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CHAPTER FIVE

LAND UTILIZATION AND CROPPING PATTERN

5.1 Introduction

Being a predominantly rural country with a large population, India's dependence on agriculture is very high in terms of overall economic development. The earlier chapters have exhibited the varied dimensions of Female work participation and sectoral characteristics of women workers. To provide a further insight into the problem, it is apt to have an idea about the status of Land Utilization, Agricultural Scenario and Cropping pattern in the study area. These aspects have both visible and invisible links with the status of women workers. Hence, an attempt has been made here to analyse the varied aspects of Land Utilization, Agricultural scenario and cropping pattern in Palakkad. Since more changes have come into existence after 1991 only two time points, namely 1991 and 2001 are considered for this analysis.

5.2 Land Utilization

Land is a finite resource. Its utilization depends not only on the physical parameters but also on the cultural, economic and demographic parameters. A number of land use classifications are in vogue. The earliest attempt on classification on land use on a scientific basis was made by Stamp (1939). Subsequently land use planning formed a vital component of Development Planning in all major countries. In India, the Indian Council of Agricultural Research adopted the traditional nine-fold classification of land utilization. It included the following categories:

1. Forest
2. Land put to non-agricultural use
3. Barren and Cultivable wasteland
4. Permanent pastures and grazing land
5. Miscellaneous tree crops
6. Cultivable waste
7. Fallow other than current fallow
8. Current fallow
9. Net Area sown

Subsequently advancement of techniques of analysis and availability of sophisticated, precise data such as satellite imageries resulted in land use classification consisting of I order, II order, III order and even IV order in certain categories,. These different hierarchical levels of land use types are more applicable in case of overall Development Planning, or in such cases of specialization such as Urban Planning. In the present case, however, the core theme is the women workers who are predominantly engaged in agricultural

activities. This being the case, the earlier nine-fold classification of land use is more pertinent to the present investigation than the detailed classifications. Hence, for the present analysis the traditional nine-fold classification of land use shown above is used. Table 5.1 exhibits the pattern of land utilization in Palakkad district during 1991 and 2001.

It may be noted that in 1991 the single largest type of land use is net sown area. In fact, nearly half of the total geographical area of Palakkad district has been under cultivation in 1991. This brings out the fact that agriculture is the major activity in this region. Forests ranked second during the period. The study area has nearly the optimal level of forests. About 31 percent of the total geographical area is covered by different categories of forests. This means that only 20 percent of the land is devoted to all other categories of land use. Among the other types, land under non-agricultural use has a share of 7.3 percent followed by cultivable waste (5.2%). The very low share of 1 to 2 percent for current fallow and other fallow type of land use indicates that the region has almost a steady agricultural scenario, without much fluctuation. Other types of land use are of lesser significance.

Table 5.1
Palakkad District – Land Utilisation Pattern
1991 and 2001

Sl. No	Description	1990-1991	2000-2001
		In Percentage	
1	Total Geographical Area	100	100
2	Forests	31.0	31.0
3	Land put to Non-Agricultural Use	7.3	12.0
4	Barren and Uncultivable Waste land	2.3	0.8
5	Permanent Pastures and grazing land	0.02	0.0
6	Miscellaneous Tree Crops	1.6	0.4
7	Cultivable Waste	5.2	4.0

8	Fallow other than Current Fallow.	1.3	2.4
9	Current Fallow	2.0	2.8
10	Net Area Sown	49.4	46.5

Source: Directorate of Economics and Statistics, Trivandrum

In 2001 there is no change in the order of land use types. Net sown area continued as the first ranking land use type but there is a slight decrease in the share (46.5 %). Area under forests remained the same. Land under non-agricultural land use had 12 percent share followed by cultivable waste (4 percent). A marginal increase is noticed in both fallow and current fallow lands.

Between 1991 and 2001 the most notable change is a sharp increase in area under non-agricultural land use. A notable aspect is that all the other types of land use contributed to this sharp increase. It is quite logical to expect an increase in the land under non-agricultural uses, mainly due to settlements, transport, industry and other activities associated with population growth. A specific factor contributing to this increase is the real estate boom funded by money remitted by workers from Gulf region.

The negative change is seen in four categories of land use. They are Barren and uncultivable wasteland, Permanent pastures and grazing land, Miscellaneous tree crops, and Cultivable waste. Considerable reduction is seen in the case of barren and uncultivable wasteland whose share is reduced from 2.3 to 0.8 percent. Miscellaneous tree crops and cultivable waste also declined by 1.2 percent each. Most of these lands are used for non-agricultural purposes.

The discussion about the pattern of land utilization has brought out the fact that net sown area has declined. Though the decline is only comparatively less, in real terms, this has a different effect on the local society. It was also noticed in chapter three that women work force is more in agricultural sector. Therefore it

becomes essential to have an in depth analysis of the agricultural scenario of Palakkad.

5.3 Agricultural Scenario of Palakkad

The agricultural sector of Kerala since Independence has undergone several phases of change. During 1950s and 1960s the major emphasis of public policy in the State was the expansion of rice cultivation. The area under rice and the productivity of rice had been increasing quite rapidly during these decades. From the beginning of the seventies the area under rice production began to decline steadily for several reasons. With the advent of the green revolution during the late 1960s rice supply in the country as a whole increased highly and the scarcity situation in Kerala quickly disappeared. Zonal restriction on rice trade was removed and private trade in rice flourished. Ever since then the price level of rice has remained almost stable. However, the steady increase in wage rates kept on in rice cultivation and in the agricultural sector as a whole. Hence agriculture became an unfavourable economic activity due to low profit.

Agriculture began to experience shortage of labour particularly for traditional items of work as tilling, ploughing, weeding and harvesting. There took place an increasing process of shift of land from annual and seasonal crops to perennial tree crops such as coconut and rubber and from agriculture to non-agricultural uses.

The salient features of Kerala agriculture after the late 1970s are predominance of cash crops, homestead system of cultivation, inter-cropping of annual and perennial crops, shrinkage of area under rice crop and dominance of small holders. The fall in area under cultivation of many crops is mainly due to increased cost of production and shortage of farm workers. The land area not cultivated either lies fallow or shifted to non-agricultural uses. During the past

three decades the agricultural sector of Kerala has undergone wide-ranging changes in terms of ownership of land, cropping pattern, cultivation practices, productivity and intensity of cultivation. In earlier periods the choice of cropping pattern was guided by agronomic considerations and consumption needs of farmers, but now it seems that market forces mainly determine the emerging trend.

Size of land holding is yet another factor. Land holdings in Kerala are very small. The average size of land holding now is 0.27 hectares. 62.97 lakh landholders hold it. Land under food crop cultivation has also been declining even though there is an ever increasing population. The land under paddy cultivation in Kerala reduced from 8.7 lakh hectares in 1971 to 2.9 lakh hectares in 2005. This has significantly reduced production of paddy as well as employment in agriculture.

However, this type of change is prominent in Palakkad only after late Eighties. The agricultural scenario of Palakkad in the Seventies was distinctly different from other districts in the sense that agriculture dominated well above all other economic activities. The reclamation of land for other purposes was much less. The district is blessed not only with a good flow of river/ stream water but also with ground water. Among the districts of Kerala Palakkad has the maximum ground water recharge per year and the utilisable ground water recharge for irrigation (Tables 5.3 and 5. 4.). When comparing ground water potential block wise it is clear that Alathur, Palakkad and Kuzhalmannam which are the major areas of paddy cultivation have a very high potential recharge for irrigation. Lowest potential ground water recharge for irrigation is in Thrithala followed by Pattambi and Sreekrishnapuram. These are the blocks where paddy is comparatively of lesser importance. Thus there is a positive relationship between paddy and potential ground water availability for irrigation.

In addition to a positive potential for ground water recharge, Palakkad district is blessed with irrigation facilities also. Dams have been constructed across almost all the important tributaries of the Bharathapuzha to provide irrigation facilities. The district has some key irrigation projects and dams at Malampuzha, Walayar, Mangalam, Gayatri, Chittur, Meenkara, Pothundi

Table 5.2
Ground Water Potential for Kerala

	Total Ground Water Recharge/Year	Utilisable Ground Water recharge for irrigation / Year	% Utilisable Ground Water recharge for irrigation / Year
DISTRICTS			
Kasargod	423.06	359.6	5.46
Kannur	733.09	623.12	9.46
Wayanad	424.55	360.87	5.48
Kozhikode	520.09	416.07	6.32
Malappuram	685.56	548.46	8.33
Palakkad	885.59	752.77	11.43
Thrissur	835.24	709.94	10.78
Ernakulam	750.65	638.06	9.69
Idukki	458.03	389.33	5.91
Kottayam	473.98	402.89	6.12
Alappuzha	572	486.21	7.38
Pathanamthitta	373.92	317.83	4.83
Kollam	464.95	371.96	5.65
Thiruvananthapuram	299.57	209.69	3.18

Table 5.3
Ground Water Potential for Palakkad

	Total Ground Water Recharge/Year	Utilisable Ground Water recharge for irrigation / Year	% Utilisable Ground Water recharge for irrigation / Year
Blocks			
Alathur	113.15	96.18	12.78
Attappady	81.27	69.08	9.18
Chittur	69.7	59.25	7.87
Kollengode	93.02	79.07	10.50
Kuzhalmannam	104.63	88.94	11.82

Mannarkkad	53.7	45.65	6.06
Nenmara	79.44	67.52	8.97
Ottappalam	51.79	44.02	5.85
Palakkad	106.97	90.92	12.08
Pattambi	49.56	42.13	5.60
Sreekrishnapuram	50.7	43.1	5.72
Thrithala	31.66	26.91	3.57
Palakkad District	885.59	752.77	100

Source: Groundwater Information Booklet, Palakkad District, Kerala.

and Kanjirapuzha. The total ayacaut of all these projects is 131506 hectares. About 30 percent of the net sown area is irrigated. Hence, agriculture in Palakkad was a profitable economic activity until early eighties.

Serious impact of Gulf boom has started in Palakkad also after mid eighties. Like in other parts of Kerala, the availability of highly paid unskilled labour in the Gulf region reduced the availability of agricultural workers which increased the labour shortage. Increase in the wages of agricultural labourers, increase in the cost of fertilizers, etc., lead to an increase in the cost of production leading to a reduction in the profit from paddy cultivation. Due to improvement in the literacy rate and the education level of the new generation interest in agriculture has also been reduced considerably. Along with this the Gulf boom increased the land value in all parts of Kerala. Hence farmers started keeping the land fallow and in course of time they started cultivating other crops. This is mainly because land value is higher in those areas with other crops than paddy fields.

All the above-mentioned reasons lead to change in cropping pattern and to be more specific, a decrease in area under paddy, which ultimately leads to decrease in the labour days. Majority of the labourers who are left in the scene due to this are females and this has affected their economic status. Hence change in cropping pattern is one of the most important reasons for the decrease in the labour days of female agricultural labourers. To substantiate the above mentioned facts

cropping pattern in Palakkad for two periods is given in the next part of this study. The changes in the agricultural scenario in the study area are more prominent in the early nineties. Hence the two periods of 1991 and 2001 are selected for analysis.

5.4 Cropping Pattern

Being the major paddy cultivating area Palakkad is the provider of food to the people of the State. The decreasing trend in paddy area is a matter of concern for the State as a whole. This section deals with the details of the cropping pattern of the district for two time points of 1991 and 2001 which shows a considerable reduction in area under paddy cultivation. Decrease in paddy area leads not only to the food insecurity but also affects the women agricultural labourers by lowering their labour days. Being a labour intensive crop, rice provides more employment, especially to women. At the same time higher wages of the labourers makes it non-profitable to the farmers. Hence they prefer non-labour intensive crops like coconut, rubber, etc. The details of this change in cropping pattern in Palakkad is given in the following part of this chapter.

5.4.1 Cropping Pattern- 1991

5.4.1.1 Paddy-1991

In 1991 Palakkad had about 45.8 percent of the total cropped area under paddy. The blocks in the highland area of the district, namely Attappady and Mannarkkad have lesser areas of paddy (Table 5.2). Paddy cultivation in Attappady was only 0.6 percent of the total cropped area while in Mannarkkad it was about 17.1 percent (Fig. 5.1). Other blocks like Thrithala, Pattambi and Srikrishnapuram in the western part of the block also had less area under paddy than that of the district average. Kuzhalmannam had the largest area under paddy

and here, more than three-fourths of the total cropped area was under paddy cultivation. Nenmara, Kollengode and Malampuzha also have more than two-thirds of the total cropped area under paddy.

5.4.1.2 Coconut-1991

About 16.1 percent of the area was under coconut cultivation in Palakkad in 1991 (Table 5.2). The western part of the district was leading in coconut cultivation. The major blocks were Thrithala (29.6), Pattambi (27.1) and Mannarkkad (20.8). Lowest share of coconut cultivation was in Kuzhalmannam with only 7.7 percent area (Fig. 5.2). Nenmara and Kollengode in the southeast also have a comparatively lower area under coconut cultivation. This shows that the block where paddy is prominent, coconut cultivation is less.

Table 5.4
Palakkad District – Cropping Pattern 1991 (%)

Blocks	Paddy	Coconut	Rubber	Banana	Vegetables	Cashew	Pepper	Mango	Others
Alathur	51.73	14.56	10.83	1.93	1.02	1.61	1.04	2.80	14.48
Attappady	0.58	14.96	3.55	7.45	3.20	2.84	5.17	1.17	61.08
Chittur	52.53	15.83	0.06	0.59	5.98	0.12	0.05	1.27	23.57
Kollengode	67.04	11.41	0.00	0.29	0.72	0.15	0.05	2.02	18.32
Kuzhalmannam	75.37	7.68	0.20	1.05	0.73	1.30	0.19	1.98	11.50
Malampuzha	65.22	11.22	4.52	1.88	0.81	0.50	0.14	2.53	13.18
Mannarkkad	17.13	20.77	36.15	7.88	0.13	3.20	2.51	1.99	10.24
Nenmara	67.69	10.05	7.94	0.31	0.68	0.44	0.20	1.32	11.37
Ottappalam	46.89	16.68	5.65	3.07	1.18	3.93	1.26	4.69	16.65
Palakkad	55.63	13.09	10.56	3.69	0.60	2.34	0.72	2.73	10.64
Pattambi	38.80	27.14	2.62	2.89	1.53	2.88	2.65	6.16	15.33
Srikrishnapuram	33.80	16.69	19.54	4.63	0.93	4.53	3.31	4.44	12.13
Thrithala	33.07	29.60	2.37	2.63	0.85	3.84	1.79	5.79	20.06
PALAKKAD DT	45.77	16.10	10.08	3.18	1.35	2.11	1.46	2.86	17.09

Source: Directorate of Economics and Statistics, Trivandrum

5.4.1.3 Rubber-1991

In Palakkad 10.1 percent of the total cropped area was under rubber cultivation (Table 5.2). It may be noted that rubber is prominent only in certain parts of the district especially in those regions like Mannarkkad where undulating topography is prominent. More than one-third of the total cropped area of Mannarkkad was under rubber cultivation (Fig. 5.3). The next important block namely Srikrishnapuram had only 19.5 percent area under rubber. The other larger producers Alathur and Palakkad have 10.8 percent and 10.6 percent area respectively. The reason for this vast area under rubber cultivation in Mannarkkad is mainly due to the terrain and favourable climatic conditions.

5.4.1.4 Other Crops-1991

Among the other crops only banana is cultivated in more than 3 percent of total cropped area (Table 5.2). Major banana cultivating blocks are Mannarkkad (7.9%) and Attappady (7.5%). Mango (2.9 %), cashew (2.1 %), pepper (1.5%) and vegetables (1.4%) are the other important crops cultivated in Palakkad in 1991. Other than these crops arecanut, cotton, groundnut and sugarcane are some of the crops cultivated in the study area. Cotton and tea are important crops of Attappady. Groundnut and sugarcane are also cultivated but only to a limited extent. Kollengode, Malampuzha and Nenmara also have groundnut cultivation. Arecanut is cultivated in almost all the blocks but the area under cultivation is less compared to the major crops.

5.4.2 Cropping Pattern -2001

5.4.2.1 Paddy-2001

Nearly 41.7 percent of the total cropped area of the district was under cultivation of paddy in 2001. Kollengode and Kuzhalmannam have more than two-thirds of the total area under paddy (Table 5.3). Malampuzha and Nenmara also have more than 60 percent of the area under paddy. Attappady had the lowest share of paddy due to the unfavourable terrain of the region as in the previous period (Fig. 5.1). Mannarkkad also had very less area under paddy because major portion of the block has an undulating terrain. Southern and southeastern parts of the district are important in paddy cultivation.

5.4.2.2 Coconut-2001

Out of the total cropped area 18.2 percent area comes under coconut cultivation in 2001 (Table 5.3). Thrithala leads in coconut cultivation with about 30.4 percent area. Pattambi, Mannarkkad and Ottappalam are the other important blocks in coconut cultivation with 27.4 percent, 23.9 and 20.5 percent respectively (Fig. 5.2). Similar to 1991 Nenmara and Kuzhalmannam were the blocks with lower coconut cultivating area in 2001 also.

5.4.2.3 Rubber -2001

Rubber is another important crop of Palakkad with about 12 percent area. Mannarkkad leads in rubber cultivation with 36.7 percent area (Table 5.3). Since geographical conditions are suitable for rubber, it is the most important crop of Mannarkkad. Srikrishnapuram with 20.3 percent, Palakkad with 16.4 percent and Alathur with 13.4 percent are the other blocks important in rubber cultivation (Fig. 5.3). In Chittur and Kollengode, area under rubber cultivation is very little.

Table 5.5
Palakkad District– Cropping Pattern 2001 (%)

Blocks	Paddy	Coconut	Rubber	Banana	Vegetables	Cashew	Pepper	Mango	Others
Alathur	48.41	15.37	13.41	1.17	1.94	1.39	1.41	3.72	13.18
Attappady	0.21	17.84	4.18	8.19	8.77	3.33	6.79	2.95	47.62

Chittur	48.56	18.62	0.07	1.47	0.59	0.11	0.04	1.49	29.05
Kollengode	67.24	16.65	0.01	0.46	0.95	0.21	0.09	2.80	11.59
Kuzhalmannam	71.87	10.75	0.56	0.36	1.58	1.10	0.47	2.28	11.03
Malampuzha	62.59	13.38	6.98	1.31	1.78	1.35	1.57	2.15	8.89
Mannarkkad	16.64	23.85	36.71	6.54	0.70	3.05	2.70	1.89	7.92
Nenmara	60.26	10.60	11.00	0.83	1.94	0.43	0.37	1.93	12.64
Ottappalam	34.17	20.48	8.96	2.91	2.61	4.14	1.82	4.80	12.12
Palakkad	49.57	16.97	16.35	1.78	1.52	1.23	0.95	2.47	9.16
Pattambi	34.85	27.36	5.30	3.39	2.32	3.40	3.58	5.80	14.00
Srikrishnapuram	29.63	17.65	20.25	6.58	1.88	4.34	3.70	4.92	11.05
Thrithala	29.81	30.38	4.94	5.81	1.24	2.19	2.26	4.81	18.56
Palakkad District	41.74	18.16	12.03	3.22	2.37	2.03	2.04	3.09	15.32

Source: Directorate of Economics and Statistics, Trivandrum

5.4.2.4 Other Crops -2001

Other crops which are not so important in any of the blocks, but at the same time almost uniformly distributed in all the blocks are banana, vegetables, cashew, mango and pepper. In 2001 sugarcane, groundnut and cotton are also cultivated in Chittur. Groundnut and cotton is important in Attappady also. Attappady is also important in other plantation crops like tea, cardamom, coffee etc.

Table 5.6
Palakkad District – Changing Cropping Pattern: 1991 – 2001

BLOCKS	Paddy			Coconut			Rubber		
	1991	2001	Change	1991	2001	Change	1991	2001	Change
Alathur	51.73	48.41	-3.32	14.56	15.37	0.81	10.83	13.41	2.58
Attappady	0.58	0.33	-0.25	14.96	17.84	2.88	3.55	4.18	0.63
Chittur	52.53	48.56	-3.97	15.83	18.62	2.79	0.06	0.07	0.01
Kollengode	67.04	67.24	0.20	11.41	16.65	5.24	0.00	0.01	0.01
Kuzhalmannam	75.37	71.87	-3.50	7.68	10.75	3.07	0.20	0.56	0.36
Malampuzha	65.22	62.59	-2.63	11.22	13.38	2.16	4.52	6.98	2.46

Mannarkkad	17.13	16.64	-0.49	20.77	23.85	3.08	36.15	36.71	0.56
Nenmara	67.69	60.26	-7.43	10.05	10.60	0.55	7.94	11.00	3.06
Ottappalam	46.89	40.16	-6.73	16.68	20.48	3.80	5.65	8.96	3.31
Palakkad	55.63	49.57	-6.06	13.09	16.97	3.88	10.56	16.35	5.79
Pattambi	38.80	34.85	-3.95	27.14	27.36	0.22	2.62	5.30	2.68
Srikrishnapuram	33.80	29.63	-4.17	16.69	17.65	0.96	19.54	20.25	0.71
Thrithala	33.07	29.81	-3.26	29.60	30.38	0.78	2.37	4.94	2.57
Palakkad District	45.77	41.74	-4.03	16.10	18.16	2.06	10.08	12.03	1.95

5.4.3 Changes in Cropping Pattern

Two crops namely paddy and coconut are more common in all the blocks. Along with that rubber is also getting important because of the changing pattern. Each of these three crops together have more than two-thirds of the total cropped area of each block except Attappady. All the other crops have less than 5 percent of the total cropped area each. Hence details of only the changing pattern of paddy, coconut and rubber is given here.

5.4.3.1 Paddy

A negative change is the common trend observed in the district and it is about 4 percent (Table 5.4). Except Kollengode, all the blocks show a negative change. In Kollengode a mere 0.2 percent increase in paddy cultivating area is seen. Highest negative change of 7.4 percent is observed in Nenmara. Palakkad with 6.1 percent Ottappalam with 4.7 and Srikrishnapuram with 4.2 percent are the other blocks which recorded major changes. Chittur and Pattambi also record comparatively higher changes. Major reason for the change mentioned by the farmers is the non profitability of paddy cultivation. Due to higher wages of the labourers, higher cost of fertilizers and non- availability of irrigation water in time, paddy cultivation create problems for the farmers. Hence they have a tendency to change paddy to perennial crops like coconut, rubber, etc. or to keep the land fallow.

Other reasons mentioned by the farmers during the discussion regarding the conversion of paddy lands were that the converted marginal lands were lying in the border area, lack of irrigation facilities, shade of trees, soil erosion, etc. which made these lands uneconomic for paddy cultivation. Also low yield from paddy, risk potential inherent in paddy cultivation and the long run benefit of cash crops forced the farmers for conversion. Labour shortage, engagement in other activities and increase in land value were also cited by the farmers as reasons for land conversion.

The price of land under food crops like paddy is relatively lower than that of land under commercial crops. Department of Economics and Statistics estimated the per hectare average price of paddy fields in Kerala during 1990-91 was Rs.10190 while for coconut grooves it was as high as Rs.38190 (Govt. of Kerala 1991). Thus the mere conversion of food crops to cash crops enhances the property value of farmers more than three fold. Hence the comparatively lower price of land under food crops leads to its widespread conversion of land for non- agricultural purposes. Land put to non agricultural use in the district has increased from 7.2 percent to 12 percent during the period 1990-01 to 2000-01 and it can be reasonably asserted that a major portion of it was previously used for the cultivation of paddy. The demand for land is more for Special Economic Zones, IT parks, tourist resorts, shopping complexes and also for transportation networks. These ever-increasing demands for land are met mainly from the rice fields which seem to be the cheapest available land.

Another reason for the decreasing land under paddy cultivation is the shortage of farm labourers during peak seasons and the rapid increase in their wages. These induce farmers to convert their lands from the cultivation of highly labour intensive food crops to commercial crops for which labour requirements are

comparatively lower. Yet another factor that favours shift towards commercial crops is the frequency of yields. From the cultivation of paddy farmers get income only one to three times in a year depending upon the number of times the fields are sown. On the other hand, perennial crops like coconut and rubber provide income to the cultivators at much more frequent regular intervals for a long period.

5.4.3.2 Coconut

A very clear positive trend towards coconut is seen in the district with 2.1 percent increase in the study area. Kollengode with 5.2 percent increase has the highest change observed and 0.2 percent increase is in Pattambi which is the lowest (Table 5.4). Palakkad, Ottappalam, Mannarkkad and Kuzhalmannam have above 3 percent increase in coconut cultivating area than the previous period.

5.4.3.3 Rubber

Area under rubber is prominent in certain blocks like, Mannarkkad, Srikrishnapuram, Alathur and Palakkad in both 1991 and 2001 (Table 5.4). Positive change is the trend observed for all the blocks but the district level change is only 2 percent. One noticeable fact is that the highest increase (5.8%) is observed in Palakkad making it third largest block in rubber cultivation, replacing Alathur to the fourth position. Ottappalam (3.3%) and Nenmara (3.1%) are the other blocks with higher increase. Chittur and Kollengode with very low percent area experienced no changes during the period of study.

5.4.3.4 Other Crops

Other crops mentioned here are all crops other than paddy, coconut and rubber. In addition all those which are cultivating in Palakkad coming under other crop category. There is not much change is observed in the case of other crops like that of the major crops like paddy, coconut and rubber.

Table 5.7
Paired Samples Correlations

Variables		N	Correlation	Sig.
Pair 1	Female Agricultural Labourers & Area under rice	13	.702	.007
Pair 2	Female Agricultural Labourers & Area under coconut	13	-.734	.004

The paired t test gives a positive relationship between area under rice and women agricultural workers and it is significant at 7% level of significance. In addition, a negative relationship between area under coconut and women agricultural workers is the result obtained at 4% level of significance. These two analyses indicate that in areas where rice cultivation is prominent, women gets more labour and at the same time if coconut is the crop chances of getting labour is less. Hence changing cropping pattern from rice to coconut or rubber is not conducive for women workers and the food security of the region. In Palakkad, which is the granary of the state, the decrease in area under rice will be a threat to the food security of the state.

5.5 Conclusion

The discussion given so far pertains to the cropping pattern and change over the decade, which give a picture depicting the decreasing trend in paddy and increasing area of coconut and rubber. The preference for rubber is prominent in certain areas where the terrain and climate is more favourable. These two perennial crops are not labour intensive; hence, the preference for the cultivators, at the same time this leads to a decrease in labour days for the landless agricultural labourers. The various aspects so far provide an idea about the decreasing work participation