateira	9 cajueiro			
	10 outro (esp)			
XB1		XB2	XB3	XB4

XI. PECUARIA

AF9 _____

O Sr(a). faz criação de animais?

0 Não (passa para Proxima pagina)

1 Sim

Gostariamos de lhe fazer algumas perguntas sobre cada tipo de animal que o Sr(a). tem

Tipo de animal 1 boi/vaca 2 cabras/ovelhas 3 porcos 4 burros/cavalos 5 aves/galinhas/patos 6 coelhos 7 outros (esp.)	Quantos tinha no começo da campanha agrícola?	Quantos vendeu até agora?	Quanto recebeu?		Quantas moreram ate agora?	Quantos comprou até agora?	Quanto custou?		Quantos tem agora?
			Meticais	Unidade 1 preço unitario 2 valor total			Meticais	Unidade 1 preço unitario 2 valor total	
XI1	XI2	XI3	XI4	XI5	XI6	XI7	XI8	XI9	XI10

AF10 _____

O que o Sr.(a) costuma dar a criaçao para comida?

1 Pastagem

2 Farelo

3 Grao

65

Produto	Frequencia de compra deste produto desde o comeco da campanha agricola? 0 Nao comprou -> 1 diariamente 2 2 vezes/semana 3 semanalmente 4 cada quinzena 5 cada mes 6 duas vezes 7 uma vez so 8 outro (esp.)	Quantidade que compra tipicamente desde o comeco da campanha agricola ate agora?		Valor da compra tipica		Quem costuma controlar as financas para a aquisicao deste produto dentro da familia? (Escreve o nome)	Aonde costuma fazer as compras deste produto? 1 Mercado local 2 Mercado vila 3 Vizinho 4 Loja desta aldeia 5 Loja outra aldeia 6 Outro (esp)	Frequencia de compra deste produto durante a epoca de colheita 1994? 0 Nao comprou -> 1 diariamente 2 2 vezes/semana 3 semanalmente 4 cada quinzena 5 cada mes 6 duas vezes 7 uma vez so 8 outro (esp.)	Quantidade que a familia comprou tipicamente durante a epoca de colheita 1994	
		Qt.	Unidade	Mts	Unidade				Qt.	Unid.
XIII1	XIII2	XIII3	XIII4	XIII5	XIII6	XIII7	XIII8	XIII9	XIII10	XIII11
22-Acucar										
23-Oleo de _____ (esp.)										
25-Hortalica/Fruta										
PETROLEO/SABAO										
51-Petroleo										
52-Sabao										
PRODUTOS ANIMAIS										
61-Carne de cabrito										
62-Galinha										
63-Carne de caça										
64-Ovos										
65-Leite										
BEBIDAS										
42-Bebidas locais (cana doce, oteka, caju...)										
ROUPAS										
54-Roupa usada										
53-Capulana										

Produto	Frequencia de compra deste produto desde o comeco da campanha agricola? 0 Nao comprou -> 1 diariamente 2 2 vezes/semana 3 semanalmente 4 cada quinzena 5 cada mes 6 duas vezes 7 uma vez so 8 outro (esp.)	Quantidade que compra tipicamente desde o comeco da campanha agricola ate agora?		Valor da compra tipica		Quem costuma controlar as financas para a aquisicao deste produto dentro da familia? (Escreve o nome)	Aonde costuma fazer as compras deste produto? 1 Mercado local 2 Mercado vila 3 Vizinho 4 Loja desta aldeia 5 Loja outra aldeia 6 Outro (esp)	Frequencia de compra deste produto durante a epoca de colheita 1994? 0 Nao comprou -> 1 diariamente 2 2 vezes/semana 3 semanalmente 4 cada quinzena 5 cada mes 6 duas vezes 7 uma vez so 8 outro (esp.)	Quantidade que a familia comprou tipicamente durante a epoca de colheita 1994	
		Qt.	Unidade	Mts	Unidade				Qt.	Unid.
XIII1	XIII2	XIII3	XIII4	XIII5	XIII6	XIII7	XIII8	XIII9	XIII10	XIII11
94=Impostos										2
95-Cigarro/Tabaco										
96-Radio										
97-Bicicleta										

XIII. DONATIVOS QUE A FAMILIA RECEBEU DO GOVERNO OU DUMA ORGANIZACAO NAO-GOVERNMENTAL

AF11 ____ A sua familia recebeu algum bem de consumo ou outro material doado desde o comeco da campanha agricola deste ano?

0 nao (passe para proxima pagina)

1 sim

Tabela XIII.

Tipo de donativo	Quanto recebeu?		Mes que recebeu	Origem do donativo
	Qt.	Unidade		
1=milho 2=feijoes 4=arroz 6=amendoim 11=catana/enxada 12=semente de _____				1=DPCCN 2=Visao Mundial 3=Care 4=Caritas 5=Accao Agraria Alema 6=Outro (esp.)
13=baldes/regadores 23-oleo de _____				
99=outro (esp.)				
XIII1	XIII2	XIII3	XIII4	XIII5

SERVICOS DE EXTENCAO

AF12 _____ Na campanha passada, recebeu visitas dum extensionista?

- 0 nao
- 1 sim

AF13 _____ Se teve visita, era de quem?

- 1 DDA
- 2 CARE
- 3 Visao Mundial
- 4 Accao Agraria Alema
- 5 UGC
- 6 Companhia de Algodao
- 7 outro (esp.) _____

AF14 _____ Na campanha pasada, viu uma demonstracao ou visitou um campo de demonstracao por parte dum extensionista?

- 0 nao
- 1 sim

AF15 _____ O Senhor(a) conhece a Uniao Geral das Cooperativas?

- 0 nao
- 1 sim

AF16 _____ Tem radio em casa?

- 0 nao
- 1 sim

AF17 _____ Se tem radio, funciona?

AF18 _____ 0 nao---porque? _____

- 1 sim

AF19 _____ Se funciona, escuta aos programas de conselhos para produtores?

- 0 nao
- 1 sim

Demographic Characteristics of Sample

	RESIDENT MEMBERS	ON-FARM LABORERS	MEMBERS W/OFF-FARM WORK	AGE - HEAD OF HH	FEMALE HEADED HH	POLYGAMOUS	HH HEAD NATIVE
	Mean	Mean	Mean	Mean	%	%	%
Malema-Manhame							
participant 95	4.92	3.44	.28	37	8	8	100
non-participant 95	4.40	2.92	.44	34	4	8	84
Ribaue-Namwali							
participant 95	4.40	3.10	.20	41	0	10	100
non-participant 95	5.67	3.78	.33	36	11	11	78
Mecuburi-Namina							
participant 95	4.00	3.14	.57	43	10	10	81
non-participant 95	4.13	2.96	.21	37	13	4	96
Mecuburi-Ratane							
participant 95	4.11	2.72	.22	33	6	6	94
non-participant 95	3.88	2.35	.65	37	18	6	71
Namapa-Nametumu							
participant 95	5.05	3.45	.27	38	0	18	100
non-participant 95	4.42	3.08	.42	31	0	17	100
Namapa-Jakoko							
participant 95	5.85	4.38	.15	45	0	23	92
non-participant 95	4.56	3.04	.16	41	0	8	92

Household Farm Size, Total and Per Adult Equivalent
1993/4, 1994/5

	FARM SIZE 1993/4	FARM SIZE 1993/4, PER AE	FARM SIZE 1994/5	FARM SIZE 1994/5, PER AE
	Mean	Mean	Mean	Mean
Malema-Manhame				
participant 95	2.00	.60	2.24	.69
non-participant 95	1.53	.49	1.51	.49
Ribaue-Namwali				
participant 95	2.85	.89	3.24	1.01
non-participant 95	2.97	.80	2.83	.67
Mecuburi-Namina				
participant 95	2.15	.81	3.28	1.15
non-participant 95	2.63	.94	3.30	1.20
Mecuburi-Ratane				
participant 95	2.97	1.03	3.17	1.12
non-participant 95	3.07	1.21	2.92	1.17
Namapa-Nametumu				
participant 95	3.28	.92	3.97	1.10
non-participant 95	3.52	1.13	4.05	1.29
Namapa-Jakoko				
participant 95	3.03	.75	3.64	.90
non-participant 95	2.44	.80	2.77	.92

Demographic Characteristics of Sample, by Farm Size/AE Quartile
1993/4

	FARM SIZE 1993/4, PER AE	RESIDENT MEMBERS	ON-FARM LABORERS	MEMBERS W/OFF-FARM WORK	FEMALE HEADED HH	POLYGAMOUS	HH HEAD NATIVE	ALGODAO SIM/MAO 93/4
	Mean	Mean	Mean	Mean	%	%	%	%
Malema-Manhame								
Qrt by Dist								
1	.27	5.58	3.42	.33	0	17	92	0
2	.43	4.75	2.83	.67	25	8	83	0
3	.56	4.77	3.46	.31	0	0	100	0
4	.92	3.67	3.00	.08	0	8	100	0
Ribaue-Namwali								
Qrt by Dist								
1	.47	5.44	3.44	.56	11	11	89	22
2	.66	5.80	4.20	.00	0	22	100	20
3	.97	4.00	2.60	.30	0	0	100	20
4	1.34	3.60	2.80	.10	0	10	90	40
Mecuburi-Namina								
Qrt by Dist								
1	.36	5.73	4.27	.73	18	18	91	9
2	.61	3.82	2.73	.09	18	0	73	27
3	.94	3.67	2.58	.25	8	0	92	33
4	1.61	3.09	2.64	.45	0	9	100	45
Mecuburi-Ratane								
Qrt by Dist								
1	.54	5.13	2.88	.50	25	0	75	75
2	.86	4.90	2.80	.30	10	10	80	90
3	1.25	3.63	2.50	.13	0	13	88	100
4	1.79	2.33	2.00	.78	11	0	89	89
Namapa-Nametumu								
Qrt by Dist								
1	.54	6.38	4.25	.25	0	38	100	0
2	.76	5.11	3.00	.44	0	0	100	0
3	1.16	3.89	3.33	.44	0	22	100	0
4	1.52	4.00	2.75	.13	0	13	100	13
Namapa-Jakoko								
Qrt by Dist								
1	.36	5.89	3.89	.00	0	0	89	0
2	.60	5.50	4.20	.60	0	30	100	0
3	.87	5.10	3.40	.00	0	10	100	0
4	1.33	3.44	2.44	.00	0	11	78	0

Food Crop Production, % Producing, Mean Production of Those w/

	MAIZE 93/94	MAIZE PROD (KGS)	SORGHUM 93/94	SORGHUM PROD (KGS)	MANIOC 93/94	MANIOC PROD (KGS)	GROUNDNUTS 93/94	GROUNDNUTS PROD (KGS)
	%	Mean	%	Mean	%	Mean	%	Mean
Malema-Manhame								
participant 95	60	256	96	343	52	374	40	152
non-participant 95	64	329	80	224	52	318	12	157
Ribaue-Namwali								
participant 95	90	689	97	446	80	535	3	48
non-participant 95	100	1029	100	495	100	456	0	.
Mecuburi-Namina								
participant 95	67	549	62	224	100	575	29	136
non-participant 95	42	165	75	295	100	485	50	132
Mecuburi-Ratane								
participant 95	83	432	94	447	67	387	6	170
non-participant 95	59	519	88	584	76	377	12	20
Namapa-Nametumu								
participant 95	100	331	86	438	86	432	86	228
non-participant 95	100	361	92	434	92	227	83	251
Namapa-Jakoko								
participant 95	85	603	85	325	100	245	62	208
non-participant 95	84	316	96	255	96	283	48	105

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Principal Food Crop Production, Percent of Those W/
1993/4, 1994/5

	MAIZE 93/94	MAIZE 94/5	SORGHUM 93/94	SORGHUM 94/5	MANIOC 93/94	MANIOC 94/5	GROUNDNUTS 93/94	GROUNDNUTS 94/5
	%	%	%	%	%	%	%	%
Malema-Manhame								
participant 95	60	60	96	100	52	48	40	16
non-participant 95	64	64	80	80	52	60	12	12
Ribaue-Namwali								
participant 95	90	87	97	97	80	80	3	3
non-participant 95	100	100	100	89	100	78	0	11
Mecuburi-Namina								
participant 95	67	81	62	57	100	90	29	48
non-participant 95	42	25	75	63	100	96	50	58
Mecuburi-Ratane								
participant 95	83	56	94	100	67	61	6	11
non-participant 95	59	41	88	100	76	59	12	12
Namapa-Nametumu								
participant 95	100	91	86	86	86	82	86	86
non-participant 95	100	92	92	92	92	75	83	67
Namapa-Jakoko								
participant 95	85	77	85	69	100	92	62	54
non-participant 95	84	88	96	88	96	100	48	60

Principal Cash Crop Production, Percent of Those W/
1993/4, 1994/5

	COTTON 93/4	COTTON 94/5	TOBACCO 93/4	TOBACCO 94/5	SESAME 93/4	SESAME 94/5	SUNFLOWER 93/4	SUNFLOWER 94/5
	%	%	%	%	%	%	%	%
Malema-Manhame								
participant 95	0	0	0	0	0	48	4	96
non-participant 95	0	0	0	4	0	8	0	20
Ribaue-Namwali								
participant 95	30	30	0	0	0	0	13	100
non-participant 95	11	0	0	33	0	0	11	67
Mecuburi-Namina								
participant 95	14	5	0	5	10	5	0	100
non-participant 95	42	29	0	0	0	4	4	13
Mecuburi-Ratane								
participant 95	100	100	0	0	6	11	0	100
non-participant 95	76	82	0	0	6	6	0	12
Namapa-Nametunu								
participant 95	5	18	0	0	18	32	0	91
non-participant 95	0	25	0	0	8	25	0	8
Namapa-Jakoko								
participant 95	0	0	15	8	31	77	8	69
non-participant 95	0	0	4	0	24	48	0	8

Cash Crop Production, % Producing, Mean Production of Those w/
1993/4 (in kgs)

	COTTON 93/4	Cotton	SESAME 93/4	Sesame	SUNFLOWER 93/4	Sunflower
	%	Mean	%	Mean	%	Mean
Malema-Marhame						
participant 95	0	.	0	.	4	.
non-participant 95	0	.	0	.	0	.
Ribaue-Namwali						
participant 95	30	350	0	.	13	170
non-participant 95	11	375	0	.	11	.
Mecuburi-Namina						
participant 95	14	200	10	.	0	.
non-participant 95	42	199	0	.	4	.
Mecuburi-Ratane						
participant 95	100	469	6	48	0	.
non-participant 95	76	727	6	.	0	.
Namapa-Nametumu						
participant 95	5	563	18	73	0	.
non-participant 95	0	.	8	.	0	.
Namapa-Jakoko						
participant 95	0	.	31	834	8	.
non-participant 95	0	.	24	69	0	.

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Cash Crop, % Producing, Mean Area Planted of Those w/
1993/4 (ha)

	SUNFLOWER 94/5	SUNFLOWER AREA	SESAME 94/5	SESAME AREA	COTTON 94/5	COTTON AREA
	%	Mean	%	Mean	%	Mean
Malema-Manhame						
participant 95	96	.62	48	.44	0	.
non-participant 95	20	.54	8	.30	0	.
Ribaue-Namwali						
participant 95	100	.48	0	.	30	.81
non-participant 95	67	.79	0	.	0	.
Mecuburi-Namina						
participant 95	100	.83	5	1.00	5	.50
non-participant 95	13	.83	4	.50	29	.93
Mecuburi-Ratane						
participant 95	100	.48	11	.75	100	1.00
non-participant 95	12	.75	6	.50	82	1.11
Namapa-Nametumu						
participant 95	91	.70	32	.64	18	1.00
non-participant 95	8	1.00	25	.67	25	1.00
Namapa-Jakoko						
participant 95	69	.71	77	.64	0	.
non-participant 95	8	.75	48	.62	0	.

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Total Ag Sales, Food Crop Sales, Maize Sales, Groundnut Sales
1993/4 (in 000s Meticais)

	Ag Sales	Value Ag Sales	Food Crop Sales	Value Food Crop Sales	Maize Sales	Value Maize Sales	Groundnut Sales	Value Groundnut Sales
	%	Mean	%	Mean	%	Mean	%	Mean
Malema-Manhame								
participant 95	32	84	32	84	4	80	12	32
non-participant 95	36	180	36	180	28	84	8	141
Ribaue-Namwali								
participant 95	97	451	97	343	90	326	0	.
non-participant 95	89	408	89	356	89	340	0	.
Mecuburi-Namina								
participant 95	57	209	52	167	29	76	10	85
non-participant 95	71	213	50	120	4	45	13	142
Mecuburi-Ratane								
participant 95	100	588	67	105	61	92	0	.
non-participant 95	76	924	53	166	41	174	0	.
Namapa-Nametumu								
participant 95	82	272	82	238	23	88	82	204
non-participant 95	92	132	92	132	42	39	83	125
Namapa-Jakoko								
participant 95	38	552	38	552	15	1033	31	164
non-participant 95	56	139	56	139	24	162	28	52

Total Ag Sales, Food Crop Sales, Maize Sales, Groundnut Sales
BY LAND/AE QUANTILES OF 1993/4
in 000s Meticais
1993/4

	Ag Sales	Value Ag Sales	Food Crop Sales	Value Food Crop Sales	Maize Sales	Value Maize Sales	Groundnut Sales	Value Groundnut Sales
	%	Mean	%	Mean	%	Mean	%	Mean
Malema-Manhame								
Qrt by Dist								
1	25	38	25	38	8	12	8	27
2	17	230	17	230	17	140	0	.
3	38	160	38	160	15	110	8	35
4	58	130	58	130	25	51	25	106
Ribaue-Namwali								
Qrt by Dist								
1	89	250	89	183	89	167	0	.
2	100	443	100	373	90	395	0	.
3	90	516	90	429	80	404	0	.
4	100	527	100	374	100	339	0	.
Mecuburi-Namina								
Qrt by Dist								
1	55	152	45	183	9	196	9	345
2	73	183	64	121	36	41	0	.
3	75	209	58	151	17	69	8	7
4	55	312	36	118	0	.	27	82
Mecuburi-Ratane								
Qrt by Dist								
1	75	467	25	20	13	35	0	.
2	90	594	50	104	40	105	0	.
3	100	1114	88	195	88	153	0	.
4	89	690	78	117	67	118	0	.
Namapa-Nametumu								
Qrt by Dist								
1	88	366	88	366	25	63	88	348
2	67	81	67	81	11	27	67	77
3	89	220	89	220	33	89	89	172
4	100	192	100	114	50	54	88	92
Namapa-Jakoko								
Qrt by Dist								
1	11	384	11	384	0	.	0	.
2	60	88	60	88	10	40	50	53
3	60	172	60	172	30	143	30	185
4	67	461	67	461	44	643	33	66

Percent w/Oil Purchases
 MSU- 9/94-1/95
 CARE- 9/94-3/95
 UNunweighted AS OF YET

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	PURCHASED	Oil
	OIL 1994/5	Purchased, 1ST PERIOD
	%	Mean
Malema-Manhame		
participant 95	32	2.8
non-participant 95	32	3.1
Ribaue-Nanwali		
participant 95	30	2.6
non-participant 95	22	6.0
Mecuburi-Namina		
participant 95	38	1.8
non-participant 95	33	3.7
Mecuburi-Ratane		
participant 95	11	3.8
non-participant 95	35	2.8
Namapa-Nametumu		
participant 95	32	2.2
non-participant 95	25	1.7
Namapa-Jakoko		
participant 95	31	3.7
non-participant 95	12	1.0

OFF-FARM INCOME, TOTAL, AGRICULTURAL, OTHER (000s Mt)
MSU 9/94-1/95, CARE 9/94-3/95

	OFF FARM INCOME	VALUE, OFF FARM INCOME	AGRIC. OFF FARM INCOME	VALUE, AG OFF FARM INCOME	INCOME FROM DRINK SALES	VALUE, DRINK SALES	CARPENTRY/A RTISINAL	VALUE, CARP/ARTISI NAL
	%	Mean	%	Mean	%		%	Mean
Malema-Manhame								
participant 95	56	181	8	408	8	35	24	116
non-participant 95	56	291	20	116	8	238	16	26
Ribaue-Namwali								
participant 95	43	99	10	147	7	45	23	41
non-participant 95	44	135	22	10	0	.	22	259
Mecuburi-Namina								
participant 95	52	818	33	188	19	33	19	63
non-participant 95	54	263	8	29	21	89	17	11
Mecuburi-Ratane								
participant 95	50	58	17	27	28	56	22	24
non-participant 95	88	188	24	109	35	25	29	56
Namapa-Nametumu								
participant 95	36	150	9	20	0	.	14	13
non-participant 95	33	56	25	54	8	50	8	10
Namapa-Jakoko								
participant 95	54	121	8	60	0	.	31	141
non-participant 95	48	72	4	148	0	.	36	46

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FRUIT AND VEGETABLE INCOME (000s Mt)

	FRUIT SALES	VALUE,	VEGETABLE	VALUE,
	%	FRUIT SALES	SALES	VEGETABLE SALES
		Mean	%	Mean
Malema-Manhame				
participant 95	12	29	4	103
non-participant 95	0	.	8	50
Ribaue-Namwali				
participant 95	10	38	20	140
non-participant 95	33	46	22	197
Mecuburi-Namina				
participant 95	19	154	0	.
non-participant 95	8	151	17	139
Mecuburi-Ratane				
participant 95	17	19	0	.
non-participant 95	18	37	6	2
Namapa-Nametumu				
participant 95	55	71	0	.
non-participant 95	17	145	17	23
Namapa-Jakoko				
participant 95	23	133	8	35
non-participant 95	32	51	0	.

ANIMAL INCOME (000s Mt) AND STOCKS

	ANIMAL SALES	VALUE, ANIMAL SALES	ANIMAL STOCK	VALUE, ANIMAL STOCK
	%	Mean	%	Mean
Malema-Marhame				
participant 95	28	270	76	380
non-participant 95	20	470	84	422
Ribaue-Namwali				
participant 95	20	106	87	246
non-participant 95	11	120	89	393
Mecuburi-Namina				
participant 95	19	69	62	325
non-participant 95	4	75	46	166
Mecuburi-Ratane				
participant 95	17	356	89	354
non-participant 95	24	53	88	318
Namapa-Nametumu				
participant 95	14	55	82	265
non-participant 95	0	.	75	178
Namapa-Jakoko				
participant 95	23	103	62	124
non-participant 95	24	83	80	254

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Smallholder History of Oilseed Cultivation

	NEVER	> 10 YEARS	5-10 YEARS	1-5 YEARS	LAST YEAR
	%	%	%	%	%
TOTAL	55	5	9	19	12
MALEMA	76	4	8	12	0
RIBAUE	38	10	5	18	28
NAMINA-MECUBURI	62	7	11	16	4
RATANE-MECUBURI	71	0	9	11	9
NAMUTEMULA-NAMAPA	29	6	15	35	15
JAKOKO NAMAPA	42	5	5	24	24

Reasons for Not Growing Oilseed Crops

	LACK OF SEED	LACK OF LAND	LACK OF LABOR	LACK OF MARKET
	%	%	%	%
TOTAL	78	1	9	17
MALEMA	84	0	3	13
RIBAUE	79	0	14	17
NAMINA-MECUBURI	71	0	13	21
RATANE-MECUBURI	87	4	9	4
NAMUTEMULA-NAMAPA	75	0	11	18
JAKOKO NAMAPA	74	0	6	23

Reasons for Not Growing Cotton

	LACK OF SEED	LACK OF LAND	LACK OF LABOR	LACK OF MARKET
	%	%	%	%
TOTAL	0	12	88	0
Montepuez	0	16	84	0
Monapo/Meconta	0	8	92	0