Government of Kerala

REPORT ON WOMEN PARTICIPATION IN AGRICULTURE

DEPARTMENT OF ECONOMICS AND STATISTICS
THIRUVANANTHAPURAM
APRIL 2001

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PREFACE

Amartya Sen in his book "Inequality Re-examined" stated, "there are systematic disparities in the freedoms that men and women enjoy in different societies, and all these disparities are often not reducible to differences in income or resources. While differential wages constitute an important part of gender inequality in most societies."

To improve the standard of living of the agricultural rural population, the Government of India as well as the State Government, have been taking up various measures. Studies on the impact of these measures are of great significance.

According to 1991 Census, out of 83.01 lakh persons in the work force of Kerala more than 39 lakhs depend on agriculture and allied sectors. More than 50% of the labour force in this sector are women. In G.O. M.S. No. 368/95/dated 10-11-95 Government have accorded sanction for the programme for development of women in Agriculture during 1995-96. The Agriculture Department requested this Department to conduct a sample survey in selected blocks in three districts viz. Ernakulam, Palakkadu and Wayanad as apart of the programme.

An attempt was made by this Department to gather information from the selected blocks of the above three districts as a case study, on the basis of existing socio-economic characteristics of farmers and the area selected for the study.

This report is prepared by Smt. T. Bhavana, Deputy Director, under the guidance of Sri. P. Kochunarayana Pillai, Joint Director and the senior officers of this Department. Sri. V. Mohandas, Compiler, Survey and Design assisted in the compilation work.

It is hoped that the findings of the survey will throw light on the role played by women in the labour force of the State and will be helpful in the formulation of policies and provide benchmark information for future studies.

A. Meera Sahib
Director

Contents

Chapter - 1

Introduction

According to 1991 Census, the labour force in Kerala is about 83.01 lakhs, of which more than 39 lakhs are employed in agriculture and allied sectors. More than 50% of the labour force in the agriculture sector are women. A significant factor that can be observed in the agricultural front of the State is the change taking place in the cropping pattern. A notable feature is the continuous fall in the area under food crops, especially paddy. The emerging trend in the cropping pattern of the State affects the employment pattern especially women employment. Paddy cultivation absorbs large quantum of women employment. Labour requirement in paddy cultivation differed from stage to stage. Labour absorption percentage in transplanting, weeding and harvesting operations in paddy cultivation favours female workers, when compared to other sectors.

In contrast to the Indian agriculture and social set up, agriculture sector and the social set up in Kerala have some specialities. One among these is the share of participation of women in agricultural labour force. In an average rural family, women constitute the main earner. The standard of living and social set up of the society in rural area mainly depend upon the pattern of crops cultivated in that region. The emerging trend of cropping pattern may affect the different groups of people in different ways. But statistical information on these

parameters is not readily available now. Data relating to these parameters may be helpful to the planners and administrators for formulating realistic plans in this area. With this end in view vide GO. M.S. No. 368/95/dated 10-11-95 Government have accorded sanction for the implementation of a scheme on Development of women in agriculture. Accordingly the Director of Agriculture requested the Director of Economics and Statistics to conduct a sample survey in selected blocks in three districts viz. Wayanad, Palakkadu and Ernakulam to assess the present status of women engaged in agriculture. The survey is conducted in three blocks, one block from each district as a case study. The results are to be used as base line information, which will be helpful for future studies as well as for formulation of schemes.

Objectives and Methodology of the Survey

The objective of the survey is to assess the extent of involvement of women in agriculture and allied activities, farming practices adopted, existing technologies, their traditional knowledge and support systems, knowledge of improved technologies, their constraints, training needs, family background, educational status, suggestions for improvement, social acceptance etc.

One block from each district was selected, based on reasonably large cropped area under cultivation and multiple cropping pattern. Twenty percent of the wards from each block was selected for conduct of the study. A list of households where women are engaged in agriculture and allied activities' in the ward was prepared after a preliminary visit to all households in the ward. From this list, 25 percent households was selected at random for detailed survey.

Coverage

The study covered 3 blocks viz. Angamaly Block of Ernakulam, Mannarkadu Block of Palakkad and Sulthan Bathery Block of Wayanad.

Field Work

The fieldwork was entrusted with locally available unemployed graduate youth. The time fixed for the fieldwork of the survey was one month.

Training and Supervision

Training was given to the enumerators for fieldwork by the staff of the Department. Adequate supervision was done by the higher officials of this department.

Analysis

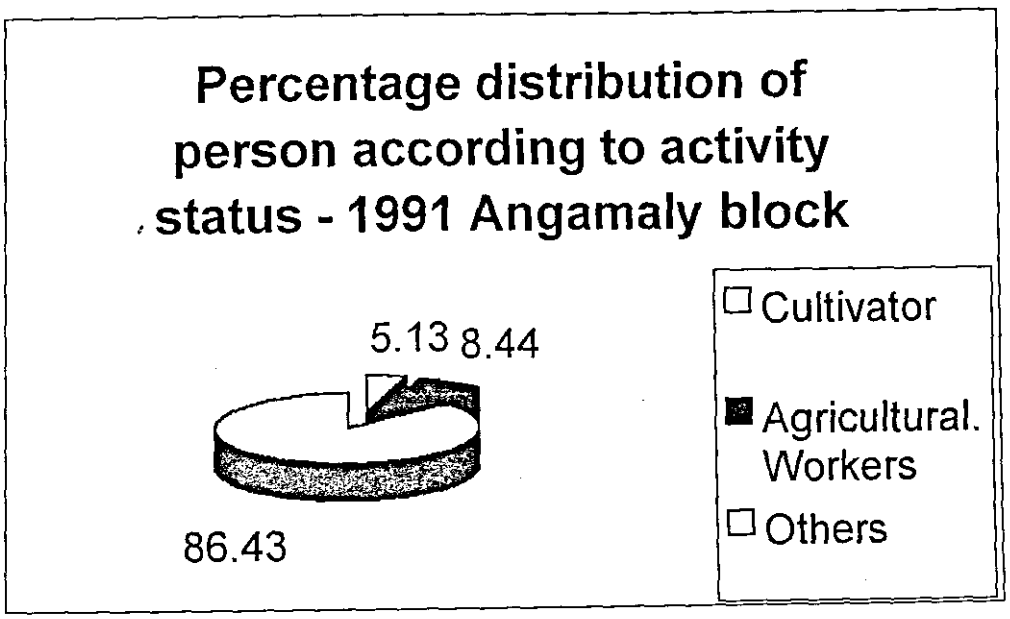
The data collected were analysed by utilizing the computer facilities of the Department. As the samples are collected from purposively selected Districts and blocks, the results are not generalized for the State or Districts.

Chapter – 2

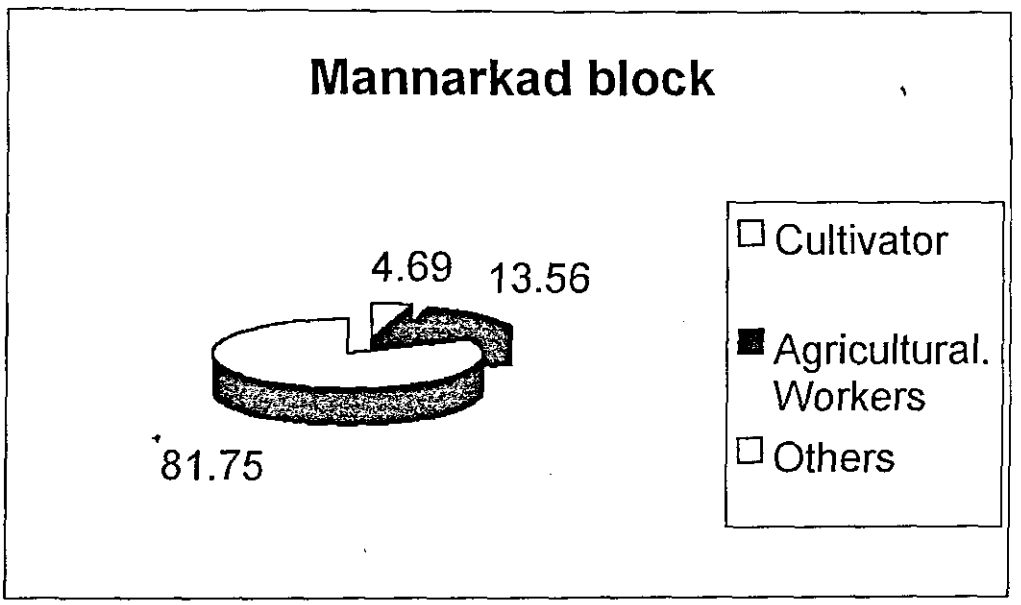
General Features of the Study Area

This survey covers Angamaly Block of Ernakulam Distirct, Mannarkadu Block of Palakkadu and Sulthan Bathery Block of Wayanad District. According to physiographic conditions Ernakulam District comprises the three natural divisions viz. High land, Midland and Low land. A tropical humid climate with almost uniform temperature throughout the year is experienced in the district. The name of Wayanad district itself denotes "Wayal Nadu". Palakkadu is also has its own significance in cultivation.

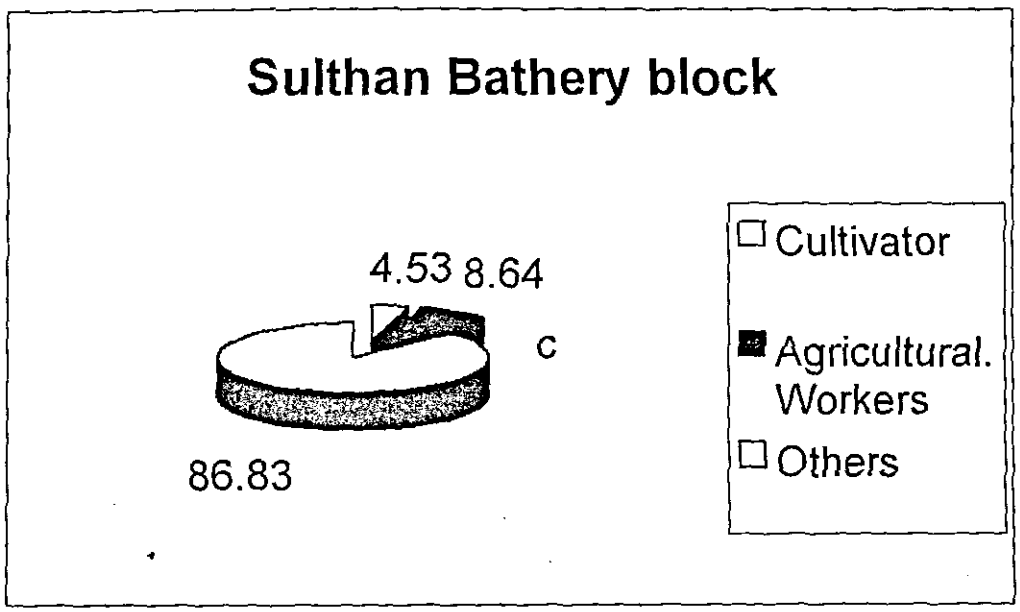
Angamaly Block has an area of 203.19Km^2 with a total number of 35,287 households having a total population of 1,79,660 as per 1991 census. It consists of 90,448 males and 89,212 females. Density of population of this region is 884 per sq. km. Industrial classification of workers of this area reveals that 5.13% are cultivators, 8.44% are agricultural workers and the remaining 86.43% constitute others categories. Sex-wise classification of cultivators shows that 86.39% are male and 13.61% are females. As far as Agricultural labour is concerned 57.07% are male workers and 42.93% female workers. (See Tables 1 – 3).



The area of the Mannarkadu Block is 482.35 KM^2 having 42,112 number of households with a total population of 2,46,877. Male population of this Block is 120,308 and the female 1,26,569. Density comes to 512 per sq. km. Activity status of this region shows that 4.69% are cultivators, 13.56% are Agricultural workers and the remaining 81.75% belongs to other categories. Of the cultivators and agricultural labourers, men constitute 88.10% and 63.68% respectively.



Sulthan Bathery block has an area of 761.90 Km^2 and 51858 house holds. Its total population is 249,695 consisting of 1,28,649 men and 1,21,046 women. Density of population is accounts to 328 per sq.. km. Cultivator category constitutes 4.53% and Agricultural workers 8.64% of the population. The other categories come to 86.83%.



The general feature of the blocks covered by the study area reveals certain peculiarities in their demography. Among the three blocks, only in Mannarkadu female out numbered male population. According to activity status female percentage was higher in Angamaly Block in cultivators as well as agricultural labourers. The lowest percentage of females was recorded in Mannarkadu Block in cultivators, while it is lowest in Sulthan Bathery Block in 'Agricultural labourers' ie. out of the total agricultural labours, 34.78% only are women.

Chapter – 3

Results of the Survey

Population in the Women Agriculture Households:

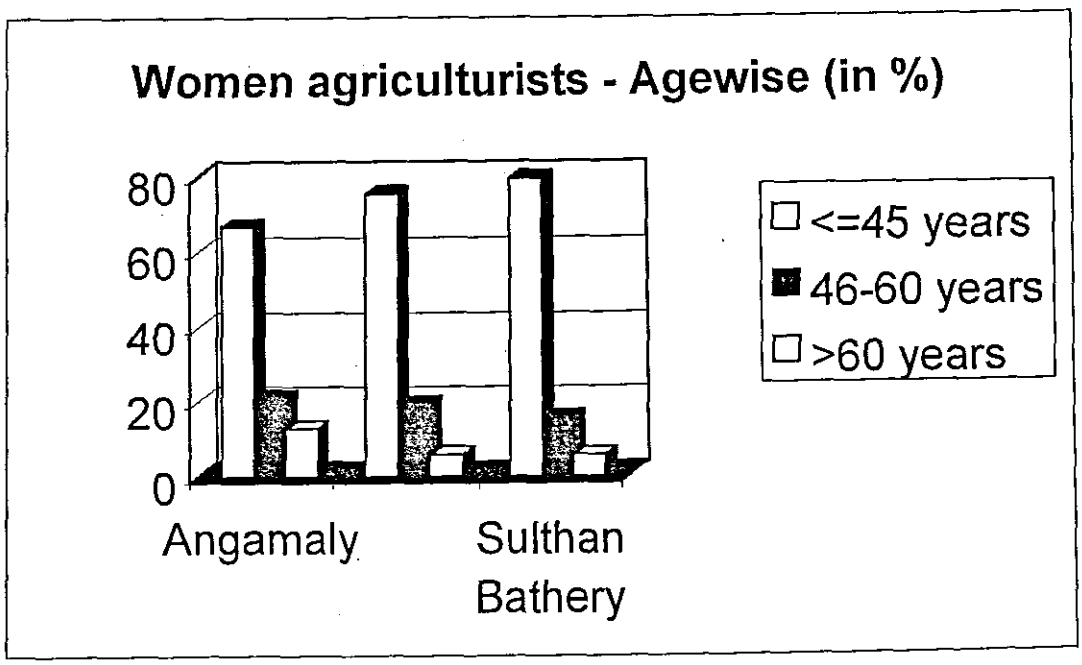
In the present study 3945 women agriculturist households from three blocks have been selected and surveyed. The total population of these households was 20119. On an average it is noted that per 1000 persons male adult population constitute 387, 326 and 348 and male children constitute 139, 182, 149 respectively in Angamaly, Mannarkadu, and Sulthan Bathery. Adult female numbered 367, 348, 368 respectively. (See Table 4). The no. of Women Agriculturists family surveyed in each block was 1194, 1237 and 1514 respectively in Angamaly, Mannarkadu and Sulthan Bathery. In these households, the no. of women Agricultural workers were 1263, 1443, and 1742 respectively. Thus the no. of women agriculturists surveyed was the highest in Wayanad district, followed by Palakkadu and Ernakulam. The average no. of women Agricultural workers in Agricultural labour family was 1.06, 1.17 and 1.15 in respectively for Angamaly, Mannarkadu & Sulthan Bathery. Details are appended in table no. 5.

Agriculturist families in the area consist of SC, ST and Others. In this families while the percentage of SC was highest in Mannarkadu (12.60%) and lowest in Sulthan Bathery (5.84%) the percentage for ST was highest in Sulthan Bathery (15.37%) and lowest Mannarkadu (1.02%). (See Table 5).

Out of 3945 Families of women agriculturist surveyed it was seen that 4448 Women were working in agriculture and allied activities i.e. on an average 1.12 women per household are engaged in agriculture activities.

Age and Sex composition of Women Agriculturists

The age group-wise distribution of women Agriculturists are given in table no. 8. Of the total agriculturists in Sulthan Bathery 79.29% are from the younger generation below 45 years. In Mannarkadu this category constituted 75.29% persons, while in Angamaly it was 66.54%. In all the blocks there are Women Agriculturists above the age of 60 years. In Angamaly, 12.73% of the women agriculturists are above 60 years of age.



Land and Cropping Pattern

Since land is an important factor of production there is a close association between land ownership, cropping pattern, occupation etc. The extent of land in the surveyed area along with net area under different crops cultivated is given in table 6.

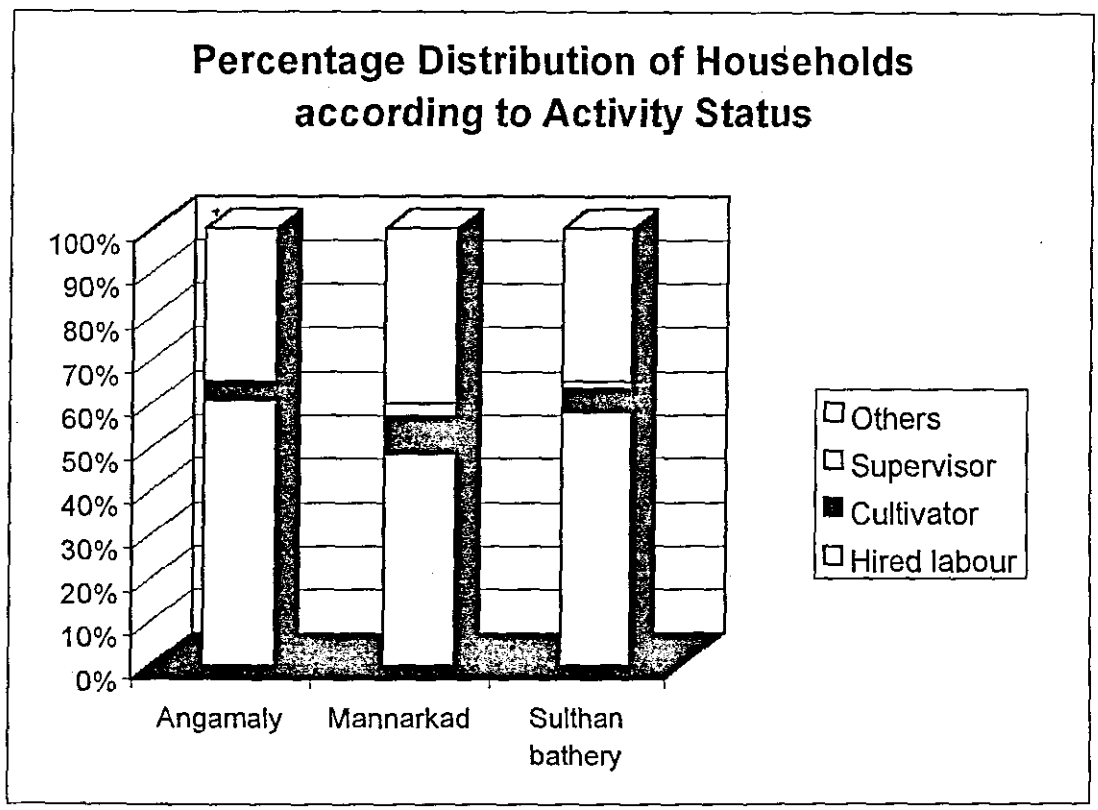
Net Area under Cultivation:

The major crops cultivated in the study area comprises of paddy, rubber, coconut, arecanut, plantain and banana. Crop wise distribution of area shows that in Angamaly Block coconut comprises of 31.05% of land, paddy 19.99%, and rubber occupies the third position with 17.26%. While in Mannarkadu rubber comes first (33.81%) paddy, second (24.78%) and coconut, third (16.66%). In Sulthan Bathery in rank position, "others" comes first, due to the inclusion of coffee, pepper etc. Second in position is paddy (20.30%).

Activity Status:

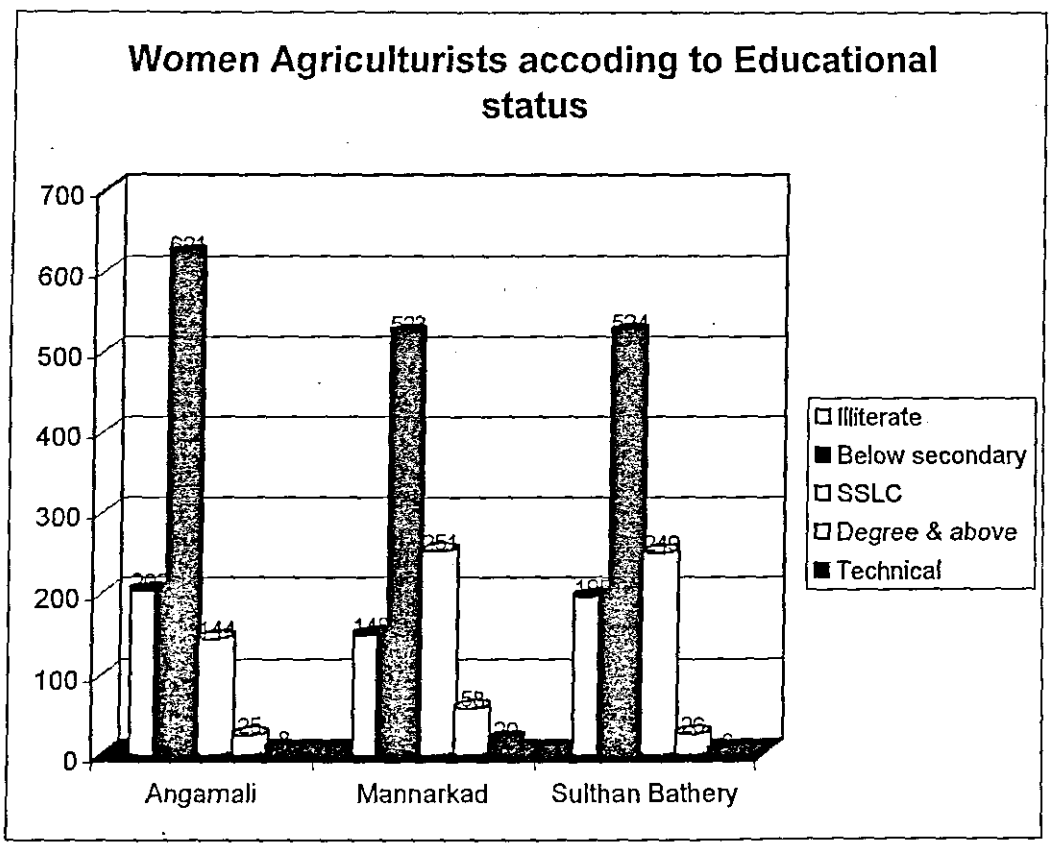
In the State, including rural areas, there is a decline in the number of persons engaged in agriculture and related activities. Hence it is necessary to have an idea about the various activities in which the women agriculturists are engaged. Activity status has been classified according to the nature of work in which they are employed. The activity status of women agriculturists in the study area are classified into four categories ie. hired labour, cultivators, supervisors, and others, Of which the major activity is hired labour and its shares in Angamaly is 60.82%, Sulthan Bathery is 58% and Mannarkadu is

48.47%. The highest percentage (8.82%) of cultivators are found to be in Mannarkadu. Sulthan Bathery comes second (5.65%) followed by Angamaly (3.65%). The percentage under the category of supervision is seen highest (2.71%) in Mannarkadu. In activity status "others" includes people engaged in cattle rearing, and poultry farming sector and registered and unregistered activity in Agricultural sectors. Table No. 7 shows the details.



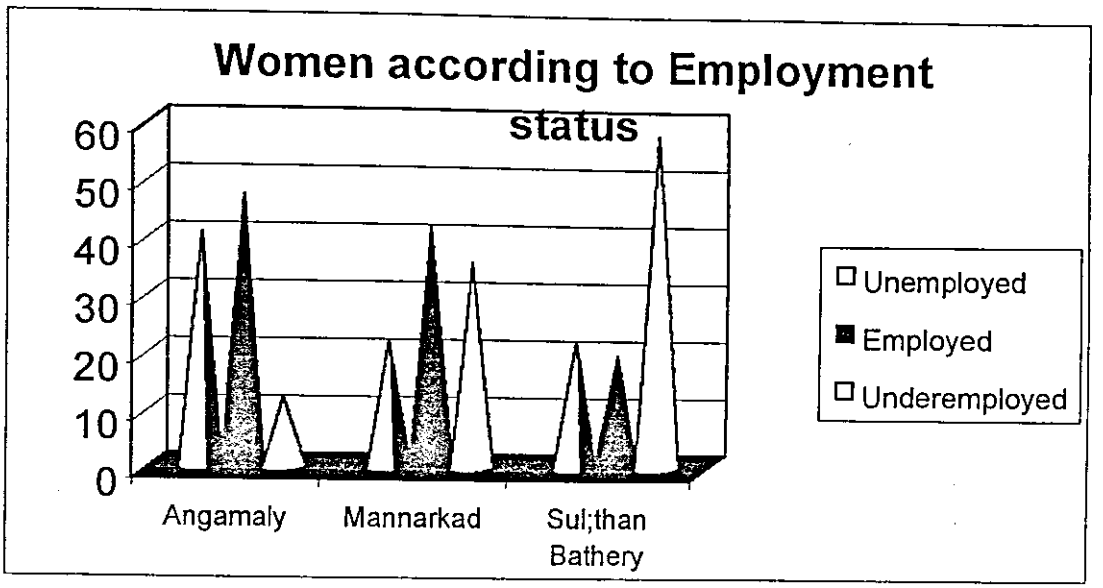
Educational Status

While identifying the women agriculturists, enquiries were made of the educational attainments of these women. The details of these aspects are furnished in table no. 9. Generally in all the blocks only 20% or less are illiterate but on an average more than 50% of the Women Agriculturists are having education below secondary school level. A few cases of graduates and technically qualified persons are also seen among the women agriculturists.



Employment Status

It is well known that in agriculture sector persons usually employed may be under utilizing the available work force due to lack of sufficient work. Visible under employment is a striking feature. The survey results revealed that the number of underemployed women was higher in Sulthan Bathery block of Wayanad District (58.13%) followed by Mannarkadu (35.83%). In Angamaly this percentage is small (12.14). Trend of unemployment is also visible in the study area. In this grouping those who were employed in agriculture sector for less than 15 days during the reference year are also included. Distribution of women agriculturists according to their employment is furnished in Table No. 10. From the survey results it is seen that the volume of unemployment is higher in Angamaly (40.56%). At the same time it is interesting to note that Angamaly ranked first in the case of full time employment provided to the women agriculturists (47.30%). In this category Mannarkadu (42.03%) is in the second position and Sulthan Bathery (19.70%) is in the third place. In almost all three blocks full employment, under employment and unemployment exist, but in different proportions. Under employment seems to be higher in Wayanad district in the age group 18 to 45. Un employment also exists in this stratum in all the three districts. This reveals that there is much scope for developing suitable strategies for the active involvement of women in agriculture in these areas. Especially the workforce belonging to younger generation may be fruitfully utilized. Details on Employment status of the women agriculturists according to employment position and on the basis of age group are furnished in table no. 10 and 11.



Irrigation

Means of irrigation is an important indicator for agricultural development. People use various sources for irrigation. Number of households using mechanical devices in irrigated land accounts to 52.19% in Ernakulam district, 64.83% in Palakkadu and 76.29% in Wayanad. The percentage share of households who did not use mechanical devices in the irrigated land comes to 47.81, 35.17 and 23.71 respectively. (See table 12).

Mode of Operation

One of the most important consequences of the emerging cropping pattern is the change in pattern of employment. Hence it is important to analyse the distribution of households, using different methods of ploughing. From the

survey results it is seen that in paddy sector the three districts under the study show different indications. In Ernakulam district majority of agriculturists used tiller for ploughing. In Palakkadu and Wayanad districts bullocks accounts for the major share. Impact of mechanization is largely seen in Ernakulam district. The use of tractor is maximum (38.06%) in Mannarkadu Block of Palakkad district. (See table 13).

Seed

The productivity of agriculture depends mainly on the basis of the usage of variety of seeds used. Survey results indicate that in all the three blocks more than 2/3rd of the households used local variety seeds in paddy sector. It is also seen that major share of cultivators were not using HYV seeds and they have not given any specific reason for the same. But a considerable percentage reported the non-availability of HYV seeds. In Sulthan Bathery and Mannarkadu 19.69% and 12.88% reported that HYV seeds are not suitable to the area. (See table 14).

General Observations

In order to assess the impact of modernization in agriculture the trend of sowing pattern followed by the households is essential. It is reported that the cultivators mainly adopted transplanting as the preferable method of sowing.

Seed application at the recommended rate is an indicator for scientific method of cultivation. Out of the selected households most of the cultivators applied seed at the recommended rate.

Usage of organic manure and fertilizers is yet another factor for development of agriculture. This input is used by most of the households included under study.

The success of paddy cultivation partly depends on the application of chemical fertilizers at the recommended dosage. It is reported that a major section of the households surveyed used chemical fertilizers, but not in the recommended dosage.

It is seen that in Palakkad and Ernakulam districts majority of households applied plant protection measures in HYV. At the same time in Wayanad district the same is done at local variety. There is a close relation between the source of seed and plant protection measures used.

Chapter 4

Summary of Findings

The data furnished in this report are collected through the field survey conducted on women participation in Kerala. The area covered under this study is Angamaly Block in Ernakulam District, Mannarkadu Block in Palakkadu District and Sulthan Bathery Block in Wayanad District. The summary of findings is given below.

1. In the study area there are very few women engaged in agricultural sector who are cultivators. Most of them are hired labourers.
2. The age and sex distribution of agriculturists shows that large portion belongs to 18 to 45 age group.
3. Among the women agriculturists ST percentage is high in Sulthan Bathery.
4. The cropping patterns of the study area comprise paddy, rubber, coconut, arecanut, plantain and banana.
5. It is seen that large number of agriculturists have below secondary level education.
6. Information on employment status of the women agriculturists highlights the severeness of partial unemployment/nominal employment.

7. Seed usage of the study area is found to be commonly limited to local varieties. Cultivators used seed at the recommended rate. It is reported that major section did not use chemical fertilizers at recommended dosage.

8. Application of plant protection measures differs from block to block.

9. It is seen that agricultural operations were done at proper time.

10. The training needs of the women agriculturists are not fully met.

CONCLUSION

Limitations of the agriculture sector

1. In Kerala, the average land holding per household is 80 Cents, of which cultivated land is 65 cents (excluding forest land, building area, courtyard and barren lands). This is far below the All India average. Because of this limitation, the percentage of families depending on agriculture alone is comparatively less than in the other states.

2. As the state comprises of low land, midland and high land, mixed cropping is widespread and as such crop-wise study on area irrigation, application of chemical fertilizers etc. is difficult.

3. Of the women agriculturists selected for the survey, women cultivators are less than 10%, leaving a majority as hired labour in agriculture and allied sectors. The agricultural labourers in the state do not depend on agriculture of any particular crop, or even in agriculture alone for their livelihood. They are not attached to any cultivator, or to any particular activity. Depending on the availability of work, their labour is spared to any employer, any activity etc.

4. Because of these limitations, the data collected from these families, on the seeds used, method of ploughing, use of fertilizers, treatment of seeds, irrigation methods, use of mechanical devices etc. may be related to the different cultivators for whom they have worked in the recent past and as a result the information collected from them on points like non-usage of fertilizers, non-treatment of seeds, non-usage of HYV seeds etc. are not comprehensive.

Table I - Demographic Particulars as on 1991

Name of Block	Area (Km^2)	No. of house-holds	Density of Population	Popultion		
				Male	Female	Total
Angamaly	203.19	35287	884	90448	89212	179660
Mannarkkad	482.35	42112	512	120308	126569	246877
Sulthan Bathery	761.90	51858	328	128649	121046	249695

Table II - Percentage Distribution of Person According to Activity Status as on 1991

Name of Block	Cultivator	Agricultural Workers	Others	Total
Angamaly	5.13	8.44	86.43	100
Mannarkkad	4.69	13.56	81.75	100
Sulthan Bathery	4.53	8.64	86.83	100

Table III - Male/Female Distribution According to Activity as on 1991

Name of Block	Cultivator			Agricultural Labour		
	Male	Female	Total	Male	Female	Total
Angamaly	86.39	13.61	100.00	57.07	42.93	100.00
Mannarkkad	88.10	11.90	100.00	63.68	36.32	100.00
Sulthan Bathery	87.89	12.11	100.00	65.22	34.78	100.00

Table IV - Demographic Particulars

Name of Block	No. of House holds Selected	Popula-tion	Distribution of Person/1000 population				
			Adult		Children		Total
			Male	Female	Male	Female	
Angamaly	1194	5844	387	367	139	107	1000
Mannarkkad	1237	7156	326	348	182	144	1000
Sulthan Bathery	1514	7119	348	368	149	135	1000

Table V - Distribution of Households According to Demography

Name of Block	No. of House Holds [with Women Agriculturists surveyed]	No. of Women Agriculturists in these house holds	Percentage Distribution of Social Group of Agricultural Families		
			SC	ST	Others
Angamaly	1194	1263	10.64	1.48	87.88
Mannarkkad	1237	1443	12.60	1.02	86.38
Sulthan Bathery	1514	1742	5.84	15.37	78.79

Table VI – Crop-wise Distribution of Area (%)

Name of Block	Net Cropped Area (Ha)	Net Area under major crops						
		Paddy	Rubber	Coco-nut	Areca-nut	Plantain	Banana	Others
Angamaly	718	19.99	17.26	31.05	4.93	7.63	5.65	13.49
Mannarkkad	1860	24.78	33.81	16.66	4.28	5.61	4.72	10.14
Sulthan Bathery	2436	20.30	2.43	15.99	7.46	1.06	1.48	51.28

Table VII - Distribution of Households According to Activity Status

Name of Block	No. of Women Agriculturists	Percentage Distribution of Activity Status of Women Agriculturists			
		Hired Labour	Cultivator	Supervisor	Others (cattle rearing, Poultry farming etc connected to agriculture more than one activity included to others)
Angamaly	1263	60.82	3.65	0.59	34.94
Mannarkkad	1443	48.47	8.82	2.71	40.00
Sulthan Bathery	1742	58.00	5.65	1.29	35.06

Table VIII – Age-wise Distribution of Women Agriculturists

Name of Block	Age Group		
	<= 45 years	46 - 60 years	> 60 Years
Angamaly	66.54	20.73	12.73
Mannarkkad	75.29	18.97	5.74
Sulthan Bathery	79.29	15.17	5.54

Table IX - Distribution of Women Agriculturists According to Educational Status (Per 1000 women)

Name of Block	Illiterate	Below Secondary	SSLC	Degree and above	Technical
Angamaly	202	621	144	25	8
Mannarkkad	148	523	251	58	20
Sulthan Bathery	195	524	249	26	6

Table X - Distribution of Women According to Employment Status of Women Agricultural Family (%)

Name of Block	Employment Status of Women of Agricultural Family		
	Unemployed (Employed in Agricultural sector for less than 15 days during reference year)	Employed	Under Employed
Angamaly	40.56	47.30	12.14
Mannarkkad	22.14	42.03	35.83
Sulthan Bathery	22.17	19.70	58.13

Table XI - Distribution of Women According to Employment Status of Women Agriculturists Family (in 1000)

Dist-rict	Employment Status								
	Unemployed (Age)			Full Time Employed (Age)			Under Employed (Age)		
	18-45 Years	45-60 Years	> 60 Years	18-45 Years	45-60 Years	>60 Yeas	18-45 Years	45-60 Years	>60 Yeas
EKM	28.72	4.37	7.47	29.31	13.40	4.59	8.51	2.96	0.67
PKD	18.75	1.46	1.93	30.00	10.40	1.63	26.54	7.11	2.18
WYD	19.53	1.91	0.73	14.08	3.81	1.81	45.68	9.45	3.00

Table XII - Distribution of Agriculturists According to use of Mechanical Devices and Variety of Seeds (Percentage)

Name of Block	Device Used		Variety of Seed	
	Mechanical Devices	Other Devices	Paddy HYV	Paddy Local
Angamaly	52.19	47.81	21.01	78.99
Mannarkkad	64.83	35.17	33.44	66.56
Sulthan Bathery	76.29	23.71	32.03	67.97

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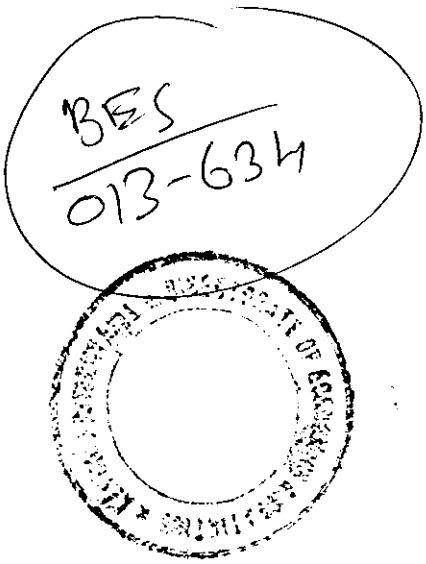
Table XIII - Distribution of Agriculturists Practicing Different Methods of Ploughing (Percentage)

Name of Block	Paddy			
	Tractor	Triller	Bullock	Mixed and Others
Angamaly	21.41	57.40	4.64	16.55
Mannarkkad	38.06	5.25	39.37	17.32
Sulthan Bathery	7.95	11.13	53.89	27.03

Table XIV - Reason for not using HYV

Name of Block	Crop I			
	Non Awareness	Non Availability	Not Suitable	Others
Angamaly	3.78	15.73	1.69	78.80
Mannarkkad	3.15	28.54	12.88	55.43
Sulthan Bathery	17.20	41.99	19.69	21.12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