OCCASIONAL PAPERS SERIES No. 1

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ON OSSREA'S OCCASIONAL PAPERS SERIES

This paper represents the second instalment in the series of **Occasional Papers** which the Organization for Social Science Research in Eastern Africa(OSSREA) is launching.

For a number of years now the Organization has been running research competitions on both general social science themes and gender issues. Winners of these competitions are required to present their research findings in the form of final reports. These reports, because they tend to be bulky, do not lend themselves to easy and wide circulation. However, since some of them are of good enough quality to deserve wider readership, it was felt that an opportunity should be given to the authors to condense their reports to a size appropriate for occasional papers. This is how the present paper originated. Its author was a winner of the First OSSREA Research Competition on Gender Issues.

However, we do not intend the research competitions to be our only source of occasional papers. We would therefore like to appeal to all social scientists in the region and those elsewhere doing research on it to contribute to the series. OSSREA undertakes to ensure as wide a circulation of the papers as possible.

Eshetu Chole

Executive Secretary

I. INTRODUCTION

To be able to assess the constraints women face as food producers, this study set out to:

- analyse women's productive activities within the farms;
- identify factors which influence productivity in the farms, for example, access and control of productive resources, land, labour, credit, information, training and benefits;
- assess the multiple roles of women within the households and labour constraints they face;
- assess the decision-making powers in order to demonstrate the extent of participation and influence in farm production.

STUDY AREA

To focus the study, Mumbuni Location, in Machakos District, Eastern Kenya was selected for three reasons. First, despite the semi-arid conditions of the area, the majority of the population, most of them women are cultivators and depend on their livelihood on land.

Secondly, the potentially arable land competes for both cash crops e.g coffee and food crops. This has led to intensification of agriculture in the area. Third, land adjudication and registrations is in process while at the same time customary land tenure is still being practiced. All these provided significant combination for this type of study.

The Location Mumbuni has recently (1988) been divided from Iveti South Location. According to the Kenyan Population Census in 1979, the total population of Iveti south Location was 20,503 with 2,654 households. The sex composition showed that there were 9,695 males and 10,810 females giving a density of 391. According to Kenya Central Bureau of Statistics, the total agricultural land available in Iveti is 83,000 ha. giving each household and average land size of 2.97 and 0.43 per person (Jaetzold and Schmidt 1983).

Rainfall in the whole Machakos district is normally concentrated in two short seasons: end of March to May and end of October to December. Rainfall figures from various stations give annual rainfall average of 665mm. The mean maximum temperature is 24.70° centigrade.

SAMPLING

The survey was carried out on a sample of 100 households (about 5% of the number of households in Mumbuni Location). The sample was taken from 6 sub-locations of Mumbuni: Misakwani, Kiandani, Mtutuni, Kathekakai, Mungala and Kasinga. Kiandani and Kasinga which have relatively-higher population as compared to other sub-locations were given a higher share of the sample.

However, the definition of the household in the Kenya population Census (1979) does not fully coincide with that adopted in this study. The household as a key concept in this study meant a family unit making provision for their own food without combining with other persons. for example in polygamous homes, each wife and her children were treated as a household. The actual inclusion of the household was thus further determined by random sampling on the field.

II. THE SOCIO-ECONOMIC PARAMETERS OF THE RESPONDENTS

THE HOUSEHOLD SIZE

The average household size in Mumbuni is 6-7 members. It is usually assumed that large families are useful in agricultural households as the children will contribute labour. However as observed by the ILO:

the larger the household, the more likely it is to be poor. The output of an extra child is not equal to her/his consumption (ILO, 1972).

In this study a large family size was indeed strongly associated with low status of the household.

AGE AND MARITAL STATUS

A look at the age structure gave an indication of active household members capable of providing both farm and household labour. Out of 100 households sampled with a total number of 1,037,200 were between ages 1-10 years, 340 were between ages 11-20 years, 430 were between 21-55 and 67 were over 55 years old.

Out of these members of the household, 390 were single, 630 were married, and 17 were widowed. The marital status was a significant demographic factor in the study as it determined one's social position in having access to resources such as land. For example a son did not inherit land until he had a wife. Widowhood particularly on the part of women also led them to own land and make management decisions regarding the land.

By examining the age structure of the household members, we found out that the majority within the age groups are either in early childhood, in school or are employed. Those economically active and can provide farm labour are within the age groups 21-55 years. Nevertheless, these are also the same group viable for wage employment and only worked on farms as a last alternative. Women provided farm labour consistently even after the age of 70 years, unless they were sick.

INCOME

Income was an important indicator of the economic status of the household. It also shows who is able to afford agricultural inputs, purchase modern tools, hire labour, and acquire other resources such as land.

The average estimated income per household per annum was found to be below K.Shs.1,500/-. Sources of income of over 80% of women interviewed came from agricultural products. Income from employment were mainly earned by husbands. The higher incomes, a part from the ones brought into the families through coffee sales, were thus associated with formal employment or off-farm self employment i.e. business.

The low income in a household was found to be strongly associated with poverty and a large family.

EDUCATION

Educational level is an indicator not only of those economically active in agriculture but those knowledgeable in it. It is assumed that those with a longer period of education are more adjustable to new technologies and are able to experiment with new methods of farming compared to those with limited education or none at all. This is not to mention that higher educational standards could mean a good wage employment which can provide money for investment in the farm e.g. hire labour and buy inputs.

The study revealed that the average level of education of 80% of women interviewed did not exceed 7 years in school. The desegregated educational years by sex in Table 1 revealed that women constitute a bigger proportion of the illiterates.

TABLE 1. LEVEL OF EDUCATION BY SEX

	None	1-8 Years	1-8 Years 9-12 Years (Secondary)	
		(Primary)		(Training)
Female	60 (60%)	20 (20%)	16 (16%)	4 (4%)
Male	10 (10%)	43 (43%)	27 (27%)	20 (20%)

These results indicate that the high level of illiteracy leaves women in Mumbuni with no option for seeking wage employment outside of agriculture. Thus because of lack of training and skills for formal sector jobs, the women are unlikely to migrate outside their rural homes at the same rate as men. Because of this, women are therefore more likely to remain stable in the rural population for a long time. Out of our sample, 96% reported that farming was their main occupation.

In summary, one can say that our sample is made up of poorly educated farmers with meager sources of income outside agriculture except for self-employment activities and remittances from relatives who are formally employed.

III. FOOD PRODUCTION

LAND USE

From observation it was clear that cash crop farms occupied most of the fertile land leaving the women with small holdings for food farming. On each farm allocated by head of the clan, land use organization is based on the supremacy of the man. On the plot allocated by head of the clan, land use organisation is based on the supremacy of the man. On the plot allocated the family cultivates for two reasons; home consumption and cash.

There was an apparent distinction between "women's crops" (mostly food crops) and "men's crops" (mainly cash crops). The "women's crops" are: Sorghum, millet; arrow roots, cassava, sweet and English potatoes, vegetables, maize and beans. The "men's crops" are: coffee and occasionally maize and beans.

It was observed during the study that women are the primary land resource managers given their role in food production. Mumbuni Location has unreliable rainfall and since crop production depends on rainfall, women realize that crop failure would adversely affect them and their families. At the same time erosion is a major hazard in the area. For this reason, women were found to combine highly diversified and risk spreading sets of management strategies. For example, complex land use combinations were employed in both upland (often shifting) cultivation and valley bottom flood retreating cultivation. Other conservation measures taken are: heaping, ridging, terracing and mulching, and intercropping. A diversity of crops are also grown at different times of the year to ensure food availability throughout the year.

To determine who uses which tools, on the farms, the women were found to use mainly <u>jembes</u>, <u>pangas</u> and hoes. The men used ploughs, tractors, handcrafts and wheelbarrow. This is true of what has been observed:

The predicted consequences of these factors is that productivity gap between men and women in agriculture could increase as women will remain in the subsistence sector using traditional technologies while men become increasingly involved in commercial production with modern technology (INSTRAW 1984 p.14).

It is true that the men have an advantage in terms of acquiring tools over women, since most modern farm tools like ploughs, tractors and wheelbarrows etc. are very expensive. Most men can afford them if they wish to because they have credit facilities. Most women, as we will see later, have no access to credit facilities and therefore can only afford cheap farm tools.

Our conclusion is that, despite the crucial role that women play in food production in this area, agricultural technological improvements have eluded them, leading to negative consequences for food production, the perpetuation of their poverty and persistence of serious labour bottlenecks. Thus lack of improved production tools for women has indeed led to most profound negative effects upon their ability to maintain their responsibilities as food producers.

IV. LABOUR PROFILE

The work of women in food production can best be appreciated if it is placed within the perspectives of the dynamics of all other activities that go on within the household. Much has been written about the multiple roles of women particularly in agricultural households. In addition to being expected to look after their children and to cook on a daily basis, and to provide water and fuel, they are also expected to provide basic daily food for the family. According to the FAO report (1984:3:19) women are frequently forced to work 10-16 hours a day in order to fulfil their domestic duties as well as to grow food crops, care for animals, process food and carry out their entrepreneurial activities.

Viewed in this way the study took a holistic view of all the activities going on within the household with a focus on conflicting demand on women's time from household tasks, subsistence farming, cash farming, self employment, wage employment and the need for rest. The implication of this analysis was found to be important as it reflected on the labour available for food production.

FARM LABOUR

To determine the nature and extent on the role women play in producing food, the respondents were asked to indicate who had performed specific tasks during the long rainy season. Table 2 gives a picture of the division of labour among the household members.

Several facts can be noticed from Table 2. First during land preparation, women provided 65% of total labour, when using the hoe as compared to the husbands who provided only 4% of their labour using the same tool. Despite the fact that the plough has often been used by men, increasing numbers of women now plough due to male migration to urban centres. This support the FAO report which says:

...Because societies are constantly evolving and adapting to new pressures, the allocation of tasks between sexes within the community also undergoes changes. ...work that has been traditionally done by women is taken over by men once it has been mechanized. On the other hand, women heads of households will have to take on management responsibilities as well as work tasks which men would normally be expected to assume (FAO 1984 p.200).

It is therefore not strange that 4% of women had ploughed compared to 65% husbands who did the same. However it was assumed that more women would use the plough if they could afford either to hire or buy. Several women did not use the plough because of the high cost of hiring and purchasing.

Secondly, planting and weeding traditionally regarded as women's tasks have so. This is evident when it was found out that 80% of women did the planting as compared to 14% of the husbands who planted while 84% of women weeded as compared to 11% of the husbands who did the same.

The results from this study of women's participation in agricultural work show that nearly all the cases recorded were found to do more than half of the agricultural work: in some cases they perform around 70% of the farm activities and in others over 80% of the total. Thus, this quantitative information about labour on food production input by sex indicates that food production in rural Kenya continues to be predominantly female farming.

Despite the fact that food processing is usually seen as non-agricultural work, yet many food crops can neither be sold or eaten without processing. Women were found to carry out time consuming and numerous tasks subsumed under the categories of food processing, preparation and storage. From the time of harvesting, transporting, home processing and handling for storage the women provided 75%, 65%, 70% and 82% of their labour respectively while on the same activities the husbands provided 15%, 20%, 15% and 22% respectively.

Thirdly, the husbands provided 68% of their labour in building the stores (a task traditionally done by men) as compared to 34% of women who built stores usually in the absence of their spouses.

Fourthly, it is worth observing too that the women's labour is usually subsidized by labourers both permanent and temporary for those who can afford to pay, and by both female and male children.

TABLE 2 FARM LABOUR ACTIVITIES DURING LONG RAINY SEASON 1988

FARM	WIF E	HUSBA ND	PERMANE NT	TEMPORA RY	WHOL E		MALE	OTHE RS
ACTIVITI ES			LABOURE RS	LABOURE RS	FAMIL Y	CHILDR EN	CHILDR EN	
Hoeing	65	4	13	18	10	10	3	
	(65 %)	(4%)	(13%)	(18%)	(10%)	(10%)	(3%)	
Ploughing	4	65	34	10	24	11	23	
	(4%)	(65%)	(34%)	(10%)	(24%)	(11%)	(23%)	
Planting	80	14	16	21	23	41	20	
	(80 %)	(14%)	(16%)	(21%)	(23%)	(41%)	(20%)	
Weeding	84	11	16	20	17	46	30	
	(84 %)	(11%)	(16%)	(20%)	(17%)	(46%)	(30%)	

Chasing birds	4	-	6	-	4	1	7	
	(4%)	-	(6%)	-	(4%)	(1%)	(7%)	
Harvesting	75	15	10	34	20	49	40	
	(75 %)	(15%)	(10%)	(34%)	(20%)	(49%)	(40%)	
Transporti	65	28	36	47	30	44	40	
ng	(65 %)	(28%)	(36%)	(47%)	(30%)	(44%)	(40%)	
Drying/	70	15	12	20	20	37	20	
Processing	(70 %)	(15%)	(12%)	(20%)	(20%)	(37%)	(20%)	
Handling for	82	22	10	2	10	44	20	
Storage	(82 %)	(22%)	(10%)	(2%)	(10%)	(44%)	(20%)	
Building	34	68	36	45	-	-	49	
Stores	(34 %)	(68%)	(36%)	(45%)	-	-	(49%)	

Several questions were asked to determine the role played by hired labour in helping women towards their farm-work. First, we wanted to know whether the farmer needed to hire labour and if the answer was negative we further wanted to know why the farmer did not need to hire labour. Second, we wanted to know how the farmers paid their labour. Third, has the farmer ever used communal labour and if so for what purposes? Fourth, is there an experience of labour shortage in the area during part or all seasons and what is the reason for labour shortage. Fifth, we were interested to know how the farmer handled labour shortages and whether there is land uncultivated because of labour shortage.

Out of 100 women interviewed, 57 (57%) agreed that there was too much work on the farm and therefore they needed to hire labour, while 44 (44%) said they did not need to hire labour. Out of the 44 women who did not need to hire labour, 34 (34%) said that they had small gardens which they could manage by themselves, 58 (58%) said hiring labour was very expensive and they had no money to pay them and 8 (8%) said that the family labour is adequate.

The reason given for hiring labour were several. A number of women argued that since they did not own plough oxen which makes work easier, they had to hire labour to help them as they could not manage by themselves. Others hired labour because the children who could give help on the farm were either too young or were at school. When both wife and husband were in

employment they had need to hire labour. Yet others simply hired labour as work was too much in the farm for one person.

The labour was found to be paid in different ways. Out of 70 farmers who hired labour, 47 (47%) paid money, 14 (14%) paid in the form of food, 4 (4%) paid money and food, and 5 (5%) paid the labourers with other payments apart from money and food. It was also found out that there was no standard money payments to the hired labour. The agreement was made between the labourer to be hired and the farmer. However by examining the households who used hired labour, we found out that such labour was used on cash crop farms thus reducing the amount of time men work on their own fields rather than women's labour time on their own food fields. Hired labour is thus chiefly used to replace absentee men due to off-farm employment and those who engage in little agricultural labour (Orvis 1983). It is not surprising then, that women turn to children to help with their work (FAO, 1984 p.29). The daughters in particular, were found to be extremely important to women as they identified with their mothers more and helped them in several farm duties. Nonetheless, many women felt that children's labour was only marginally helpful in relieving the strain on women's time because of their school attendance. Children, both male and female, are unavailable for nine months of the year. During weekends, and school holidays they are quite a significant addition to the labour force. However most women preferred to do all the work by themselves and give their school going children time to study "so they may have better employment than farm-work".

The results of this study show that labour scarcity is a constraint to women farmers as there is a lot of work to be done and with the absence of children in school and absentee husbands in wage employments, the women need to hire labour, if they have to effectively

perform duties that pertain to farm-work. Every time the women farmers' requirement exceeds the capacity of her family labour she faces labour scarcity. Depending on her cost of meeting her labour deficit with outside workers, a number of women were found to face serious labour constraints. For this reason, those who could afford, hired labour, to help in the farm-work and particularly during times of land preparation, weeding and harvesting periods when there is much more work to be done on the farms. It is also worth mentioning at this point that 71 (71%) of our respondents informed us that they were not able to cultivate all their land because this meant too much work and they were not able to hire enough labour to help them do so.

Nonetheless, labour scarcity is a seasonal phenomena which is as a result of labour requirements in agricultural production. Peaks of intense work occur during planting, weeding and harvesting with low labour requirements falling within and between cycles. Since most farmers must regulate their production activities in relation to weather conditions as well as crop needs, labour tasks must be completed on schedule within fairly strict deadlines.

It is important to recognize that in traditional agriculture, family labour is not seen as a cost of production. It is not paid a wage, its subsistence share remain the same whether it works or not. In contrast hired labour is a cost of production, requiring a payment in cash or land. Moreover hired labour is not always reliable and can require supervision by family labour.

It should be mentioned that cash crops, and in particular, coffee plays an important role in the lives of the people of Mumbuni. Though the coffee farms are owned by men, most part of the women's annual labour time is spent on her husband's field. The value created by this labour is primarily directly appropriated and regulated by the husband himself. That is, women are forced to finish the work in the coffee farms before they can proceed to their food farms. This is a major constraint on women's labour in food production.

The study found out that the most important aspect in food production is the realization that shortage of labour is often a greater constraint on production than shortage of land, as most household members are exempted from activity for reasons of health, age, sex or in order to pursue other valued objectives such as schooling and wage employment. Most of food production activities therefore fall on women's shoulders. Drawn by prospects of wage employment, many men have left their wives with the sole responsibility for sustaining their families. This in effect deprive the household of labour which they would otherwise provide.

How do women deal with the labour shortage? Either labour is hired or they use communal labour.

COMMUNAL LABOUR

The use of communal labour is an example of women's survival strategy to deal with labour shortage on the farms. 95% of women interviewed used communal labour. A typical communal group was found to have ten to fifteen members that would come together to help each other in times of high labour requirement. Such groups were either formed from kinship members, common residence, church membership or the same socio-economic status, often such factors appearing in combination. They perform such tasks that need a lot of labour input, such like land preparation (hoeing), weeding and harvesting. Their labour is based on a rotation basis on each members land working on a number of specific days per week. Orvis who worked on the same issue in western Kenya observed:

Because each member must participate in working on the others fields in order to get her field worked, it does not represent increase in labour time, though many people report they find working in a group rather than along increases productivity (Orvis 1985).

Another communal group labour type found to be used by the women is the occasional one usually called together for a specific task by the person who wants the task done. This particular group were usually offered meals in the cause of their work.

The result of using communal labour may be to free the members to perform other kinds of work on their own farms or to engage in other cash-earning activity.

HOUSEHOLD ACTIVITIES

The women's work on their farms and in their houses is fundamental to the survival of their families. Some household jobs must be done everyday, for example cooking, fetching firewood and water or collecting the food to be cooked, just to mention a few and not to forget their

responsibilities as parents and providers. At the same time the farm-work has to be done. The point is, the opportunity cost of the women's time is not zero. If she is not working on the farm, she is working in the house. There are many activities, some of which only they can do, and others which cannot be postponed. The work of women in food production cannot therefore be a study in a vacuum without taking into consideration other duties performed by them. In other words, the woman's time is not freely available for farm tasks. This implies that domestic activities play two integrated functions centred around physical reproduction and other aspects of the reproduction of labour force and production of the use value. The nature of women's work in food production depend upon factors that transcend the household which implies that women's farm activities must be analyzed within the context of the dynamics of overall household activities.

Table 3 shows the household activities that have to be done along with the farm-work, and the individual members who perform these tasks within the family unit.

From Table 3 we can see that the women contribute over 98% of their labour, fetching firewood, water, and food, cooking and looking after the children. The tasks that were traditionally done by men like looking after animals are being taken over by women in great numbers. 54 (54%) of the women interviewed looked after their animals as compared to 45% of the men who did the same job. The contribution of men's labour in household activities is minimal. It can also be observed from Table 3 that the women are helped in their household tasks mostly by their female children and less by their male children except in looking after the animals. Our assumption here is that, the male children identify with their fathers at an early age, so they only tend to involve themselves in duties traditionally performed by men but ignore duties traditionally left to the women. There are few women in relatively wealthier households who can afford to hire labour and thereby ease the workload. This is not possible for most women in poorer households.

The most arduous task that women were found to perform is, the preparation of <u>isio</u> or <u>muthokoi</u>, a meal of dry maize and beans or pounded maize respectively. Before the maize is pounded, it has to be soaked overnight for it to be soft. Sufficient pounding for an average family of six members takes up to two hours per meal. <u>Isio</u> takes not less than three hours to cook. As a consequence women often serve one or two meals a day. When the agricultural work is most demanding, meals are sometimes neglected altogether until late in the evening.

Fetching water, which was also found to be a time consuming activity, is carried out mainly by women. Water is collected at least four times a day. The distance during dry season can be up to 3 kilometers. However, water during the long rainy season when the study was conducted, was taken from several streams not very far from most homes.

The collecting of firewood was frequently found to conflict with agricultural work. The fuel supply which is dwindling in the area as a lot of forests and bushes have been cleared to give way for agricultural crops, was found to be collected almost on a daily basis. Since dry and suitable for burning and cooking type of firewood have to be searched for in different distances, this activity was found to take a lot of women's time particularly in the wet season. Both firewood and charcoal are being sold in the local markets and thus present an economic burden to women.

In addition to all these, women were found to take sole responsibility for daily household chores such as cleaning and washing. The women were also found to take great responsibility for child care and supervision. Usually they were assisted by their daughters. The sole responsibility of child health, food and clothing tend to rest with the mother (Pala 1975).

Most of these tasks were performed at the same time. For example it was observed that women without family help, carried their children to the farms where they watched over them as they slept or played. Often they have to stop whatever activity they are doing to breast feed the child before being coaxed to lie down or play while the mother continues with her work.

The household tasks are multifaceted and what women show is a great deal of flexibility in meeting the demands made on them by the virtue of their being producers and reproducers (Obbo 1983: 54).

OFF-FARM INCOME-GENERATING ACTIVITIES

Since the food produced is generally consumed by the household members, and since lack of economic incentives for food crops has led to their being produced primarily for subsistence, women nevertheless need cash not only to purchase other foods and basic necessities for their families but also to pay for improved production that are necessary for increases on farm productivity. Thus in order to improve their household needs and also food production, increasing numbers of women engage in off-farm income generating activities by trading off between food and non-food crop production for sale.

Out of 100 respondents, 92 were involved in some type of income generating activity. Although women do not specialize in marketing (Pala 1975), it was nevertheless the major off-farm income generating activity. The women were found to market their own food crops, mainly vegetables, fruits and grains. Other activities involved selling knitted materials and hand made baskets. These off-farm activities were found to be compatible with women's reproductive functions e.g. caring for small children.

The average income from the sale of agricultural produce was K.Shs. 100/- per month. This money is very little taking into consideration the distance walked to the market with loads of goods carried on the back. One only needs to look into the market and see the women selling their goods understand the situation. They sit here for not less than eight hours and by the end of the day, they have made an average of K.Shs. 3/-- net profit which is immediately swallowed up in purchasing other family needs.

From observation, there is no well developed market for crops produced. Women engage in the same activities selling the same types of goods making competition stiff and thereby selling their goods at throw away prices. There was little evidence that these women have attempted to come together as a group, set fixed prices and explore avenue for transporting their products to nearby urban centres. Instead mediums (usually men) travel from other urban centres to the local market in Mumbuni, buy these food products from the women at cheap prices, and transport them to the urban centres and sell them (sometimes only 30 kilometers away) at exorbitant prices, making a lot of profit.

Table 3 HOUSEHOLD ACTIVITIES AND WHO DOES WHAT IN THE FAMILY

ACTIVITIE S	WIF E	HUSBAN D	PERMANEN T LABOUR	TEMPORAR Y LABOUR	FEMALE CHILDRE N	MALE CHILDRE N	OTHER S
Fetching	230	1	7	1	92	28	6
Firewood	(80%)	(1%)	(13%)	(5%)	(46%)	(14%)	(6%)
Fetching	142	2	28	9	92	55	7
Water	(71%)	(1%)	(14%)	(6%)	(46%)	(28%)	(4%)
Cooking	176	2	26	4	89	20	3
	(88%)	(1%)	(13%)	(2%)	(46%)	(10%)	(2%)
Cleaning	155	-	27	3	94	14	4
House	(78%)		(13%)	(1%)	(47%)	(8%)	(2%)
Washing	158	4	24	5	99	38	6
Clothes	(79%)	(2%)	(12%)	(2%)	(50%)	(20%)	(3%)
Ironing	136	8	24	5	79	30	4
	(68%	(5%)	(12%)	(2%)	(40%)	(15%)	(2%)
Taking care	109	2	12	3	74	12	3
of children	(55%)	(1%)	(6%)	(2%)	(37%)	(6%)	(2%)
Going to	183	4	9	2	46	5	4
market	(92%	(2%)	(6%)	(1%)	(23%)	(2%)	(2%)
Collecting	175	11	25	10	64	30	8
Food- Garden	(83%	(6%)	(13%)	(5%)	(32%)	(15%)	(5%)

Farm-work	165	84	36	38	79	75	11
	(83%)	(42%)	(18%)	(19%)	(40%)	(38%)	(6%)
Looking after	107	45	28	31	43	62	5
animals	(54%)	(22%)	(14%)	(16%)	(21%)	(31%)	(2%)
Others	50	24	4	3	8	-	-
	(25%)	(12%)		(2%)	(5%)		

On the other hand men were found to involve themselves to much higher levels and well paying off farm income than do women.

In summary one can say that a large amount of time, income and effort is spent on off farm income-generating activities. The main concern however is what effects these have on agricultural production. Labour thus remains the key factor at issue. This study shows that women's labour is certainly not in surplus. During peak labour periods the labour demand on the women is quite strained. This is not due to agricultural activities alone but also to the overall demands on the women's time as she maintains and manages all aspects of a rural agricultural household. Illness and pregnancies are other factors that put great strain on women's labour (Orvis 1985).

V. DECISION-MAKING PROFILE

If women are the key resource in food farming, then their productivity will depend not only on improving their access to resources such as land, credit and services, but also on how much access and control they have over these resources. Where decision power over household resources is limited or denied, we would expect women farmers to be less efficient than other women and men who have control over productive resources and the power of decision on how to use them. For example lack of control or decision power will not only affect the organization of labour and types of crops produced, but will also affect how land is allocated for cashcrops and food crops. Lack of control and power of decision might therefore lead to the marginalization of both women and food crops. It therefore became significant to highlight issues which deal with decision-making in the household.

The decision-making profile demonstrates the extent of women's participation and influence in farm production and the extent and variety of their roles and responsibilities in all areas of household production.

Taking each labour process individually a number of questions were posed as to who makes decisions or takes the responsibility for food production, land preparation, planting, weeding,

harvesting, buying inputs and seeing that the labour is done. Again we wanted to know who decides on sale of crops, and food storage. Table 4 indicates the responses given from these questions.

Table 4 illustrates that women in Mumbuni make decisions in their sphere of food production, farm inputs, processing and marketing. They are also in control of the money that come out of the sale of their food products, an activity which they pursue on their own account to provide the means to fulfil efficiently their responsibilities for household food supplies and other basic household necessities.

The study however, examined in details who takes responsibility and decides on the farm labour, farm inputs, tools used and improved methods of farming. Table 5 shows who take such responsibility.

Table 5 indicates that men take decisions or the responsibility of buying farm inputs. For example 80 men took the responsibility of buying and 65 of the men also bought other farm inputs compared to 5 women who bought fertilizer and 20 women who bought other farm inputs respectively. Fertilizers and far tools are some of the most expensive farm needs. Our conclusion is that most men were in a position to afford both fertilizer and farm tools as they were economically able, and they also have access to credit facilities which are provided by most cooperative societies (see next chapter). It is also significant to note that decisions and responsibilities taken by women are related to the farm tasks they perform. For example, since planting is a task performed by more women than men, it would only be logical if the women took the responsibility of buying seeds, the varieties to be planted and the cropping patterns to be adopted. The ILO reports that:

the types of household decisions that women in Kenya would be expected to make would be a mirror image of their inferior status in many level of the society (ILO 1986: 154).

Given that women do not control a lot of money in the household, their decisions on the use of money are limited. The men on the other hand take responsibilities, given their superior financial status provided to them by the fact that they control resources and means of production.

To provide labour in the farm is in the realm of women's role in agriculture, therefore the women take the responsibility of seeing that labour is provided. It is interesting to note that both women and men are almost equally responsible to adopt new methods of farming. Our observation is quite similar to a study done in Zimbabwe which concludes that:

Women may be willing to adopt new farming practices or buy equipment and other agricultural inputs, but they have no power to decide without the husband's approval. Moreover the husband controls the family finances in the majority of cases which makes things even more difficult (UNICEF 1982: 27).

In view of this study we decided that the usefulness of assessing decision making can only be justified when we look at the reflections of the underlying dynamics that command the decisions made on other household resources, particularly on income.

Further investigations revealed that women control money and take responsibility regarding food and household maintenance, sometimes with the help of husband, daughter and sons. Decision power is influenced by income or amount of money one handles. For this reason most women do not control money for school fees, repayment of loans, farm equipments and for buildings and repair. Nevertheless, the women take decisions on money for clothing, transport and medicine, a responsibility which relates to their reproductive roles. It is also significant to mention that the household income of our TABLE 4 FARM DECISION PROFILE

	LAN D	PLANTIN G	HARVESTIN G	TRANSPOR T	STORAG E	SAL E	INPUT S	FAR M
	PREP.	WEEDING						
Wife	70	80	95	84	75	91	97	85
	(70%)	(80%)	(95%)	(84%)	(75%)	(91%	(97%)	(85%)
Husban	30	20	5	16	25	9	3	15
d	(30%)	(20%)	(5%)	(16%)	(25%)	(9%)	(3%)	(15%)

TABLE 5 DECISIONS ON LABOUR, FARM INPUTS,

TOOLS USED AND IMPROVED METHODS OF FARMING

DECISION TAKEN	WIFE	HUSBAND	WIFE AND HUSBAND	NONE
Buying Fertilizer	5	80	5	10
Buying Seeds	76	5	4	15
Buying Tools	10	50	5	35
Buying Farm Inputs	20	65	15	-
Labour	64	10	14	10
Variety of Seeds	86	3	11	-
Cropping Patterns	87	4	9	-
New Methods of Farming	40	43	10	7

respondents were allocated (90%) by the husbands. 85% of the women said that no discussions took place before the allocation of this money took place.

In summary, women's control of household resources and decision-making power was found to vary in relation to a number of factors with the key variables, education and the general control of income. The participation of women in income generating activities improves their control over resources, allocation and possibly establishes an economic base for them. The higher the income, the greater the say over household decisions. Thus, confinement to non-market subsistence reduces the power to decide and control household resources while participation in market economy gave women greater power and increased their status in terms of household decision-making. The women's low position in decision-making in the family and the household economy adversely affects their productivity and personal security.

VI. FACTORS INFLUENCING WOMEN'S PRODUCTIVITY IN FARMING

Examining access to means of production was very significant in this study because it is what determines the bulk of all agricultural labour, the returns of the women's labour and decisions concerning the inputs essential for successful farming. For this reason, it became necessary to look at the factors that influence women in their agricultural production, among the, access to land, credit facilities, agricultural services and information and membership to cooperative societies.

LAND

Few studies in Kenya are focussed on women's land rights. However, Pala (1974) and (1983) has raised a number of questions concerning the issue. According to her, the traditional system of land tenure, provided both unmarried and married women with land user rights on land vested on her father's patrilineage and husband's patrilineage respectively. Customarily individuals (both men and women) had no right to allocate or dispose of land. Thus, access to land by women was ensured and they were entitled to land for agricultural purposes from which they were expected to feed their families (themselves, their children and spouses).

However, the Land Reform is transferring the customary land tenure system into individualized tenure. Since all Kenyan communities are patrilineal - that is women move into their husband's clan and use their husband's land, the `owner' of the land in individualized tenure automatically becomes the man. The inheritance of land runs from father to son. This means that land is being transferred to almost exclusively male individuals leaving no provision concerning how women's access rights are to be defined. How does this affect women in the role in food production. In Pala's words:

the new land reform system, enables individual men to alienate land without any legal obligation to consult with other males or female of the patrilineage. At the same time there is no clear stipulation as to how a woman's customary use rights are to be realized in the event that a male on whose land she depends makes a decision to sell the piece of land (Pala, 1974).

With this background in view, the study set out to find the following; whether women farmers own any land; how much of family land they utilize for food farming; or access rights. We were

also interested to know how many parcels of land the farmer has and whether the parcels are consolidated or dispersed.

Out of 100 women interviewed, 92 responded that they owned land. The average women's farm sizes range between 0-1 ha.

A number of women were found to have access to at least two parcels of land. Most of these parcels were dispersed in different places. This indicated the scarcity and demand for land in the area. The ILO reports that:

Most women must be content with land wherever they find it, and the norm is to have access to small scattered pieces of land. The implication for time expenditure just to get to these pieces of land are obvious (ILO 1984 p.61).

Other interest focused on whether the land the woman was farming was already registered and if so in whose name. It was also important to know the women's rights to land they farm, how they acquired the land they are farming, whether they can sell the land and in fact whether they are aware of the advantages one would have with registered land.

The land for food farming mainly belonged to the clan under which the woman was married although some women had access to land which had been bought, rented or given as gifts. Most of the land women farm are registered in the names of their spouses. The women are aware of this handicap and their response were: they have no rights of ownership, they have no right to sell or lease, and they cannot secure loans.

Questions were also designed and directed to elders in the community in order to find out whether there are any land owners in the area, how they acquired the land they own, the types of land they owned and whether the women managed the land they owned by themselves and the general effect of land consolidation in the area.

The elders generally agreed that there were women land owners in the area who owned land which fell to them when they were widowed. However, some elders said that women who owned land in the area only did so in trust for their sons before they grew up to take the responsibility. Most women who own land in the areas have bought the land either by themselves or by their children. Out of 50 elders interviewed 27 (27%) said that

the women who owned managed the land by themselves. Others agreed that land though owned by women, were managed by their husbands or sons. According to elders interviewed, land consolidation, and registration are significant in the area as it enables them to take loans and therefore farm better by buying farm inputs and tools for farming. It is important to note that the women interviewed seemed to be unaware of the mechanics of the new land reform and its effects and that the man becomes the absolute owner of the land. This is why women, asked whether they own land, still look at it from the traditional tenure point of view of the user right, and easily respond that they own land. The women indeed have not been involved in the consolidation and adjudication of land which is geared towards land registration. The implication it will have on them has not yet registered in their minds.

What effect will this have on food production? First, apart from one's own labour, land is the only major resource. Without land, the women cannot determine the returns of their labour. Secondly, land can act as security in getting loans or credit facilities for the improvement of the farm. How are the women going to improve their already observably backward farming situation, when they have no land to secure loans and credit? Third, for the women to be productive, they have to have an upper hand in decision making and managerial power concerning the lands they farm. In Mumbuni, since men have their farms where they grow cash crops, they usually allocate to the women the poorest plots for food farming while they keep the best for themselves. Fourth, because the women do not own land as such in the area, very few are therefore members of cooperative societies. As we will see later it is within this cooperatives that most farmers within Mumbuni get loans or credit for the improvements of the farms.

Finally, the new land reform has reduced the women to a state of dependency on those who control the land (the men) and this is very unfortunate particularly taking into consideration that they provide the bulk of agricultural labour in the country.

CREDIT

Access to credit is crucial for increasing women's productivity in food. Women need credit for tools and equipment and agricultural input. However from this study we realized that credit facilities have reached a significant proportion of women farmers in Mumbuni. In general, it was found that women have few possibilities of getting access to capital, more so because financial institutions can only give loans to those who display security such as land (INSTRAW 1984:113). Women are already disadvantaged in this position as already shown that they have no land.

The main concern of the study was to find out where women go incase they needed credit, sources of outstanding loans if any, purpose for taking the credit if taken, security offered to get the credit and how the credit was being paid back.

Out of 100 respondents, 78 said they have never asked for loans or credit, neither were they aware of such facilities. Most women accepted that they needed credit which they would use to buy land, ploughs and improve on their farms. A number of women needed credit for the purposes counted: to buy food, pay debts, buy furniture, buy domestic utensils, buy land, farm machines and farm-inputs, to buy 'posho' mills and pay school fees. The sources of credit facilities were counted as mainly: cooperatives, women's groups and family groups.

The result and family data show that women in Mumbuni in general have no credit facilities. The credit giving bodies are ill adapted to the enterprises in which women are engaged. The women have therefore tried to overcome this financial handicap by organizing themselves in small women's groups of 15-20 members, where they give each other money in turn to meet their individual needs. Usually in such a group, each member of the group contributes about K.Shs.50/- and all give to one member, until every member of the group has had a chance. When the husband takes a loan, most women look at it as a family loan to benefit the whole family. However, the striking point is that the loans taken by the men is mostly used for buying farm tools which are mainly used by the men themselves to ease their work on their cash crop farms

rather than for the use by the women on food farms. Most women would like to take loans to acquire the bare necessities of life i.e. to buy food, utensils, clothes; an indication of poverty reflecting that most of women respondents cannot adequately rely on their food farms as this does not bring enough income to survive on. There is no incentive of taking loans to improve the farm.

MEMBERSHIP IN THE COOPERATIVE SOCIETIES

The cooperative societies are powerful vehicles particularly in an agricultural setting. The societies do not only strive to distribute money accruing to their members equitably but they are also an important instrument in achieving mass participation in national development (ILO 1984:21).

The cooperatives play a very important role in Mumbuni, particularly as they are locally based in the areas and are administered by the local people. They also seem to be the major source of credit that women in the area are more aware of than other credit giving institutions.

The study set out to find out which cooperatives women belonged to, what the members gain by joining such cooperatives who runs them,the women proportion and how many women had actually received credit from the cooperatives.

Out of 100 respondents, 83 were not members of any cooperative. Very few women were represented as most of the cooperatives were found to be run by men. None of them had an elected woman to the level of committee where major decisions affecting the farmers are made.

The role cooperative societies can play in the life of women and food production cannot be underestimated. It is mainly through these agricultural cooperatives that women can get credit for the improvement of their farms, and the cooperatives can also market the products and even help in the processing of some of these food products. This is the only way women can gain from these cooperatives, otherwise the gain will forever go to the men and their cash crops.

ACCESS TO AGRICULTURAL SERVICES AND INFORMATION

The agricultural services usually provided to farmers are: agricultural Extension Services provided by agricultural officers, in service courses in farmers training centres and credit facilities made available to farmers from Guaranteed Minimum Return and Agricultural Finance Corporation.

The most common service to farmers through the Ministry of Agriculture is the one provided by the Extension Officers who are supposed to visit farmers and give advice about husbandry and also introduce new crops. In addition to this the extension officers are supposed to provide group training in the form of demonstration plots, where they teach in groups of 10 to 50 husbandry practices such as planting in lines and spaces and application of fertilizers.

It was found that visits by agricultural instructors were not usually requested by farmers but were initiated by the instructors themselves. In this study we examined whether agricultural officers

visited the farm, what advise was given, how many times they visited within the season and the previous season and whether the farmers felt that they gained from such visits.

The responses show that out of 100 women farmers interviewed, only 39 were visited by the extension officers while 61 were not visited. Advise given by these officers were mainly on land preparation and planting. Within two seasons the farmers visited had only been seen once. The general feeling among most of the women is that they had not really gained from extension officers, much more 50 because they had not been visited.

Since most of the agricultural officers are men, there is a problem in trying to transmit information to the women farmers (most of them managers of their own farms) in the absence of their husbands as this can raise suspicion. Culturally, these officers also find themselves asking to talk to the "head of the family" usually the man rather than the woman. It appeared that the homes which were visited (35 out of 39) had a "male head" present.

The study also examined other sources of agricultural information women are exposed to, given that they did not significantly gain from agricultural extension officers. A number of women responded that they either got agricultural information form Church, women's groups, over the radio, relatives and neighbours.

The second type of service extended to farmers is group demonstration plots. From observation the plots are taken from prominent farmers, mostly retired agricultural officers. The demonstrations are usually announced in government meetings (barazas); meetings that women do not usually attend either because of cultural or time constraint. Nonetheless the information given in these meetings can always reach women through friends, neighbours and relatives.

The study examined the number of women who attended the demonstration plots. The results show that a very small number of women attended these demonstrations.

It further indicates that the women in Mumbuni were uninterested, unaware or unable to attend the demonstration plots. This could have been probably lack of information or labour constraints in the house and farms which made women not attend these demonstrations.

The third service given to farmers in training in Farmers Training Centres (FTC). The fee paid for these courses range from K.Shs.10/- to 100/-. The courses usually last from 2 weeks to 1 month. In Staudt's words:

Farmers Training Courses represent a valuable direct service to the farmers as they are more intensive than other educational services and the instructors are highly qualified (Staudt 1977).

A number of farmers were not aware of the availability of Farmers Training Centre. Only 2 women out of 100 had attended the FTC. A study done in Western Kenya on delivery of services to female clientele has observed that:

Husbands are often worry about wives being gone for extended periods of time and in some cases the Chief or assistant must persuade husbands to allow their wives to attend a training

course. For women managing farms alone, one to two week training period presents social problems, in that they must make arrangements on their day-to-day household and farm responsibilities while they are away (Staudt 1977).

However, the fact that the training goes to the men rather than the women illustrates the waste involved, as women trained are likely to remain in the farm and engage in farm-work after training while men migrate in search of wage employment mostly to the urban areas. A comprehensive study conducted by ILO/UNDP mission has recommended that wider opportunities for Kenya women for training in agriculture be provided (UNDP and ILO, 1972).

It is already mentioned under the topic of credit that women were found not to gain from the Agricultural Finance Company as they are required to produce land or an indication of wage employment to be able to get loans. Over 80% of women interviewed were not even aware of such credit facilities for farmers.

Women are fully involved in agricultural work. It is essential that the focus should be on women to be provided with support services, which otherwise poses serious obstacles to the improvement of food production.

VII. CONCLUSIONS

The following conclusions have been reached both from the survey and in-depth interviews. Women in this study are represented as landless. On the grounds of customary rights, most women still believe that they own land and wish to maintain their independence in managing the land on their own. Unfortunately,the women have not realized that their rights are legally and formally non-existent as the lands are registered in the names of the husbands.

It is notable that most women are excluded almost enmarse from cooperative societies. This is because membership requires evidence for resources which in this particular area is land. Few women, if any, hold titles of land. The women's low educational attainment has not exposed them enough to learn the benefits of membership in the cooperatives.

In general, the women do not seem to have much communication with, nor assistance from agricultural extension officers. The agricultural information much needed by a farmer seems to come from neighbours, relatives and the church.

The women also exercise decision making authority on the work on the farm. The men seem to come in only when inputs costing money have to be purchased. There is also independence on the part of the woman on the money which comes from the sale of her produce or crafts. The money goes towards buying food, clothing and household needs. In deed, it is their responsibility to take care of their own families so they have to decide how to use the little income they get and see how it fits into the running of the family.

We also conclude that women do most of the work in food production as there is a great indication that most men are employed on salaried jobs. The household activities are left to the

women alone with little help from their female children. To be able to run the families, the women have to engage in one or other income generating activity as they cannot maintain their families on the farm produce along. Our findings pint to labour shortage. The women cannot cope with all the work left to them. What effect does this have on their role in food production? Most land is left uncultivated as they cannot manage by themselves. Sometimes farm-work has to be left in order to perform other tasks which might need immediate attention. According to Kariuki:

The expressed feeling is that "women must work hard -harder than the men" for families to survive. The women seem to take the whole responsibility of the family subsistence. The main obstacle to the women's performance of their double tasks is

the lack of help. The image of the husband does not appear particularly helpful (Kariuki 1984:25).

The majority of the women interviewed expressed the need for help. According to them their workload has been caused not much by male migration or children going to school, but by lack of money to hire more labourers. How far can the women's labour be stretched? The general expression is that, "We are very tired. There is too much work". Time to rest, "I rest on Sundays when I do my housework, or at lunch time when I am eating, or at night when sleeping, or when cooking". The women perceive that they bear all the burdens of their families, but that the families are also aware of it as most of them openly appreciate. The women themselves are aware of their worth too. Their self perception is very good because "things are as they are because of the work I do - otherwise things would be in chaos". However, they seem to say, this is not enough as they also need enough benefits just as the men to perform their roles more efficiently and effectively otherwise they face a situation which is restraining and a hindrance to their otherwise important tasks.

In Mumbuni Location as in many parts of rural Kenya, women were seen and found to provide over 80 per cent of labour in food production. Factors favouring food production and the constraints that face women as food producers have been assessed and analyzed and we have arrived at the following conclusion.

First, it is true that land reform has not promoted women's legal ownership and inheritance rights and at the same time undermined women's traditional use rights under customary land tenure system by registering land in the name of husband or son. This is a serious constraint on women's productivity in food as land reform is meant to modernize agriculture and improve quality of access to resources yet despite the fact that women provide over 80% of agricultural labour force in Kenya, they have not benefited from these changes.

Second, the majority of the women were found to have no access to credit and finance. The cooperatives which provides the most credit and loan facilities in the area, usually requires a display of security such as land. The women were therefore found to be disadvantaged because they do not own any land. Access to credit is crucial for increasing productivity, by enabling one to afford inputs, seeds, fertilizers and farm implements without which the women cannot improve their food production.

Third, the women were found to face discrimination in access to extension services. Most of the extension officers seen in the area were men who seem to prefer to visit the men cash crop farmers rather than women food farmers. For the production of food to improve, it is only through the training of the women or through extension officers that new agricultural technological adoption can reach the rural women.

Fourth, the participation and decision making in the cooperatives by women was found to be very poor. The cooperatives surveyed within the study area rarely had women registered members. The few women found to be members of the cooperatives were not in positions to effect decisions. We found this to undermine the authority of the women in their traditional decision making powers concerning food production, processing, storage, marketing, preparing and budgeting. The women have therefore been deprived of their food production experience and knowledge by the cooperatives.

Fifth, the male migration in search of salaried jobs was found to lead to a further constraint to women's role in food production. A number of women left behind by the husbands to produce food at home had no access to credit, no control over household income and had no powers of decision making on the farm. The migrant husband has to be contacted before any vital decision or move is taken by the women. This delays a lot of farm activities and can be very frustrating to the farmer.

Sixth, labour was found to be a great constraint to the women in their food production. The share of labour in food production is particularly important in view of the fact that in many cases the women performed their agricultural work with a range of other household tasks, and other income generating activities. It is therefore worth noting that food production will be influenced by the relative labour demand it requires. Lack of labour saving implements in food production will discourage women from their farm-work.

Seventh, women like men need cash to purchase food and other basic needs. Since food crops are generally consumed at home, the women have come up with a strategy of getting cash income by engaging in other income generating activities. It was observed that the need for cash seemed to lead to a trade off of decision between food and non food production for sale. Improving agricultural food prices and their marketing will definitely improve their production.

Last, the failure to recognize the economic contribution to food production and household work by the society and whether the women should control the proceeds or rewards from their efforts was found to be a constraint in their role as food producers. This in effect has led to a failure in considerations of factors affecting women's contribution, how they are prepared for the tasks they perform, tools and techniques they use and the efficiency of their effort. The incentives that the women may need in food production may be very important.

It is indeed true as already suggested in this study that development efforts with respect to food production cannot be successful if the role of women is not taken seriously. In this respect the women should be the target group in all development programmes, including credit, training, crop improvement and marketing.

According to Pala "improving women's agricultural productivity depends on improving their access to resources such as land which is a key factor of production. Without specific land rights their role in production will be further marginalised" (Pala 1983). It will be important to review the women's land rights, and establish a policy that recognises women's user rights to land. The ILO report says that:

At the minimum these rights should be guaranteed and protected by law, and ownership rights established where appropriate (ILO 1986: 180).

Such a measure could be an incentive for better production.

For extension services, it will be important to identify women's groups upon which they depend quite a lot. These groups can be introduced to programmes that will suite their interest and needs in the productive roles, by facilitating the participation of the disadvantaged women in new methods of farming and organizing them to acquire skills and make use of government programmes and services. The extension workers should be women or men specifically trained to meet the needs of women farmers.

The Government should acknowledge the nature and time profile of rural women's work while developing strategies for raising productivity. The women's workload can only be reduced by introducing simple and inexpensive equipment to facilitate both domestic and farm tasks (Pala 1983). However, the women have to be involved in the design and testing of such technologies and be trained in their use, maintenance and repair.

Further research should be done on data base to determine the number of women participating in food production in different parts of Africa. Special attention should be given to the following topics: the relative priority given to cash and food crops on land allocation, the women's economic contribution, social and family consequences, both positive and negative that can be attributed to her roles, the consequences of seasonality on women's labour; labour input discrimination for cash and food crops; intra household distribution of income, consumption, assets and decision making; and time budget survey of agricultural households. These topics will broadly deal with the socio-economic issues that effect food production.

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