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#### Enathimelpakkam revisited: 1993-94

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# **ENATHIMELPAKKAM REVISITED 1993-94**

# CHAPTER I

# GEOGRAPHICAL AND DEMOGRAPHIC FEATURES OF THE VILLAGE

#### LOCATION OF THE VILLAGE

Enathimelpakkam is predominantly an agricultural village located in the Gummidipundi taluk of Chengalpattu-MGR district, Tamil Nadu. It is situated at about 50 kilometers north of Madras city and 3 to 4 kilometers east of Gummidlpundi town. The settlement pattern of the village consist of a separate caste quarters and a scheduled caste colony. But the latter is contiguous to the former. Compared to the 1985-86 survey, in 1993-94 the village showed signs of prosperity in terms of new houses, temples, school and panchayat office buildings, overhead tanks for drinking water purposes, telecommunication towers, phones and bus facilities and acquisition of television sets by at least one-third of the households. The increased number of tractors and pumpsets acquired by the farmers had facilitated increased cultivation of paddy.

#### METHODOLOGY OF THE STUDY

The methodology of the study consisted of census and sample survey of households conducted in the village during the agricultural year (July to June) of 1993-94. For conducting sample survey, we first identified the households on the basis of "major source of income" and then stratified them based on the "size of their land, ownership". This process enabled us to divide the households into 9 categories as against 8 categories in 1985-86. They are: 1) big farmers (owning 10 acres and above), 2) medium

farmers (owning between 5.01 and 9.99 acres), 3) small farmers (owning between 2.51 and 5.00 acres), 4) marginal farmers (owning upto 2.50 acres), 5) pure tenants (who depended mainly on the cultivation of leased-in lands), 6) agricultural labourers, 7) non-agricultural workers with regular salaried employment, 8) non-agricultural casual workers and 9) artisanal and service households. We found no household in the medium farmer category in 1993-94. And the new category added in 1993-94 was 'non-agricultural casual worker households'. Like in 1985-86, the "household" continued to be the unit of analysis even in 1993-94. We selected 40 households for our sample survey which constituted about 30 per cent of the total households in the village in 1993-94. However, the numbers of the sample households across the categories do not maintain the 30 per cent to their total size for reasons of accessibility. Nevertheless, for the village level generalisations, we have only used weighted averages.<sup>1</sup> And to the extent possible, the data are made comparable with that of the data gathered for the year 1985-86.

#### THE DEMOGRAPHIC SCENARIO OF THE VILLAGE

The relevant demographic details are given in Table 1. Between 1985-86 and 1993-94 while the number of households in the village had gone up from 106 to 134, the number of persons living in them had increased from 486 to 571. The annual rate of growth of village population between these two years works out to 2.18 per cent. This is considerably higher compared to the annual rate of growth of population observed at the state level (1.54 per cent) between 1981 and 1991. But the rate of growth of population at the village level was lower compared to the rate of growth of population in the district (2.87 per cent) between 1981 and 1991<sup>2</sup>. However, the village level rate of growth of population between 1985-86 and

1993-94 was also considerably higher compared to its own taluk's rate of growth of population (1.70 per cent) between 1981 and 1991. The higher rate of growth of population observed in the village between 1985-86 and 1993-94 was brought about mainly by the in-migration of 10 SC agricultural labour households into the village. They added to the village population by more than 30 during the 8 year period under consideration. Out of the total village population of 571 in 1993-94; 291 were males and 280 were females. The sex-ratio in the village thus works out to 962.20 in 1993-94 and was not much different from its own taluk (967.87), district (960) and the state (974) level figures in 1991. Hence the unfavourable sex-ratios were found at all levels of the state down to the village in the early 1990s. But, in the village itself there had been a considerable improvement in the sex-ratios over the years.

#### TABLE 1

			Villa	Taluk			
		1981	1985-86	1991	1993-94	1981	1991
1.	Number of households	115	108	130	134	25814	32688
2.	Population a) Total	492	488	569	571	122613	143513
	b) Males	257	253	293	291	62263	72928
	c) Females	235	233	276	280	60350	70585
3.	Number of literates					3 <b>9</b> 5	
	a) Total	244	259	300	307	39032	59869
	b) Males	152	162	183	179	27193	37993
	c) Females	92	97	117	128	11839	21876
4.	Percentage of literates				7		
	to total population	49.59	53.29	52.72	53.76	31.83	41.72
5	Scheduled caste				27		
	population	203	223	244	234	30819	37427
6.	Percentage of Scheduled caste population to the						
	total population	41.26	45.88	42.88	40.98	25.14	26.08
7.	Scheduled tribe population		-	<u></u>	6	2978	3120
8.	Percentage of Scheduled tribe population to the						
	total population	13 <del>-12</del>	-	<del>,</del> #	1.05	2.43	2.17
9.	Sex-ratio	914.39	920.95	941.98	962.20	969.27	967.87
10	. Percentage change of total population from						
	the previous year	28.46 (between	1.23 (26.89%	15.65 (bet	17.49 (bet	18.70	17.04
		1971 & 1981)	1971 & 1986)	ween 1986 & 1991)	1986 & 1993)		

# Changes in Demography and Literacy Levels between 1981 and 1993 in Enathimelpakkam village and Gummidipundi Taluk

Sources: 1) Census of India, 1981 Series 20, Tamil Nadu, District Census Handbook, Part XIII B, Village and Townwise primary Census Abstract, Chenglepattu District.

- 2) Data for 1985-86 are from field survey (census)
- 3) Village Primary Census Abstract, Gummidipundi Taluk, 1991

4) Data for 1993-94 are from field surveys (census).

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Around two-fifths of the population in the village continued to belong to the scheduled castes. This was far higher compared to the percentages of total population belonging to the scheduled castes at the taluk (26 per cent), district (25.97 per cent), and state (19.18 per cent) levels in 1991. The literacy rate in the village hovered around 50 per cent in both points of time. While this was considerably higher compared to its own taluk figure of 41.72 per cent in 1991 it was considerably lower compared to its own district's and state's respective figures of 66.38 per cent and 62.66 per cent in 1991. As against no scheduled tribe person living in this village earlier, there were six persons belonging to this category living in this village in 1993-94. And, they hardly account for one per cent of the total village population in our resurvey year.

The caste wise demographic details are presented in Table 2. There were 11 caste groups living in the village in 1993-94. In the caste hierarchy while Brahmins, Pillals, Mudaliars and Chettlars occupy the top five ranks respectively, the scheduled castes and tribes occupy the bottom ranks. And, all other five caste groups come in between. Only Mudaliars and Chettiars emerge in our survey as agricultural castes in terms of land ownership and cultivation in the village. The scheduled castes had been providing agricultural labour for decades in the village. The Chettiars, who were originally traders had converted to agricultural activities over the years and were working either as cultivators or as agricultural labourers in the village in 1993-94. Only two Chettiar households in the village were pursuing their traditional occupation of trading.

#### TABLE 2

#### Caste and Demography in Enathimelpakkam in 1993-94

Cast	e group	Number of hou- seholds	Number of persons	Average famiły size	Number of eamers	Number of depen- ents	Eamer- depen- dents ratio	Number of agl. labourers	Number of non- agl. workers	Number of literates
1.	Mudaliars	29	147	5.07	48	99	0.48	3	19	98
2.	Naickers	р <del></del>	-	<u></u>	—	-	-	÷	. <del></del> 0	(3.38)
3.	Reddy	1 <u>2</u> 17 #5		2 <del></del>	2 <del></del>		-	2 <del></del> 2		1.1

4.	Pillai	1	7	7.00	2	5	0.40	2-0	-	5 (5.0)
5.	Nadars	1	6	6.00	3	3	1.00	1	2	4 (4.0)
6.	Dhobi		-	<b>_</b> 0	~			-	~	-
7.	Barber	1. State	(Jacob)		<u> </u>	***	-	53 <del>-3</del> 7	-	3 <del></del>
8.	Scheduled Caste	s 64	234	3.66	122	112	1.09	88	10	90 (1.41)
9.	Scheduled Tribes	s 1	6	6.00	2	4	0.50	2	-	2 (2.0)
10.	Chettiars	30	138	4.60	54	84	0.64	14 •	19	85 (2.83)
11.	Acharis	3	19	6.33	7	12	0.58		6	14 (4.66)
12.	Devars	1 	4	4.00	3	1	3.00	-	3	3 (3.00)
13.	Gounder	2	2	1.00	2	-	2.00		2	4 (4.00)
14.	Brahmins	1	5	5.00	1	4	0.25		1	4 (4.00)
15.	Naidus	1	3	<b>3.0</b> 0	2	1	2.00	-	2	2 (2.00)
TO	TAL	134	571	4.26	246	325	0.76	108	64	30 <b>7</b> (2.29)

Source : Field Survey (Census)

Note : \* Figures in parantheses are the numbers of literates per household in each caste group of households.

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Demographically, while the scheduled castes accounted for two-fifths of the total village population, the remaining 10 castes accounted for the rest of the population in the village in 1993-94. The average family size in the village was 4.26 in 1993-94 as it was in 1985-86. Across the castes, whereas the Pillais maintained the largest family, Gounders, the smallest. The demographically dominant scheduled castes maintained largely nucleus families of three to four persons. The earner-dependent ratio (earner + dependents) in the village worked out to 0.76 in 1993-94 indicating the larger number of dependents compared to earners. Again, across the castes while the scheduled castes provided the largest number of agricultural laborers, the upper caste Mudaliars and Chettiars provided the largest number of (38 out of 64) non-agricultural workers in the village. However, it is important to note that the scheduled castes provided only 10 non-agricultural workers out of the 64 in 1993-94. And the table reveals a close correlation between the numbers of non-agricultural workers and the numbers of literates per household, at least, across the demographically dominant castes in 1993-94.

The demographic details of the different occupational groups in the village in 1993-94 are given in Table 3. Between 1985-86 and 1993-94 while one service household had left the village, four medium farmers joined the other categories in the village. Whereas one medium farmer moved upward to the big farmer category by acquiring additional land, the remaining three medium farmers became small farmers by selling some of their lands. Thus the depeasantisation process was restricted to the category of medium farmers between the two survey years in the village. The numbers of all other categories of households had increased without any household leaving them. Again, between 1985-86 and 1993-94 both the average family size and the number of literates per household at the village level had declined from 4.58 to 4.26 and from 2.44 to 2.29 respectively. But these declines had contrasting implications for the incomes earned by different groups households in the village.

TABLE 3

# Demographic Characteristics by Occupational Categories in Enathimelpakka (n 1993-94

Category of households		Number of house- hoids	Number of persons	Average family size	Number of eamers	Number of dependents	Eamer - dependent ratio	Number of literates	Literates per house- hold
1.	Big farmers	8	69	8.63	21	48	0.44	53	6.62
2.	Medium farmers	-	8 <del></del>	•••	- 144	-	-	-	-
З.	Small farmers	9	45	5.00	14	31	0.45	. 32	3.55
4.	Marginal farmers	22	90	4.09	33	57	0.58	58	2.64
5.	Pure tenants	20	88	4.40	44	44	1.00	41	2.05
6.	Agricultural labourars	43	159	3.70	<b>8</b> 3	76	1.09	56	1.30
7.	Non-agricultural workers with regular salaried employment	6	22	a 3.67	9	13	0.69	17	2.83
8.	Non-agricultural casual workiers	24	85	3.54	37	48	0.77	41	1.71
9.	Artisanal and service household	2	13	6.50	5	8	0.62	9	4.5
	Total	134	571	4.26	246	325	0.76	307	2.29

Source : Field survey (census).

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Across the categories as against the big farmers maintaining the largest average family sizes the non-agricultural casual workers maintained the lowest average family sizes in the village in 1993-94. It is encouraging that marginal farmers, agricultural labourers, non-agricultural workers with regular salaried employment and non-agricultural casual workers accounting for about 71 per cent of the households maintained small families with only three to four persons living in each of them. Hence majority of the households in the village enjoyed this advantage of low average family sizes in 1993-94. As far as earner-dependent ratios are concerned, the village was at a disadvantage in 1993-94 compared to 1985-86. Between these two years it declined from 1.64 to 0.76 indicating the increase in dependents in 1993-94. Across the categories, with the exception of pure tenants and agricultural labourers, all others experienced lower than even village average earner-dependent ratios in 1993-94. Hence advantage of small families was cancelled by the increase in dependents in many households in the village in 1993-94. As far as literacy rates over the categories are concerned, with the exception of landless agricultural labourers and non-agricultural casual workers, who accounted for half of the households in the village, all other households enjoyed higher than the village average literacy rates in 1993-94. Nevertheless, the lower literacy levels prevailing among half of the households had implications for the wage incomes earned by them.

Changes in the composition of village workforce<sup>3</sup> over the years are shown in Table 4. Between 1985-86 and 1993-94, while the percentage of total workers engaged in agricultural occupations declined from 84.31 to 73.98, the percentage of workers engaged in non-agricultural occupations increased from 15.69 to 26.01. However, it is worth noting the fact that the proportions of agricultural and non-agricultural

#### TABLE 4

Changes in the Composition of Workforce in Enathimelpakkam and Gummidipundi Taluk between 1981 and 1993-94

	1985-86	1991	1993-94	1981	1991
1. Total population	486	569	571	122613	143513
2. Total workers	204	211	246	47127	58385
3. Total cultivators	86	50	74	17138	16375
a) Males	83	47	67	14613	12753
b) Females	3	3	7	2525	3622
4. Total agricultural labourers	86	112	108	18023	26734
a) Maies	42	74	52	10571	15549
b) Females	44	38	56	7452	11185
5. Total non-agricultural workers	32	49	64	<b>1</b> 1966	15276
6. Percentage of total workers to total population	41.97	37.08	43.08	38.43	<b>4</b> 0. <b>68</b>
7. Percentage of agricultural workers to total workers	84.31	<b>7</b> 6.78	73.98	74.60	73.83
8. Percentage of non-agricultural workers to total workers	15.69	23.22	26.01	25.39	26.16
9. Percentage of cultivators to total workers	42.16	23.70	30.08	36.36	28.05
10. Percentage of agricultural					
labourers to total workers	42.16	53.08	43.90	38.24	45.79
11. Total number of non-workers	282	358	325	75486	79542
12. Percentage of non-workers to the total population	58.03	62.98	56.92	61.56	59 32
			50.0 <b>E</b>	000	

Source : Field survey (census)

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workers at the village level were only in confirmity with the taluk level figures on the same in 1991. Thus, village over the years had only caught up with the taluk level trends observed with respect to the growth of work force. in the total work force of the village, while three-fourths were engaged in agricultural occuaptions available within the village, one-fourth of the workers were engaged in non-agricultural occupations available largely outside the village. The village continued to have three-fifths of its population classified as non-workers even in 1993-94. And this was only in confirmity with the trends observed at the taluk (59.32 per cent), district (63.64 per cent) and the state (59.18) levels in 1991. Between 1985-86 and 1993-94, while the number of male cultivators declined with only a marginal increase in the number of female cultivators, the numbers of both male and female agricultural labourers had gone up considerably mainly due to the in-migration of 10 agricultural labour households into the village, especially after our last survey. in 1985-86 we found the evidence in support of the process of agricultural involution (concentration of labour force within agriculture itself) taking place in the village. But, by 1993-94, we also found evidence in support of the "Leweslan process" (shifting of surplus agricultural work force into industry) setting in in the village. Table 4 shows the declining number of cultivators associated with the increasing number of agricultural labourers between 1985-86 and 1993-94. And even over a shorter period of 1991 to 1994 there had been a marginal decline observed in the number of agricultural labourers in the village. However, between 1985-86 and 1993-94, a few cultivators and agricultural labourers, largely belonging to upper castes, had changed their original occupations into non-agricultural occupations available outside the village. This is contrary to the occupational changes that took place mainly between 'the agricultural occupations within the village uptill 1985-86. And, it is also interesting to note that the modern agriculture practised in the village had failed to absorb the growing local labour force even while attracting the in-migrant agricultural labourers into it over the years.

Thus the period between the two survey years witnessed a higher rate of growth of village population thanks to the in-migration of agricultural labour households into it. The village economy had also considerably diversified with one-fourth of its workers changing their occupations over the years. And by 1993-94, the "agricultural involution" process observed earleir had been replaced by the "Lewesian

process". However, all these changes had only helped the village to catch up with the demogrpahic developments taking place in its own taluk, district and the state over the years.

#### **CHAPTER II**

#### LAND AND LIVESTOCK OWNERSHIPS AND TENANCY

#### LAND UTILISATION

Just as there were not many changes in the utilisation of land between 1971 and 1985-86, there were no changes even upto 1993-94. The total area of the village continued to be 524.77 acres of which while 402.33 acres were cultivated, 122.44 acres were uncultivated in 1993-94. Since the village was already a highly irrigated one there was only a marginal increase in the proportion of total area irrigated. It increased from 94.38 per cent in 1985-86 to 97 per cent in 1993-94. And there were negligible declines observed in the areas of cultivable waste land and the extent of land not available for cultivation between the two survey years. The village still has no area under forest.

#### LAND OWNERSHIP AND DISTRIBUTION

Between 1985-86 and 1993-94 the residents and non-residents largely retained their respective land ownerships despite some sales and purchases between them. Out of the total area of 402.33 acres, while residents owned 201.47 acres (or 50.08 per cent), the non-residents and temples put together owned the remaining 200.86 acres (or 49.92 per cent). Out of the 200.86 acres, whereas the local temples continued to own 30 acres of land (7.46 per cent), the non-residents continued to own 170.86 acres of land (42.46 per cent) in the village. As against the non-residents owning about two-fifths of the land in the village, three of the resident big farmers owned only 8 acres of land in the neighbouring villages in 1993-94. And the extent of land owned by the residents in the neighbouring villages declined from 14 acres in 1985-86 to a mere 8 acres in 1993-94. This happened mainly because of the sale of land by the medium farmers who owned among themselves about 6 acres of land in the neighbouring villages in 1985-86.

The data on the distribution of land ownership among the different categories of households in 1993-94 are presented in Table 5. Out of 134 households in the village, only 71 households owned some land in 1993-94. The remaining 63 households did not own any land either in the village or outside. The table reveals the highly skewed distribution of land ownership across the categories in the village. The few big farmers themselves owned about two-fifths of the land in the village. Further, the extent of landlessness had increased from 41.51 per cent in 1985-86 to 41.02 per cent in 1993-94. And the categories such as agricultural labourers, pure tenants, non-agricultural workers with regular salaried employment, non-agricultural casual workers and artisanal and service households which accounted for about 71 per cent of the households owned hardly 9.33 per cent of the area owned by the residents in 1993-94. Compared to 1985-86 by 1993-94 all the four medium farmers (owning between 5.01 to 9.99 acres) had either joined the big farmers group (only one) or the small farmers group (the remaining three) either by selling or acquiring land. Again, comparing the distribution of land ownership in 1985-86 and 1993-94, we found that while the big, small and marginal farmers gained some more land because of the sales by medium farmers and purchases of land, all other categories of households with the exception of artisanal and service households, largely retained the extent of land which they previously owned. However, the calculations of Gini coefficients<sup>4</sup> for the concentration of land ownership in 1985-86 and 1993-94 revealed them to be 0.6250 and 0.5930 respectively. Thus the Glni coefficients indicate a declining concentration of land ownership over the years, though marginally 5. Some of the factors which restricted the concentration of land ownership in the village between 1985-86 and 1993-94 were the doubling of land prices from Rs.30,000 per acre to Rs.60,000 per acre and the increased intensity of cultivation and the productivity of land which raised the hopes of land owners with the regard to the earning of higher profits from cultivation. Due to increased prices of land, the land market was not so vigorous between 1986 and 1993 compared tot the earlier period (1971-1986).

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# Distribution of Land Ownership, Operation, Leasing-in and Leasing-out by Category in Enathimelpakkam in 1993-94

Ca of hol	tegory house- Ids	No. of HHs owning land	Extent of area owned (in acres)	As %age to the total area owned	No. of HHs leasing -In	Extent of area teased -in (in acres)	No. of HHs lea- sing-out	Extent of area leased -out (in acres)	No.of HHs opera- ting land	Extent of area ope- rated (in acres)	As%age to the total area operated
1.	Big farmers	8	117.93	58.53	6	17.25	3	15.00	8	120.18	53.54
2.	Medium farmers	( <b>1</b> )	-	*	<del>70</del> 1	-	_	<del></del>	<del></del> :	-	-
3.	Small farmers	9	33.90	16.63	2	4.50	3	11.50	7	26.90	11.98
4.	Marginal farmers	22	30.84	15.31	7	4.82	2	4.66	20	31.00	13.81
5.	Pure tenants	9	6.39	3.17	20	25.92	1000	-	20	32.31	14.39
₿.	Agricultural labourers	11	4.49	2.23	5	2.60	1	0.50	14	8.79	3.02
7.	Non-agri-cultural workers with regular salaried employment	4	2.97	1.47	<b>-</b> (j)	-	3	2.17	1	0.80	0.36
8.	Non-agricuitural casual workers	7	4.65	2.31	3	1.30	۱	0.75	8	5.20	2.32
<b>9</b> .	Artisanal and service households	1	0.30	0.15	1	1.00	-		1	1:30	0.58
- T	otal	71	201.47	100.00	44	57.59	13	34.58	79	224.48	100.00

Source : Field survey (census)

The castewise distribution of land ownership is provided in Table 6. According to the table the upper caste Mudaliars owned about two-thirds of the total land with the remaining 10 castes owning only about one-third of the total land in the village in 1993-94. The demographically dominant scheduled castes owned hardly 7 per cent of the total land.

#### LAND OPERATION AND TENANCY

Extent of area operated and the number of households operating land in the village depends both on the extent of owned and leased-in land. The relevant data are presented in Table 5. In 1993-94, as against 71 households owning land, 79 households operated some land in the village. Thus there were still 55 households which were neither owning nor operating any land in the village. And the percentage of households not operating any land hadgone up from 27.36 in 1985-88 to 41.05 in 1993-94. Thus the proportions of households neither owning nor operating any land in the village had gone up substantially between the two survey years.<sup>6</sup> Besides, the total extent of area operated (area owned – area leased out + area leased in) by the households had also declined from 244.80 acres in 1985-86 to 224.48 acres in 1993-94. Hence the average extent of area operated by a land operating household declined from 3.18 acres to 2.84 acres between these two years with negative implications fro the incomes earned by different categories of households in the village. Thus, the accessibility of weaker sections to the land either as owner cultivators or as tenant cultivators declined between the two survey years.

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Across the categories, while a few big farmers operated little more than half of the operated area all other categories of households operated little less than half of the operated area in the village in 1993-94. The picture was just the 'reverse in 1985-86. However, the calculations of Gini coefficients revealed the declining concentration of operated area among the households with 0.5653 in 1985-86 and 0.5265 in 1993-94. Hence not only the concentration of owned area declined but also the concentration operated area between the two survey years. These indicate better distributions of owned and operated areas in 1993-94 compared to 1985-88. This was mainly brought about by some of the medium farmers becoming small farmers by 1993-94. Land operated by different caste groups of households in the village in 1993-94 are presented in Table 6. According to the table as against the upper caste Mudaliars operating 55.77 per cent of operated area, all other 10 caste groups of households operated 44.23 per cent of operated area. The demographically dominant scheduled caste households operated less than 5 per cent of operated area. Thus both land ownership and land operation continued to be dominated by the demographically less important Mudaliar caste households in the village.

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#### TABLE 6

# Distribution of Land Ownership, Operation, Leasing-in and Leasing-out by Caste in Enathimelpakam in 1993-94

Caste Group of house- holds	No. of HHs owning land	Extent of area owned (in acres)	As %age to the total area owned	No. of HHs leasing in	Extent of area leased in (in acres)	No. of HHs lea- sing-out	Extent of area leased- out (in acres)	No.of HHs opera- ting land	Extent of area ope- rated (in acres)	As%age to the total area operated
1. Mudaliars	24	128.95	<b>84</b> .00	6	11.85	5	15.60	23	125.20	55.77
2. Chettiars	21	35.68	17.71	10	13.60	6	12.15	19	37.13	16.54
3. Devars	1	1.75	0.87			1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1		1	1.75	0.78

Tolai	71	201.47	100.00	44	57.59	13	34.58	79	224.48	100.00
11. Scheduled Tribes				11 <del></del>	-	¥-	<u></u>	3 <sup>55</sup> 8 1000-100	0 <del>-0</del> 6	2. <u>—</u> 2
IO. Scheduled Castes	20	14.33	7.11	22	25.24	-	<u>1997</u> )	31	39.57	17.63
9. Acharis	2	6.93	3.44	2	4.00	-	-	2	10.93	1.87
8. Pillai	1	12.00	5.96	1	2.50	1	6.00	1 ~	8.50	3.79
7. Brahmins	1	0.83	0.41			1	0.83	-	( <u>211</u> 2)	9 <u>-</u>
6. Naldus		-	-	51 <b></b> -7	3 <u></u>		=	b <del>i₩</del> IG	( <del></del> ))	37 <u>—</u>
5. Nadars	=	÷.	2	1	0.40		<del></del>	1	0.40	0.18
4. Gounders	1	1.00	0.50	NY S	1	-		1	1.00	0.44

Source : Field survey (census)

As far as tenancy is concerned, the table shows that 44 households had leased in totally 57.59 acres in 1993-94. Compared to 1985-86, while the number of tenants had marginally increased from 43 to 44, the total extent of area leased in by them declined considerably<sup>7</sup> from 69.79 acres to 57.59 acres by 1993-94. The number of pure tenants who depended mainly on the cultivation of leased in land for their livelihoods had increased marginally from 18 to 20. But the extent of area leased in by them declined from 30.81 acres in 1985-86 to 25.92 acres in 1993-94. During the same period even the total extent of land leased in by the owner-cum-tenants declined from 38.98 acres to 31.67 acres. Thus the declining tenancy had affected both the groups equally over the years. But even among the owner-cum-tenants, the big farmers continued to lease in larger extents of lands in comparison to others in 1993-94. And as in 1985-86, tenancy became a marginal source of income for small and marginal farmers,

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non-agricultural casual workers and the artisanal and service households even in our resurvey year. As against 25.43 acres leased out by the residents in 1985-86, they leased out 34.58 acres in 1993-94. Thus the share of area leased out by the residents had increased with a corresponding decline in the share of area leased out by the non-residents over the years.

Nevertheless, the reasons for the declining tenancy are not far to seek. The increased intensity of cropping based on pumpset irrigation had increased the profitability of cultivation to the owners of land. Hence the non-resident owners of land had resumed the cultivation of their land by evicting some of the resident tenants between 1985-86 and 1993-94. The increased intensity of cultivation had also increased the average rent charged per acre per year from 6 bags of paddy in 1985-86 to 7 bags of paddy per acre per year in 1993-94. And the land continued to be leased in on Kuttagai (fixed rent) basis rather than on Varam (share cropping) basis. However, while owner-cum-tenants leased in lands mainly to take advantage of their agriculturally related assets such as pumpsets and tractors, the pure tenants leased in lands mainly to take advantage of their family and bullock labour. Nevertheless, the ownership of pumpsets became crucial for the profitability of cultivation in the village even in 1993-94. And we will turn to this later.

#### CHANGES IN THE OWNERSHIP OF AGRICULTURALLY RELATED ASSETS

#### A) LIVESTOCK

Ownership of different types of animals enable the households to earn both agricultural and nonagricultural incomes. The changes in the ownership of different types of animals in the village between 1985-86 and 1993-94 are presented in Table 7. The total number of animals owned in the village between these years had gone up from 260 to 294 representing an increase of about 13 per cent. While this was considerably lower compared to the district level increase of 19.22 per cent observed between 1982 and 1989, the same was considerably higher compared to the negligible percentage (0.52 per cent) increase in the livestock ownership at the state level between the same period.<sup>8</sup> And the sharp increases were

observed in the numbers of buffaloes, sheep and goats at the district level, if not at the state level, in the 1980s. Nevertheless, it is discouraging to note that while the village retained its ownership of milch animals, it had experienced a sharp decline in the number of bullocks by about half during a period of 8 years. And the declining ownership of bullocks had implications for the availability and use of draught power in agriculture and hence the incomes earned, especially by agricultural labourers and marginal farmers. And the necessity to produce milk, at least for household consumption, especially by upper caste

#### TABLE 7

# Changes In Livestock Ownership between 1985-86 and 1993-94 in Enathimelpakkam

Type of animals	1985-86	1993-94	% age change over 1985-86
1. Number of bullocks	89	45	-49.44
2. Number of milch animals	86	88	2.32
3. Number of he-buffaloes	5	25	400.00
4. Number of calves or young animals	53	44	-16.98
5. Number of sheep and goats	27	92	240.74
Total	260	294	13.07

Source : Field survey (census)

households, explained how and why there was no decline in the milch animals owned in the village. As far as increase in sheep and goats were concerned, no household in the village was owning them in herds. Their ownership developed only as a poor man's occupation with low caste agricultural labour households owning two or three of them each in 1993-94. And the increased meat prices tempted these households to rear them in larger numbers over the years. The same also explains the increase in the number of sheep and goats at the district and state levels in the 1980s.

The distribution of animals over the categories in the village in 1993-94 is shown in Table 8. According to the table, while a few big farmers themselves owned about one-fourth of the animals, all other categories of households together owned the remaining three-fourths of the total animals. On an average, whereas big farmers owned 9 to 10 animals per household all others owned 1 to 3 animals per household with the village average being only 2 in 1993-94. As far as the ownership of different types of animals across the categories is concerned while the big farmers owned the largest number of milch animals the pure tenants, as had been expected, owned the largest number of bullocks in the village. And, as already noted, the low caste agricultural labourers owned the largest number of sheep and goats in the village. The large ownerhsip of sheep and goats by agricultural labour households had implications for the supplementary incomes earned by them in 1993-94.

#### TABLE 8

#### Categorywise Distribution of Animals in Enathimelpakkam in 1993-94

Ca ho	tegory of useholds	No. of HHs		Nu types	mber of C s of anima	Total no. of	As precent age	Number of animals		
	3		Bull. ocks	Milch animals	He- buff aloes	Sheep and goat <del>s</del>	Young animals	animals owned by the category	age to the village total	owned per HH
∷ 1.	Big farmers	8	4	48	8	3	10	<b>7</b> 3	24.83	9.12
2.	Medium farmers	(14-1) (14-1)	** **		( <u>* 1</u> 7)	( <del>**</del>	2000	-	<u>1928</u>	1015
3.	Small farmers	9	2	9	7	4	7	29	9.86	3.22
4.	Marginal farmers	22	13	13	2.	9	10	47	15.99	2.14
5.	Pure tenants	20	18	9	2	15	4	48	16.33	2.40
6. 7.	Agricultural labourers Non-agricultural workers with regular salaried	43	8	4	4	59	9	84	28.57	1.95
	employment	6	<del></del>	2	1	1	2	6	2.04	1.00
8.	Non-agricultural casual workers	24		2	1	1	1	5	1.70	0.21
9.	Artisanal and service households	2	1 <del></del>	1*	<u>-</u>	-	1	2	. 0.68	1
T	otal	134	45	88	25	92	44	294	100.00	<u></u>
A to	s percentage the total	s <del>-</del> <sup>101</sup>	15.31	29.93	8.50	31.29	14.97	100.00	-	2.19

Source: Field survey (census).

#### **B) AGRICULTURAL IMPLEMENTS AND MACHINERY**

The information on the ownership of agricultural implements and machinery by different categories of households in the village in 1993-94 is provided in Table 9. Comparing the data in Table 9 with that for the year 1985-86, we found drastic reductions in the ownership of traditional wooden agricultural implements in 1993-94 with negative consequences for the incomes earned by agricultural labourers who use them and for the artisans who manufacture and repair them. By contrast, the numbers of high value agricultural machines such as pumpsets and tractors had respectively increased from 21 to 27 and 5 to 8 between 1985-86 and 1993-94. The increased number of tractors used in the cultivation of crops and the increased

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# Agricultural Implements and Machinery : Categorywlse Distribution in Enathimelpakkam in 1993-94

Big farmers Medium farmers Small farmers Marginal farmers Type of Agricultural implements

1.	Wooden ploughs	3	-	1	4
2.	Iron ploughs	3 👘	- 8	1	4
3.	Knives and sickles	-	i. <b></b> i	5	19
4.	Levelling Boards	3	. <b>—</b> .	1	. 7
5.	Builock carts	1	-	-	1
6.	Other traditional			•	
	implements		-	-	
7.	Pumpsets	16	7	4	-
8.	Tractors	8	-	-	-
		22.269			* * ***************

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Source : Field survey (census)

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Pure tenants	Agricultural labourers	Non-agricultural workers with regular salaried employment	Non-agricultural casual workers	Artisanal and service households	Total no.of imple- ments
	36 - 26 -	34222		19 <b>1</b> 4	6 ( <u>1997) - D</u>
6	2	_	-	3	16
2	-	-	_		10
35	-	-	-	-	<b>59</b>
4	-	- «	-	-	15
2	1	-		-	5
	-	-	-	-	. <del></del>
-	<sup>53</sup>		-	-	27
-	-	-	-	-	8
<u>1999</u> - 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997	5045W				04

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employment of in-migrant agricultural labourers and the neighbouring village casual agricultural labourers, who also brought their wooden and iron implements, had largely contributed to the declining ownership of traditional implements by the resident households over the years. The declining ownership of traditional agricultural implements such as ploughs (both wooden and iron) was also associated with a equally declining number of bullocks in the village between the two survey years.

Despite enormous increases in the prices of pumpsets (a bore well along with a pumpset costs around one lakh rupees in 1993-94) and tractors (costs around two lakh rupees per tractor with a trailor in 1993-94), the big farmers owned two pumpsets and a tractor each by 1993-94. And, a considerable number of small farmers and a few marginal farmers also came to own pumpsets in the village. However, all the new (3) tractors (of 35 HP) in the village were bought by big farmers with the help of loans provided by commercial banks, at low interest rates, for which the former mortgaged more than 10 acres of land each to the bank. But the intention behind the acquisition of new tractors by the big farmers was not only agricultural but also commercial for they were hiring-out their tractors for industrial work outside the village whenever there was no work within the village. We will return to this aspect later in the study. Thus, not only the land owned and operated but also livestock and high value agricultural machinery were all concentrated in a few big farmers hands with negative implications for the incomes earned by the assetless households such as pure tenants, agricultural labourers, non-agricultural casual workers and artisanal and service households in the village. Though there had been marginal declines observed with regard to the concentrations of owned and operated areas between the two survey years, the basic position observed with respect to the ownership of crucial agricultural resources among the different categories of households in 1985-86 remained more or less the same even in 1993-94. In the following chapters, we shall try to analyse how the household level demographic features and asset ownerships influenced their income earnings from agricultural and non-agricultural occupations in 1993-94.

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#### CHAPTER III

#### AGRARIAN ECONOMY OF THE VILLAGE

#### **CROPPING PATTERN AND IRRIGATION**

The village continued to have its monocropped cultivation of paddy in 1993-94. With the net sown area remaining the same at 402.33 acres, the gross cropped area had increased substantially from 650 acres in 1985-86 to 750 acres (both for residents and non-residents) in 1993-94. The intensity of cropping (net sown area + gross cropped area) had increased from 1.61 per cent to 1.86 per cent between the two survey years. But the intensity of cropping in the village in 1993-94 was much higher compared to the district (1.28 per cent) and state level <sup>9</sup> (1.22 per cent) in 1991-92.

At the end of our survey in 1994 we observed a non-resident farmer preparing 4 acres of his land to cultivate sugarcane which is an annual crop. The resident farmers would watch the growth of this crop and the profits earned from its cultivation by him. If the experiments in cultivating sugarcane becomes successful and if it fetches higher profits in comparison to the profits earned from HYV paddy, then, many resident farmers are inclined to cultivate sugarcane in parts of their holdings, at least, from the agricultural year of 1995-96. Meanwhile, preparations are on to set up a sugar factory at Maduravoil which is at a distance of 8 kilometres from the village. With the starting of sugar factory in the nearby town in the next one or two years, we can expect a considerable diversification of cropping pattern from 1995-96 breaking the decades old monocropped cultivation of either traditional or HYV paddy in the village.

Irrigation in the village is provided mainly by its tank and pumpsets. Normally the tank gets filled up by the North-East monsoon (October to December). The tank is connected to Araniyar river which passes at a distance of 5 kilometers from the village through a feeder canal. The modernisation of this tank and the construction of field channels during our last survey year was expected to increase the irrigated area by 30 to 40 acres. But, by 1993-94 the poor maintenance of the tank and field channels and the unregulated use of tank water had all contributed to the slowly declining of area under tank irrigation. In addition the increased number of borewells and pumpsets installed had also contributed to the poor maintenance of the tank in the village.

Between 1985-86 and 1993-94, while the number of pumpsets owned by the residents had increased from 21 to 27, those owned by the non-residents had increased from four to seven. Thus there were totally 34 pumpsets installed in village agricultural ayacut. Each of these pumpsets can irrigate about 10 acres of land. While they supplement the tank irrigation in the main Samba (September to February) season and the following less importnat Navarai season (February to May), they substitute tank irrigation in the important summer Sornavari (May to August) season which is favourable for the cultivation of HYV paddy. The increased installation of pumpsets had also increased the market for water in the village. While in the Samba and Navarai seasons the non-pumpset owners buy water on an hourly basis by paying Rs.15 per hour (compared to just Rs.5 per hour in 1985-86) in 1993-94; in the Sornavari season they continued to pay 6 bags of paddy per cropped acre which roughly came to one-third of the crop yield. Pumpsets had not only earned incomes to their owners but also increased the latters' socio-economic domination on the non-pumpset owners in the village. In this connection, it is worth noting that while electricity supply to agriculturists was subsidised by imposing a uniform tariff rate of Rs.75 per horse power in 1985-86, the same was supplied free to agriculturists in 1993-94. But the pumpset owners continued to sell pumpset waters at high prices by making use of free electricity supplied by the state government. And Tamil Nadu is the only state in the country which supplies electricity free.

The increased pumping of ground water for irrigation purposes led to the lowering of water tabels in the village over the years. Hence the borewell owners were compelled to deepen their borewells from

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about 70 feet in 1985-86 to about 100 feet in 1993-94. And almost all pumpset owners had deepened their borewells between the two survey years. There is also a possibility of further deepening of water tables in the next four or five years. In future there will also be a threat of seepage of salt water (because of the nearness of the village to the sea) into the fresh underground water in the village. Hence there appears to be a time limit for the pumping of ground water for irrigation. And, after sometime, farmers may have to go back to their old situation of depending solely on tank irrigation for cultivation. Hence there is every need to regulate the continued exploitation of underground water resources in the village. And this should also be accompanied by the efficient use of tank irrigation in the village. Right now, one source of irrigation is cutting into the efficiency of the other and the *vice versa*.

#### **CULTIVATION PRACTICES**

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Paddy is still cultivated as a wet crop based on transplanting method. And, almost all farmers, without any exception are cultivating the high yielding varieties (HYV) of paddy in 1993-94. The older high yielding varieties of seed such as hybrid sirumani and IR 20 cultivated in 1985-86 were substituted by the newer high yielding varieties of seed such as Ponmani, Ponni, Adudurai, IR 50 and IR 36 etc. by 1993-94. Hence farmers were interested in lab to land experiments in paddy cultivation in the village. Besides, they were also interested in raising crops other than paddy provided their efficient cultivation in the agricultural ayacut was demonstrated by somebody.

Till now paddy is raised as a main crop based on tank irrigation in the Samba (September to February) season. And the entire cultivated area in this season is raised with HVV paddy. Normally long duration crops (4 to 6 months) are cultivated in this season mainly to avoid the damage to the crops caused by floods in Decmber-January months. Samba season is followed by the less important Navarai season (February to May). In this season only about 50 acres of land located near the tank are cultivated with paddy mainly to take advantage of the remaining shallow waters of the tank supplemented by pumpset irrigation. But all pumpset owners prefer to leave their lands fallow and concentrate on preparing the land for the next summer season which is highly conducive for raising HYV paddy. Hence only the non-pumpset

owning poor farmers raise paddy in Navarai season. In the summer Sornavari season (May to August), about 300 acres are cultivated with HYV paddy. And, the short duration crops (3 to 4 months) are preferred by the farmers in this season. Even non-pumpset owners whose lands are adjacent to the pumpset available farms prefer to cultivate paddy by purchasing pumpset waters.

Normally, the yield rate of paddy varies between 17 to 30 bags of paddy both across size classes and agricultural seasons. Across size classes while the maximum per acre yield rates are achieved by the big farmers across seasons the same are achieved in the summer sornavari season. However, we did not observe any change in this regard between our two survey years. Cultivation is carried on mainly based on the use of chemical fertilisers and pesticides. The use of domestic manures, especially cowdung, is restricted by their availability in the village. There was no purchases of domestic manures for cultivation purposes by the farmers. Farmers also do not grow or use any green manures in paddy cultivation. And between 1985-86 and 1993-94, we observed the Increased use of cowdung as fuel by the non-livestock owning poor households who collected the same from the commons. And, between the bio-fertilisers and bio-fuels, the land poor households prefer the cowdung as a bio-fuel. However, in 1993-94 a few big farmers applied rice bran ash purchased from the nearby towns just before transplanting summer paddy. But that did not lead to any substantial reductions in the use of purchased chemical fertilisers. Though big and small farmers are inclined to use less costly bio-fertilisers which will not affect the yield rates, their availability is very much in question. And the paddy crop residues are not used either as fuel or as a bio-fertiliser. But possibility for these exist with the diversification of cropping pattern in the next few years. However, the increased costs of chemical fertilisers and pesticides consequent to the part withdrawal of subsidies in the new economic reform period created awareness among the farmers for the meed to adopt sustainable agricultural development.

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#### THE CHANGING LABOUR PROCESS IN AGRICULTURE

The increased intensity of cultivation based on the increased mechanisation of agriculture had also changed the labour process very much in favour of contract labourers and in-migrant agricultural labourers between the two survey years. By 1993-94 agriculture was carried on mainly by employing casual agricultural labourers in the village. And there were no permanent farm servants employed in the village in 1993-94. Thus the casualisation of agricultural labour force had repched its maximum<sup>10</sup> by our resurvey year. The increased number of tractors owned by the big farmers, who also hired them out apart from own use, had further affected the employment of male and bullock labour in operations such as ploughing, threshing and transportation. This is also very much evident in the rapidly declining number of bullocks in the village between 1985-86 and 1993-94. Between our survey years, there were further increases in the employment of in-migrant agricultural labourers who came from far away places and from neighbouring villages. And these had implications for the employment and incomes of resident agricultural labourers in the village. But the quickness with which the modern agricultural operations were carried on necessitated the cultivators to depend more and more on the in-migrant agricultural labourers. In fact, the in-migrant agricultural labourers were coming to the village regularly right in time for paddy harvesting. And compared to 1985-86, the in-migrant female labourers were also employed in the transplanting of paddy along with local female labourers on a contract basis in 1993-94. However, the middlemen found in agricultural contracts in 1985-86 were eliminated by 1993-94. Instead, the contracts were negotiated directly between the employers and employees. Thus there was less of exploitation in agricultural contracts in our resurvey year compared to our original survey year. And the exploitation of in-migrant agricultural labourers had also been reduced very much over the years thanks to their regular visits to the village.

While the local female agricultural labourers joined the in-migrant female labourers in transplanting operation, the local male and female labourers did not join the in-migrant labourers in paddy harvesting. Hence local and in-migrant agricultural labourers were seen employed separately in paddy harvesting in the village in 1993-94. However, the in-migrant agricultural labourers were employed predominantly in the harvesting of paddy in the main Samba season and in the summer Sornavari season. In the Navarai season (February to May) when only about one-eighth of the net sown area was cultivated with paddy; all the agricultural operations were performed by the local agricultural labourers without employing any in-migrant and the neighbouring village agricultural labourers. In the same manner, some of the agricultural labourers irrespective of agricultural seasons. And like transplantation, weeding was also performed largely by local female agricultural labourers.

Big farmers had also entered into the local labour market in a big way with their tractors. With 8 tractors owned by them, they were seen vieing with each other to capture the local labour market for hiring-out their tractor services. And the cultivation of high yielding varieties of paddy demanded each and every farmer to hire-in the tractor services at least for one or two hours either for ploughing or for threshing of paddy. However, for threshing of paddy, the hiring-in of tractor services at least for an hour per acre of crop had become a must because HYV paddy stacks are shorter and the grains cannot not be separated from crowns by trampling them under the feet of animals. Hence modern agriculture offered a sure market for the tractor services provided by big farmers. And many of them have repaid substantial loan amounts taken for the purchase of tractors from banks by hiring them (tractors) out.

Between 1985-86 and 1993-94 the permanent farm servants were replaced by beck and call labourers in the village. These semi-permanent farm servants were paid advances ranging from Rs.500 to Rs.2000 each by the big farmers and their labour was reserved for peak season agricultural operations. And they were paid the same wage rates already prevailing for casual agricultural labourers in the village. Thus, some of the agricultural labourers became beck and call labourers by 1993-94. But, they were free to

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change their employers after paying the advances that they had taken from the latter. And, in our resurvey year, none of the agricultural labourers were paid their wages in kind. And they were also not served with meals either on the farm or in the household.

In 1985-86, we found the employment of two permanent farm servants and two cowherds by independent employers on annual kind wage payment basis with some perquisites in the village. With the increased intensity of cropping and livestock ownerships, the cultivator-employers found it convenient to do away with these kinds of labour in the village. Instead, while they converted some of the casual agricultural labourers as beck and call labourers, they converted the two cowherds who were independently employed earlier into collective employees. In 1993-94 the cowherds were employed collectively by the livestock owners and were paid cash wages of two rupees per animal per month. There were three scheduled caste children employed as cowherds in 1993-94. And the payment of just two rupees per animal per month became very cheap for livestock owners compared to kind wage payments and perquisites paid in 1985-86. But this also meant the exploitation of low caste child labourers in the village by the upper caste land and livestock owners. In the same manner, big land owners also found it convenient not to employ any irrigation workers to regulate tank irrigation in the village on a collective basis. They just did not bother about what happens to the tank, though European Economic Community (EEC) had spent a lot of money (about 25 lakh rupees) to modernise the tank in 1985-86. Such negligence led to breaches in the tank in 1991 and destroyed part of the school buildings and old temples in the village. Nevertheless, farmers continued to employ the four field guards even in 1993-94 on a collective basis for their own benefit of protecting the crops from animals and thefts. But the field guards were paid the same old wage rates of six kilograms of paddy per cropped acre even in 1993-94. And all the four field guards came from scheduled caste agricultural labour hosueholds. Since none of them were employed on a permanent basis, the agricultural labour households took turns to provide field guards every year. The employment and incomes of artisans had also been very much affected consequent to the mechanisation of agriculture and the drastic reductions observed in the ownership and use of traditional wooden agricultural implements. And the Jajmani system (payment of fixed annual wages in kind) prevailing earlier between the artisanal and service households and employer-cultivator households came to an end by 1993-94. As a result, the resident artisanal and service households started working for the employers living outside the village for piece wage rates paid in cash.

#### LABOUR UTILISATION IN AGRICULTURE

The information on the average number of man-days of different types of labour used per acre in the village in 1993-94 is provided in Table 10. The total number of man-days of labour used for per acre of paddy declined marginally from 71.87 in 1985-86 to 69.4 in 1993-94.11 On an average, farmers used 9.80 days of family labour, 36.62 days of hired labour and 22.55 days of in-migrant agricultural labourers per acre in 1993-94. Both owned and hired bullock labour days used for per acre of paddy worked out to be 5.70 days. Tractor services were used on an average for 2 hours per cropped acre. Between 1985-86 and 1993-94, while the number of days of in-migrant agricultural labour used per acre increased from 16.66 to 22.55, the number of days of hired labour used per acre declined from 46.79 to 36.62. The declining number of hired labour days used per acre by more than 10 days between the two survey years had implications for the incomes earned by resident agricultural labourers. While the use of tractor services per acre increased marginally from 109 minutes to 117 minutes, the use of bullock labour days (both owned and hired) declined from 7.55 to 5.70 between the two survey years. Since the total number of days of labour used for the per acre cultivation of paddy did not increase, the total employment of labour in village agriculture could have increased solely because of the expansion in the gross cropped area from about because of the expansion in the gross cropped area from about 600 acres in 1985-86 to 750 acres in 1993-94. The resident agricultural labourers could also have benefited mainly from the increased gross cropped area despite the increased use of in-migrant agricultural labourers between the two survey years.

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# Utilisation of Labour (per acre) in Paddy Cultivation across Major Categories in Enathimeipakkam in 1993–94

	No. of HHs	12/5.8	Average	number o Iabour	f days of used pe	different r acre	rent types of			
Category of households	land	Own Own Hired H labour bullock labour bullock labour (			Hired bullock days	Hired tractor (in mlnut <b>es</b> )	Migrant labour	Total no. of labour days used		
1. Big farmers	8	3		42.37	2	255 (own)	25.25	74.12		
2. Medium farmers	-		-	-		· . ••••	-	-		
3. Small farmers	7	8	6	39	-	90	22	69		
4. Marginal farmers	20	8.63	-	38.25	4.50	135	25.50	72.38		
5. Pure tenants	20	14.78	4.57	34	4	60	20.00	68.78		
6. Non-Agricultural workers with regular salaried employment	1	22 	_	_	8 X		_			
Total or weighted averages	56	9.80	2.36	36.62	3.34	117	22.55	5 69.47		

Source : Field survey (sample)

## AGRICULTURAL LABOUR AND EMPLOYMENT

Between 1985-86 and 1993-94 the total number of agricultural labourers had gone up 12 from

86 to 108. While the number of male agricultural labourers went up from 42 to 52, the number of female agricultural labourers went up from 44 to 56. These increases were brought about mainly by the in-migration of 10 scheduled caste agricultural labour households between the two survey years. And, all of them were working as casual agricultural labourers in 1993-94.

The sample survey of agricultural labour households in 1993-94 revealed that on an average while a male agricultural labourer secured employment for 142 days in a year, a female agricultural labourer secured employment for 158 days in a year. In contrast, male and female casual agricultural labourers secured employment for 116 and 154 days, respectively, in 1985-86. Thus, despite the increased in-migration of agricultural labourers, whereas the employment of male casual agricultural labourers went up by 22.41 per cent, the employment of female casual agricultural labourers went up by a negligible 2.60 per cent. Thus the increased intensity of cultivation and growth in agricultural employment between the two survey years had mainly benefited the male casual agricultural labourers. This is because the female casual agricultural labourers could secure the maximum numbers of days of employment in the mid-80s itself and over the years some of the traditional female agricultural operations such as weeding and reaping of paddy had been carried on by male casual agricultural labourers.

The calculations of incomes earned by the agricultural labourers in 1993-94 revealed that as against a male casual agricultural labourer earning Rs.3775, a female casual agricultural labourer earned Rs.3782. Thus there was no difference at all in the total wage incomes earned from agricultural employment by them in 1993-94. This was also because of the wage discrimination prevailing in the village in our resurvey year. However, an agricultural labour household consisting of one male and one female casual agricultural labourer could expect to earn a total income of about Rs.7500 in 1993-94. Similar

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household in 1985-86 earned about Rs.3000 from agricultural employment. Thus the money incomes of agricultural labour households had more than doubled between the two survey years. However, the prices of staple food item such as rice and other essential commodities bought by the agricultural labourers had more than doubled during the same period.

#### CHANGES IN MONEY AND REAL WAGE RATES

Table 11 provides the information on changes in the money and real wage rates paid to casual agricultural labourers between 1985-86 and 1993-94. The money wage rates paid to male and female casual agricultural labourers between the these two survey years had more than doubled. While they varied between Rs.24 and Rs.30 for males, the same varied between Rs.22 and Rs.25 for females. The table shows the discrimination of females in the payment of wage rates even in similar operations such as weeding and harvesting in both 1985-86 and 1993-94. The official surveys conducted in some of the districts of Tamil Nadu<sup>13</sup> reveal the same discrimination. They showed that whereas the money wage rates paid to male casual agricultural labourers varied from a minimum of Rs.20 to a maximum of Rs.30 in different agricultural operations, the same for female casual agricultural labourers varied from a minimum of Rs.15 to a maximum of Rs.18 in different agricultural labourers in 1993-94. It appears that the money wage rates paid to male and female casual agricultural labourers in our survey village were somewhat higher compared to the general agricultural wage rates prevailing in the state in 1993-94.

#### TABLE 11

Changes in the Money and Real Wage Rates\* (In terms of rice II sort) paid to Casual Agricultural Labourers between 1985-86 and 1993-94 In Enathimelpakkam

Type of	Мо	ney wage paio	rates (in d to	Rs) ·	Real wage rates (in kgs of rice) paid to         Males in       Females         1985-86       1993-94       1985-86       1993         3.43       3.33       -       -				
agricultural operation	Male	s in	Fema	les in	Mal	es in	Fen	nales in	
	1985-86	1993-94	1985-86	1993-94	1985-86	1993-94	1985-86	1993-94	
1. Ploughing	12	25			3.43	3.33			
2. Land levelling and bund trimming	12+M	25	-	-	3.43	3.33	• •	-	
3. Fertilising	12+M	25	» <del>–</del>		3.43	3.33			
4. Sowing			23	-	<u>112</u>	5 <del></del>	3 <u></u> -		
5. Transplanting	<del></del> i		9	25			2.57	3.33	
6. Weeding	10	24	9	22	2.86	3.20	2.28	2.93	
7. Pesticiding	15+M	25			4.28	3.33		10007	
8. Transporting	12+M	25	-		3.43	3.33		<u>1000</u>	
9. Harvesting	13	30	11	25	3.71	4.00	3.14	3.33	

Note : The rice II sort prices went up from Rs.3.50 in 1985-86 to Rs.7.50 in 1993-94 in the retail market and hence the real wage rates were worked out accordingly. To this we have added the actual quantities of rice (300 grams) supplied to the labourers as meals in the farm both in 1985-86 and 1993-94.

Source : Field survey (sample)

But the real wage rates (deflated by rice II sort prices prevailing in the village in 1993-94) paid to male casual agricultural labourers declined in many agricultural operations with the exception of weeding and harvesting between the two survey years. By contrast, during the same period the real wage rates paid to female casual agricultural labourers increased in all the important operations of transplanting, weeding and harvesting in which they were mainly employed. The discontinuation of serving male casual agricultural labourers with meals by the employers either on the farm or in the household had also contributed to their declining real wage rates received over the years. Nevertheless, it is important to note that the real wage rates offered to female casual agricultural labourers had gone up considerably over the years. Of course, they were not served with meals on the farm earlier. And none of the agricultural labourers were paid their wages in kind in 1993-94. However, the real wage rates paid to agricultural labourers had gone up in certain operations without any increases in the efforts put in by them compared to 1985-86. And the wage rates shown in the table are the time wages paid per day of 8 hours. In some of the operations like ploughing, weeding and reaping the labourers were employed mostly for half days (of 4 hours). And the agricultural labourers normally go home for lunch. As far as contract wages are concerned, while they varied between Rs.350 and 400 for an acre of transplanting, the same varied between Rs.800 to 1000 for an acre of paddy harvesting in 1993-94. And, the contract wage rates had also more than doubled between the two survey years in the village.

#### COSTS AND RETURNS IN AGRICULTURE

#### A : COSTS

Since agriculture is the mainstay of many households in the village, the analysis of costs and returns from paddy cultivation in 1993-94 becomes all the more important for the economic conditions of the weaker sections vis-a-vis other categories. In calculating the different costs of cultivation

(A1, A2, B and C), we have followed the standard procedures adopted by the Studies in the Economics of Farm Management. While Cost A1 reveals the working capital requirements of agriculture Cost C shows the total per acre cost of cultivation (both owned and purchased) incurred by different categories of farmers in the village in 1993-94. The same are presented in Table 12 (for details on the valuation procedures adopted, see Appendix-1).

The average total per acre cost of cultivation of paddy across the categories varied from a minimum of Rs.4875 in the case of non-agricultural casual workers to a maximum of Rs.5821 in the case of big farmers. The average (weighted) per acre cost of cultivation incurred by all categories in the village in 1993-94 (in Table 14) worked out to Rs.5353.95. The same in 1985-86 worked out to Rs.2349.02. Thus the per acre cost of cultivation of paddy in the village increased by 127.92 per cent during a period of 8 years. Among the categories, while the average per acre cost of cultivation varied over a small range of Rs.246.58 in 1985-86 the same varied over a wide range of Rs.946 in 1993-94. Such a wider variation observed in the per acre cost of cultivation in 1993-94 also reflected the economic abilities of different categories of households to meet the increased costs of cultivation over the years. Some of the factors which contributed to the increasing costs of cultivation between 1985-86 and 1993-94 were the faster increases in the prices of chemical fertilisers and pesticides consequent to the part withdrawal of fertiliser subsidy by the government in the new economic reform period and the rise in the money wage rates paid to agricultural labourers by more than 100 per cent. However, Cost A1, which largely reflects the working capital requirements of agriculture varied over a smaller range of Rs.685 across the categories in comparison to the total per acre cost of cultivation which varied over a wide range of Rs.946 in 1993-94.

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# Average per Acre Cost of Cultivation of Paddy Incurred by Different Categories in Enathimelpakkam in 1993–94

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(All in Rs.)

e e o e s

ltem -	Big farmers	<b>Medium</b> farmers	Small farmers	Marginal farmers	Pure tenants	Non-agl Workers with salaried employment	Agl. Iabo- urers	Non- agri casual workers	Artisanal and service house- holds
1. Hired human labour	ψ.	is draftstandare	asa-na na	anania i ara di			et 1. <u>2020-0</u>		
(casual)	1675	: <del></del> .	1525	1575	1325	1700	1300	1500	1575
2. Hired human labour (permanent)	· -	-	-	13 	70 <b>***</b>	- <del>2-1-</del> 1	-	-	<u>2004</u> <u>1</u> 207
3. Owned bulkock labour	19 <sup>100</sup>	-	150	1 <u>—</u> 31	125	):	3	3	*
4. Hired bullock labour	50	-	-	125	100	150	200	100	100
5. Tractor (Owned)	400	-		-	-	<del>~~</del>		-	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -
6. Tractor (Hired)	-	-	300	450	200	300	200	200	300
7. Seeds (Owned)	211		140	150	175	<u></u>			0 <del></del>
8. Seeds (Purchased)	-	-	70	60	50	200	200	200	200
9. Domestic manures :									2
a) owned	_	-	100	-	100	-	100	_	10 <b></b>
b) Purchased	200	-	10 10-00	<u>1000</u>	-			-	10
10. Chemical fertilisers and pesticides	1060		e <b>890</b>	725	600	700	600	600	700
11. Depreciation	300	-	90	<u>19478</u> 1965	· 90	57 <u></u> 0		_	
12. Land tax	25		25	25	25	25	25	25	25
13. Irrigation charges		19 <del></del>	200	900	900	900	900	900	900
14. Water cess	-		<u></u> -	° <del>-</del>	-	-	-	-	3 <del></del> 33
15. Interest on working capita	e e								
a) owned	215	-	180	125	70	150	<del>~~</del>	100	200
b) borrowed	40		180	200	190	50	150	150	<u> </u>
16. Miscellaneous expenditure	s 50		50	75	50	50	50	50	50
17. Cost A1	4226		3900	4410	4000	4225	3725	3825	4050
18. Rent on leased in-land		-			1050	······································			
19. Cost A2	4226		3900	4410	5050	4225	3725	3825	<b>4050</b>
20. Rental value of owned la	nd 1050	-	1050	1050		1050	1050	1050	) 1050
21. Interest on fixed capital (excluding land)	470	30 <del>_</del>	90		_	- 3		-	-
22. Cost B	5746	58. 57-0	4950	5460	5050	5275	4775	487	5 5100
23. Value of family labour	175		200	225	37	5 -	400		_
24. Cost C	5821	-	5240	5685	542	5 5275	5175	487	5 5100
					-				N 1993 1994

Source : Field survey (sample).

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In order to have a better understanding of the different costs of cultivation incurred over the categories in 1993-94, we have also worked out the owned and paid-out costs of cultivation separately in Table 13. Whereas the average per acre paid-out cost of cultivation varied from a minimum of Rs.3575 in the case of agricultural labourers to a maximum of Rs.4530 in the case of pure tenants, the owned per acre cost of cultivation varied from a minimum of Rs.895 in the case of pure tenants to a maximum of Rs.2001 in the case of big farmers. However, the average (weighted) per acre paid-out cost of cultivation for all categories in the village (in Table 15) in 1993-94 worked out to Rs.3922.05. And the average (weighted) owned per acre cost of cultivation for all categories worked out to Rs.1431.90 in the same year. Between 1985-86 and 1993-94, as against the per acre paid-out cost of cultivation increasing by 125.56 per cent, the owned per acre cost of cultivation increased by 128.23 per cent. Thus, both owned and paid out costs cultivation increased more or less equally between the two survey years.

As far as the proportions of owned and paid-out costs of cultivation are concerned, Table 13 shows that whereas the proportion of paid-out cost was the least in the case of small farmers, the proportion of owned cost was the least in the case of pure tenants. And, this simply reflected the greater dependence of small farmers on the use of owned inputs in paddy cultivation and the pure tenants increased dependence on purchased inputs in paddy cultivation. However, these types of input use in agriculture had implications for the net incomes earned from paddy cultivation by different categories of households in the village in 1993-94. And, it should be noted that the pure tenants had to spend large amounts to buy pumpset water and to pay increased land rent in the village in 1993-94. The table also reveals that the major cultivator groups such as big and small farmers incurred about one-third of the cost as owned cost and the remaining two-thirds of the cost as paid-out cost in our resurvey year. And between 1985-86 and 1993-94, while

#### TABLE 13

Average per acre Owned and Paid-out Costs of Cultivation of Paddy Incurred by Different Categories in Enathimelpakkam in 1993-94

		B farm	ig ners	Medi _ farm	um ers	Sm farm	3   <b>ers</b>	Margir farme	nal Irs	Pure tenants	5
Π	EM	Owned	Paid- out	Owned	Paid- out	Owned	Paid- out	Owned	Paid- out	Owned	Paid- out
1:	Human labour	75	1675			200	1525	225	1575	375	1325
2.	Bullock labour	-	50		-	150	Breed I		125	125	100
З.	Tractor services	400	( <del>),,</del> )	-			300		450	<b>—</b> <sup>2</sup>	200
4.	Seed	211		1.03		··· 140	70	150	60	175	50
5.	Domestic manure	<del></del> -	200	1.5		100	1/2-32	32 <del></del> 6		100	-
6.	Chemical fertilisers and pesticides	100	1060		-54 K 	-	890	<b>~</b>	725	8 <del></del> -0	600
7.	Irrigation charges		3 <del>-</del> 0	1 <b></b> 2)	_		200	16 <del>-0</del> 1	900		900
8.	Water cess		<u>.</u>	-				5 <del></del>	-	20 <del>0.00</del> 5	:. <del></del> :
9.	Land tax		25	-	-	-	25	-	25	~	25
10.	Depreciation	-	300	3 <b></b> 5			90		19 <u></u> -		90
11.	Interest on working capital	<b>21</b> 5	40	-	-	180	180	125	200	<b>7</b> 0	190
12.	Interest on fixed capital		470		_		90		_	_	<u> </u>
13.	Land rent	1050	-		9 	1050	<u></u>	1050	<del></del>		<sup>a</sup> 1050
14.	Miscellaneous expenditures	50	<del></del>	-	i <del>-</del> 1	50		75	07.5	50	-
Tot	al .	2001	3820			1870	3370	1625	4060	895	4530
As tota	%age to the category's al cost of cultivation	34.38	65.62			35.69	64.31	28.513	71.42	16.50	83.50

(Table continues overleat)

#### TABLE 13 (Continued)

(All in Rs.)

ITEM	Non-ag worke regular emplo	ricultural rs with salaried byment	Agricu labou	lltural Irers	Non-agricu casua worke	Non-agricultural casual workers		
	Owned	Paid- out	Owned	Paid- out	Owned	Paid- out	Owned	Paid- out
1. Human labour		1700	400	1300		1500		1575
2. Bullock labour	<del>*</del>	150	:: <del></del> ::	200		100		100
3. Tractor services	•••-	300	-	<b>20</b> 0	-	200	2000	300
4. Seed	<del>~~</del>	200	5. <u></u> .	200	-	200	They a	200
5. Domestic manure	<del>~~~</del>		100		-	2	<del></del>	1 <u>1111</u>
6. Chemical fertilisers and pesticides	-	700	<b></b> .	600	2 <b>00</b> 0	600		700
7. Irrigation charges	_	900	-	900	57 <del>55</del> 8	900	-	900
8. Water cess	<del>~</del>				2 <del>24</del> 1	3 <del></del> 1	9 <b></b> -2	5
9. Land tax		25	-	25	23 <del></del> 8	25	3. <del></del>	25
10. Depreciation	<del>*</del>	33 <b></b> 63			<u></u>	<b>→</b>	1.	-
11. Interest on working Capital	150	50	-	150	100	150	200	
12. Interest on fixed capital	-	20 <del>000</del> 20	and the second s	-	<u></u>			-
13. Land rent	1050		1050		1050	-	1050	- 26) 77787
14. Miscellaneous expenditures	50	-	50	1 <del>50</del> 1	50		50	
Total	1250	4025	1600	3575	1200	3675	1300	3800
As %age to the category's total cost of cultivation	23.70	76.30	30.92	69.08	24.62	75.38	25.49	74.51

Source : Field survey (sample).

the big farmers used more of purchased inputs and less of owned inputs, the small farmers used more of owned inputs and less of purchased inputs in paddy cultivation. The marginal farmers incurred more or less equal proportions of owned and paid-out costs of cultivation both in 1985-86 and 1993-94.

#### **RETURNS FROM AGRICULTURE** B)

The profitability of cultivation to different categories of farmers varies depending on the per acre yield, prices secured for the outputs and the per acre costs of cultivation. The relevant data are presented in Table 14. It is evident from the table that the average (weighted) yield of paddy per acre achieved by all categories in 1993-94 was 22.16 bags (of 80 kgs each). This is lower compared to the per acre yield rate of paddy achieved (23.65 bags of 80 kgs each) in the state in 1991-92 for which the latest data are available.<sup>14</sup> In the village, the per acre yield rate of paddy had gone up from 18.69 bags in 1985-86 to 22.16 bags in 1993-94. Thus the per acre yield rate of paddy had gone up by little less than one-fifth (18.5 per cent) during a period of 8 years. And the increased per acre yield rate of paddy was brought about mainly by the increased area under paddy in the summer season which is suitable for higher yield rate in comparison to the other two seasons in the village.

The average (weighted) price secured per bag of paddy sold in the market had more than doubled between 1985-86 and 1993-94. It went up from Rs.127.08 to Rs.300.90. The open market prices of paddy in 1993-94, as they had always been, were higher compared to the procurement prices fixed by the government of Tamil Nadu in the same year. The procurement prices paid per bag (of 80 kgs each) were Rs.248 for common varieties, Rs.264 for fine varieties and Rs.280 for super fine varieties<sup>15</sup> in 1993-94.

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The average (weighted) net income earned per acre on the basis of total cost i.e., Cost C worked out to Rs.1645.15. But the net income earned per acre over the categories varied from a minimum of Rs.1075 in the case of agricultural labourers, who operated tiny plots with no agriculturally related assets, to a maximum of Rs.2729 in the case of big farmers, who cultivated large extents of land with all the agriculturally related assets in their hands. Thus the per acre net incomes earned varied over a wider range compared to the range of variation observed in the per acre cost of cultivation across the categories in the village in 1993-94. The marginal farmers and the pure tenants like agricultural labourers had also earned less than the village average net income earned per acre because they lacked crucial agricultural resources such as pumpsets, tractors, livestock and capital.

The caalculations of input-output ratios in the same table reveals that the big and small farmers were found to be more efficient in the cultivation of paddy in comparison to all other categories of farmers in the village in 1993-94. However, it is encouraging to note that the overall efficiency of agriculture in the village had gone up with the input-output ratios showing 0.87 in 1985-86 and 0.78 in 1993-94. Among the categories, the lack of necessary complementary agricultural assets led to inefficient (input-output ratios are higher than the village level input-output ratio) cultivation of crops by marginal farmers, pure tenants and agricultural labourers.

#### TABLE 14

# Gross and Net Incomes Earned from an Acre of Paddý Cultivation among Different Categories in Enathimelpakkam in 1993-94

Cat of hou	<b>Iegory</b> <b>seholds</b>	No. of HHs operating land	Average yield per acre (in bags)	Average price obtained per bag (in Rs.)	Value of paddy obtained per acre (in Rs.)	Value of hay obtained per acre (in Rs.)	Gross value of output obtained per acre (in Rs.)	Average per acre total cost of cultivation (Cost C) (in Rs.)	Net income earned per acre (in Rs.)	Input- output ratio (i.e cost C + gross value of output)
1.	Big farmers	8	25	330	8250	300	8550	5921	2729	0.68
2.	Medium farmers			-	-	=	-			
З.	Small farmers	7	24	310	7440	270	7710	5240	2470	0.68
4.	Marginal farmers	20	23	300	6900	250	7150	5685	1465	0.79
5.	Pure tenants	20	22	300	6600	250	6850	5425	1425	0.79
6.	Agricultural labourers	14	20	300	6000	250	6250	5175	1075	0.83
7.	Non-agricultural workers with regular salaried employment	1	23	300	6900	270	7170	5275	1895	0.74
8.	Non-agricultural casual workers	8 8	22	300	6600	250	6850	4875	1975	0.71
9.	Artisanal and service households	s 1	22	300	6600	250	6850	5100	1750	0.74
W	eighted averages total	<b>7</b> 9	22.16	300.90	6744.60	254.50	6999.10	5353.95	1645.15	0.76

Source : Field survey (sample)

We have also worked out the net incomes earned per acre on the basis of different cost concepts by different categories in 1993-94. The relevant data are presented in Table 15. The table shows the average (weighted) per acre net incomes earned by all categories on the basis of Cost A1, Cost A2, Cost B and Cost C as Rs.2987.25, Rs.2724, Rs.1900 and Rs.1654.15 respectively. The average (weighted) net income earned per acre on the basis of paid-out cost worked out to Rs.3077 in

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# Different Costs of Cultivation Incurred and Net Incomes Earned per Acre of Paddy over the Categories in Enathimelpakkam in 1993-94

Category of households	No. of house holds opera- ting land	Gross income eamed per acre	Cost A1	Net income eamed per acre	Cost A2	Net income eamed per acre	Cost B	Net income eamed per acre	Cost C	Net income eamed per acre	Paid-out cost	Net income eamed per acre
1. Big farmers		8550	4226	4324	4226	4324	5746	2804	5821	2729	3820	4730
2. Medium farmers			-	<del></del>	-	-	-	n <del></del>	-	-		-
3. Small farmers	7	7710	3900	<b>38</b> 10	··· <b>3900</b>	3810	4950	2760	5240	2470	3370	4340
4. Marginal farmers	20	7150	4410	<b>27</b> 40	4410	2740	5460	1690	5685	1465	4060	3090
5. Pure tenants	20	6850	4000	2850	5050	1800	5050	1800	5425	1425	4530	2320
6. Agricultural labourers	14	6250	3725	2525	3725	2525	4775	1475	5175	1075	3575	2675
7. Non-agricultural workers with regular salaried employment	1	7170	4225	<b>2945</b>	4225	- 2945	5275	1895	5275	1895	4025	3145
8. Non-agricultural casual workers	8	6850	3825	3025	3825	3025	4875	1975	4875	1975	3675	3175
9. Artisanal and service households	1	6850	• 4050	2800	4050	2800	5100	1750	5100	1750	3800	3050
Weighted averages or Total	79	6999.10	4011.85	2987.25	4274.35	2724.75	5098.35	1900.75	5353.95	1645.15	3922.05	3077.05

Source : Field survey (sample).

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1993-94. The same in 1985-86 worked out to be Rs.963.54. Thus the net income earned per acre on the basis of paid-out cost increased by more than three times between the two survey years and this became crucial for further investments in agriculture. Nevertheless, the net income earned per acre on the basis of total cost by all categories went up by 5 times, i.e., from Rs.335.84 in 1985-86 to Rs.1645.15 in 1993-94. And the difference between the two incomes had also increased substantially at least in money terms, indicating the availability of more money, for further investments.

Among the categories, while the big and small farmers earned far higher net incomes per acre in comparision to the village average on the basis of any cost concept, all other categories' net incomes per acre were either closer to or less than the village average in 1993-94. This only indicates that the growth of incomes from agricultural production in the 8 year period had malnly benefited the big and small farmers who owned the required agricultural assets in the village. And, they eamed sufficient surplus incomes from agriculture which facilitated them to invest more in the same sector. The new acquisitions of costly tractors and pumpsets between the two survey years reveal how the surplus agricultural incomes were invested in the village, especially by the big farmers. However, these surplus agricultural incomes could not be invested in the acquisition of some more land because enough land was not available for sale.

#### **INCOME FROM AGRICULTURAL PRODUCTION**

Table 18 provides the estimates of gross cropped area (operated area multiplied by intensity of cropping) and total agricultural production (gross cropped area multiplied by per acre yield rate of paddy) across the categories in the village in 1993-94. According to the table, whereas the operated area was 224.48 acres, the gross cropped area was 413 acres. The intensity of cropping for all the categories worked out to 1.84 per cent in 1993-94. The same worked out to 1.51 per cent for resident categories in 1985-86. The average yield of paddy per acre (obtained by dividing the estimated total output by the gross cropped area) for all categories worked out to 23.99 bags or 24 bags in 1993-94. This is closer to the state level

figure (23.65 bags) in 1991-92.

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Of all the categories, the big farmers achieved the highest intensity of cropping and per acre yield in the village. And the table shows positive relationship between the farm size and productivity. There is also a positive relationship observed between the farm size and intensity of cropping in 1993-94. But our results of not confirm the inverse relationships observed between farm size and productivity on the one hand and farm size and intensity of cultivation on the other by some of the studies conducted at a macro level.<sup>16</sup> However, the positive relationships observed between these two aspects of the village agricultural economy were very much explained by the possession and use of agriculturally related assets by different categories of households. After all, the possession of pumpsets and tractors became crucial for the farmers to achieve higher intensities of cropping and higher per acre yield rates of paddy both in 1985-86 and 1993-94.

According to Table 16, the total paddy production of the village in 1993-94 was 9906.60 bags. Out of the total production, while big farmers themselves accounted for 58.17 per cent all other categories accounted for the remaining 41.83 per cent. Between 1985-86 and 1993-94, the share of big farmers in the total output had gone up considerably from 48.52 per cent to 58.17 per cent with the corresponding declines in the shares contributed by all other categories. Thus, agricultural production was highly concentrated in the hands of a few big farmers. Across the categories, agricultural labourers, non-agricultural regular salaried employees, non-agricultural casual workers and the artisanal and service households, which accounted for 55.97 per cent of households, contributed hardly 4.73 per cent of agricultural production in the village in 1993-94. Thus, for more than half of the households in the village had nothing to do with the changes in agricultural production and their economic interests lie somewhere else.

# Estimated Area and Production of Paddy Across Different Categories in Enathimelpakkam in 1993-94

Category of households	Total number of H.Hs	Total operated area (in acres)	Average intensity of cropping	Gross cropped area (in acres)	Average yield of paddy (in bags)	Total produc- tion (in bags)	As percent age to the total
1. Big farmers	8	120.18 (53.54)	1.92	230.50 (55.81)	25	5762.50	58.17
2. Medium farmers				2 <u></u> 2	alaren eta a		_
3. Small farmers	9	26.90 (11.98)	1.81	48.80 (11.82)	24	1171.20	11.82
4. Marginal farmers	22	31.00 (13.81)	1.64	51.00 (12.35)	23	1173.00	11.84
5. Pure tenants	20	32.31 (14.39)	1.87	60.50 (14.65)	22	1331.00	13.44
6. Agricultural labourers	43	6.79 (3.02)	1.55	10.50 (2.54)	20	210.00	2.12
<ol> <li>Non-agricultural workers with regular salaried employment</li> </ol>	6	0.80 (0.36)	1.87	1.50 (0.36)	23	34.50	0.35
8. Non-agricultural casual workers	24	5.20 (2.32)	1.58	8.20 (1.99)	22	180.40	1.82

<ol> <li>9. Artisanal and service households</li> </ol>	2	1.30 (0 <i>.</i> 58)	1.54	2.00 (0.48)	22	44.00	0.44	
Total	134	224.48 (100.00)	1.84	413.00 (100.00)	23.99*	9906.60	100.00	

Note : Figures in brackets indicate the percentages to the respective village totals

\* Obtained from the estimated total output and gross cropped area cultivated with paddy in 1993-94

Source : Field survey (sample)

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With the data available on agricultural production relating to the years of 1985-86 and 1993-94, we have also worked out its rates of growth over time. Between these two years, the total agricultural output of the village had gone up from 7825.04 bags to 9906.60 bags. This worked out to a 26.60 per cent increase. Thus, the real rate of growth of agricultural output in the village in the 8 year period turns out to 3.32 per cent per annum. And this is not much different from the rate of growth of agricultural output observed at the national level for a long time. However, the calculations of rate of growth of agricultural output per capita between the two survey years revealed it to be less than even one per cent (0.97 per cent) per annum.

Estimates of total net incomes earned from paddy production by different categories of households in 1993-94 are shown in Table 17. The table gives the net incomes earned both on the basis of total cost and paid-out cost among the categories. On the basis of Cost C, the total net income earned by all categories in the village from paddy production in 1993-94 was Rs.9,44,323. And, it was Rs.16,64,947 on the basis of paid-out cost. However, it is important to note that the 8 big farmers themselves earned

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Estimates of Total Net Incomes Earned from Paddy Cultivation by Each Category In Enathimelpakkam In 1993-94

Category of households	Gross cropped area (in acres)	Net in- come earned per acre on the basis of Cost C (in Rs.)	Total income earned by the category (in Rs.)	As per centage to the village total income	Net income earned per acre on the basis of paid-out cost (in Rs.)	Total income eamed by the category (in Rs.)	As %age to the village total income
1. Big farmers	230.50 (55.81)	2729	62 <del>9</del> 034.50	66.61	4730	1090265	65.48
2. Medium farmers	-	1 <u>000</u> 81	3 <del>-3</del>			<u></u>	and the second sec
3. Small farmers	48.80 (11.82)	2470	120536	12.76	4340	211792	12.72
4. Marginal farmers	51 (12.35)	1465	74715	7.91	3090	1575 <del>9</del> 0	9.47
5. Pure tenants	60.50 (14.65)	1425	86212.50	9.13	2320	140360	8.43
6. Agricultural labourers	10.50 (2.54)	1075	11287.50	1.20	2675	28087.	.50 1.69
7. Non-agricultural workers with regular salaried employment	1.50 (0.36)	1895	2842.50	0.30	3145	4717.	.50 0.28
8. Non-agricultural casual workers	8.20 (1.99)	1975	<b>16195</b>	1.71	3175	26035	1.56
9. Artisanal and service households	2.00 (0.48)	1750	3500	0.37	3050	6100	0.37
Total	413 (100.00)		944323	100.00	****	1664947	100.00

Note : Figures in brackets are percentages to the village total Source : Estimates based on the filed data (sample)

about two-thirds of the income generated in agriculture either on the basis of Cost C or on the basis of paid-out cost. And their share in the total income was higher in comparison to their share of production in 1993-94. This only indicates the unproportionate gains made by them even in the product market in comaprison to all other groups of cultivators in the village. It is also discouraging to note that 71 out of 79 land operating households in the village could earn only the remaining one-third of the total income generated in village agriculture in 1993-94. And the declining shares of total agricultural income earned by the categories other than the big farmers reveal that they had not gained much from the increased agricultural production between 1985-86 and 1993-94.

#### **\* MARKETING AND DISTRIBUTION OF AGRICULTURAL PRODUCE**

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The quantitative estimates of production, distribution and marketing of paddy by different categories of househods based on sample data in 1993-94 are presented in Table 18. The table shows that out of a total prodution of 9906.60 bags, while 1701.99 bags were distributed among the various categories of production, consumption, wages and land rent, 8204.61 bags were marketed both in the post-harvest and lean seasons. Again, out of 1701.99 bags distributed, whereas 1298.86 bags were retained for consumption and seed purposes, 403.13 bags were paid as rent for the leased in land. In the total production

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# Categorywise Estimates of Production and Distribution of Paddy in Enathimelpakkam in 1993-94

Ca	tegory of	No.	Алеа	Production	202	Distrit	ni) nottu	bags)		Total	As %ag	8	Marketing				A.V.Q.	
ho	useholds	of HHs operating land	HHs paddy (in perating (in land acres)	of paddy (in bags)	Q retained as seed	Q retained for consump- tion	Q paid as wages to ALs	Q paid to artisanal & service HHs	Q paid as rent	distri- buted (in bags)	to the categ ory's total produc tion	Q sold in the post- harvest season (in bags)	As %age to the categ- ory's proden.	Q sold in the lean season (in bags)	As %age to the categ- ory's prodn.	Market able surplus (in bags)	As %age to the categ- ory's prodn.	table surplus per land operating HH (in bags)
1.	Big farmers	8	230.50	5762.50	115.25	207.00	<u></u>	_	120.75	443	7.69	2953.50	51.25	2366.00	41.06	5319.50 (64.84)	92.31	664.94
2	Medium farmers	s –	-	-	<u></u>	-	-	-	-	-	-	-	-	-	-	-	-	57 <u></u> 2
<b>3</b> .	Small farmers	7	48.80	1171:20	24.40	105.00	-	-	31.50	160.90	13.74	610. <b>30</b>	52.11	400	34.15	1010.30 (12.31)	86.26	144.33
4.	Marginal farmer	s 20	51.00	1173.00	25.50	245.50	-	-	33.74	304.74	25.98	540.26	46.06	328	27.96	868.26 (10.58)	74.02	43.41
5	Puna tanants	20	60.50	1331.00	30.25	264.00	-	-	181.44	475.69	35.74	605.31	45.48	250	18.78	855.31	64.26	42.77
6.	Agricultural labourers	14	10.50	210.00	5.25	155.40	-	-	19.60	180.25	<b>85</b> .83	29.75	14.17	-	-	29.75 (10.42)	14.17	2.12
7.	Non-agricultural workers with regular salaried employment	1	1.50	34.50	<b>0.7</b> 5	11.00	-		-	11.75	34.06	12. <b>7</b> 5	36.96	10	28.98	22.75 (0.28)	<b>65.94</b>	22.75
8.	Non-agricultural casual workers	8	<b>8.20</b>	180.40	4.10	84.96	-	-	9.10	98.16	54.41	52.24	28.96	30	16.63	82.24 (1.00)	45.59	10.28
<b>9</b> .	Artisanal and service households	1	2.00	44.00	1.00	19.50	-	-	7.00	27.50	62.50	16.50	37.50	-	-	16.50 (0.20)	37.50	16.50
То	al — — — —	79	413.00	9906.60	206.50	1092.36	-		403.13	1701.99	-	4820.61		3384	-	8204.61	-	103.86
As the	percentage to total production	2 <u>-</u>	_	_	_	-		-	-	17.18	48.66	34.16		-	82.82	-	-	-

Source : Estimates based on the field data (sample)

No.: Number, HHs: Households, Q: Quantity.

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of 9906.60 bags, 48.66 per cent was sold in the lean season. Compared to 1985-86, a much higher (34.65 per cent in 1985-86) proportion of total paddy was sold in the post-harvest season itself in 1993-94. This was necessitated by the increased cash costs of cultivation which resulted in the increased borrowing from merchants by pledging crops in advance in 1993-94. During our last survey, we found three residents working as paddy brokers to the non-resident merchants. They were paid commissions for the quantities of paddy purchased on behalf of the merchants in the village. By 1993-94, there was no paddy broker in the village because the merchants were directly dealing with their debtor-cultivators in buying paddy and in adjusting the amounts borrowed against the sales.

The marketable surplus of paddy in the village had gone up from 79.51 per cent in 1985-86 to 82.82 per cent in 1993-94. Hence the commercialisation of agriculture had further increased between the two survey years. The average quantity of marketable surplus per land operating household had gone up from 79.51 bags to 103.86 bags during the same period. Thus there was a considerable increase in the marketable surplus of paddy both in absolute and relative terms.

The changes in the distribution of paddy between 1985-86 and 1993-94 are given in Table 19. The table shows an increase in the proportion of paddy marketed with a corresponding decline in the proportion of paddy distributed between the two survey years. The changing distribution of agricultural produce had mainly affected

#### TABLE 19

Changes in the Distribution of Total Paddy between 1985-86 and 1993-94 in Enathimelpakkam

	a <u>a a</u> 1	985-86	1993-94		
item of production and distribution	Quantities (in bags)	As per centage to the total production	Quantities (in bags)	As percentage to the total production	

I: Production				
1. Total number of households operating land	77		<b>79</b>	
2. Gross cropped area(in acres)	370.49		413	
3. Average yield per acre(in bags)	21.12		23.99	
Total production	7825.04		9906.60	-
II : Distribution				
1. As seed	138.93	1.78	206.50	2.08
2. For self consumption	978.13	12.50	1092.3 <b>6</b>	11.03
3. Payments to artisanal and service households	· 46.49	0.59		
4. Payments to agricultural labourers : a) Total	120.31	1.54	_	-
b) for casual labourers	18.00	· -	1 <del></del>	-
c) for permanent servants	32.00	<u> </u>		
d) for cowherds	23 <del></del>	<u>100</u>		
e) for migrant labourers	70.31		1-	
5. Payments towards land rent	418.74	5.35	403.13	4.07
6. Total distribution of paddy	1702.59	21.76	1701.99	17.18
7. Total marketable surplus	6122.45	78.24	8204.61	82.82

Source : Field surveys (sample)

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the agricultural labourers, who were paid their wages only in cash, and the artisanal and service households which experienced the disappearance of Jajmani system in the village. Between 1985-86 and 1993-94, while the quantities of paddy retained for seed and consumption purposes by the households had increased in absolute terms thanks to the increased intensity of cropping and population increase in the village, the absolute quantity of paddy paid as rent declined negligibly due to the reduction in the area under tenant cultivation. Of course, for the payment of rents the declining area under tenancy was offset by the increased rent charged per acre between the two survey years. However, the marketable surplus of paddy had also increased (apart from the increased production of paddy) at the cost of real economic securities provided earlier to agricultural labouers and the artisanal and service households in the village.

#### SOURCES OF AGRICULTURAL INCOMES

So far we are only discussing some of the important sources of agricultural incomes to the households such as cultivation and hiring-out labour, thus leaving out other sources of agricultural incomes such as rents on leased-out land, hiring-out draught animals and self employment in agriculture etc. The computations of agricultural incomes earned from different sources by various categories of households in the village in 1993-94 are presented in Table 20. According to the table, the total agricultural income (for the proceedures adopted in the calculations of agricultural and non agricultural incomes, [see Appendix-21] earned by all hte households worked out to Rs.24,61,146. The same in 1985-86, worked out to Rs.7,94,062.48. Thus the total agricultural income of the village had gone up by 209.94 percent in money terms between the two survey years. Out of the total agricultural income earned in 1993-94, while the sources within the village accounted for 99.32 per cent, the outside sources accounted for a mere 0.68 per cent. And, there was not much of a change in the proportions of agricultural income contributed by within and outside sources.

Of all the sources of agricultural incomes earned by the households, the cultivation of owned land provided the largest source (30.14 per cent) of income followed by hiring-out labour (20.15 per cent) and rental income earned from owned land (13.11 per cent). However, the dominant source of agricultural income continued to be the cultivation of owned land both In 1985-86 and 1993-94. While it accounted for a little

more than one-third of the agricultural income earned in 1985-86, the same accounted for a little less than one-third of the agricultural income earned in 1993-94. Now let us move on to the analysis of its (agricultural income) distribution and growth between the two survey years.

Table 20 shows that the 8 big farmers themselves earned 53.58 per cent of the agcultural income while the rest of 126 households earned the remaining 46.42 per cent of the agricultural income in 1993-94. And, betweent he two survey years there had been only a slight reduction in the share of agricultural income

As against the per household agricultural income Increasing from Rs.7,491.15 to 18,366.76, the per capita agricultural income increased from Rs.1633.87 to Rs.4311.44 between the two survey years. Across the categories, with the exception of big and small farmers, all other categories of households earned less than the average per household and per capita agricultural incomes for the village as a whole in 1993-94. While the per capita agricultural income in money terms had gone up from Rs.1633 to Rs.4311, the same in real terms (deflated by the relevant consumer price Indices for Agricultural Labourers in Tamil Nadu) had gone up from Rs.304 to Rs.405 between the two survey years. Whereas the money rate of growth of per capita agricultural income worked out to 20.50 per cent a year, the real rate of growth of per capita agricultural income worked out to only 4.15 per cent a year. This confirms largely with the real rate of growth of incomes observed in the macro economy.

It is important to note how the mechanisation of agriculture had helped the big farmers with a considerable proportion of agricultural income. They were increasingly hiring out tractors and pumpsets. Both tractors and pumpsets eanred their owners 9.83 per cent of agricultural income in the village

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In 1993-94. In both the survey years, tractors and pumpsets contributed to about one-tenth of agricultural income in the village. Some of the other important sources of agricultural incomes such as rents on leased-out lands, self employment in agriculture, common property resources, use of owned and hired-out bullock labour hardly contributed to 6.88 per cent of the agricultural income earned by all households in the village in 1993-94. However, it is interesting to note that the use of owned inputs In agriculture other than land, labour and tractor services accounted for about 11 per cent of the agricultural income earned in 1993-94. The hiring out labour, especially by agricultural labourers fetched about one-fifth of the agricultural income in our resurvey year. The income earned from this source specifically by the group of agricultural labourers accounted for one-sixth (16.58 per cent) of the agricultural income generated in the village in 1993-94.

#### TABLE 20

# Sourcewise Estimates of Agricultural Incomes Earned by Different Categories in Enathimelpakkam in 1993-94

(All in Rs.)

Category of households	No. of HHs		Agricultural	Incomes ea	arned with	in the villa	ge from th	<b>10</b>
		Cultivation of owned land (on Cost C basis)	Cultivation of leased in land (on Cost C basis)	Rental income earned from the cultiva tion of owned	Rental income earned from the leased- out land	Sale or use of palm products	Collection of fuels from the common lands	Self- employ- ment in agricul- ture

			6935	0.000		(Table co	ntinues	overleaf
As percentage to the total production		30.14	8.23	13.11	2.76	0.04	0.22	2.66
Total	134	741853.40	202570.63	322726.52	67897.83	1000	5325	65410
9. Artisanal and service households	. 2	808.50	2695	485.10		2 <b></b>	<u> </u>	-
8. Non-agricultural casual workers	24	12169.95	4056.65	6470.10	1472.63	-	-	
7. Non-agricultural workers with regular salaried employment	6	2834.92	2 —	1570.80	4260.79		<del>en</del> t	
6. Agricultural labourers	43	6648.34	4665.50	6493.72	981.75	1 000	3225	4200
5. Pure tenants	20	17027.75	69070.32	12546.76	-	( <del>1010</del> )	1000	22687.50
4. Marginal farmers	22	62900	11580.53	45081.96	9149.91		1100	11475
3. Small farmers	9	100143.68	20118.15	42571.20	22580.25	<u>-</u> 1		9760
2. Medium farmers	3 <del>_3</del>	←		· -				<del></del>
1. Big farmers	8	539320.26	90384.4 <b>8</b>	207506.88	29452.50		-	17287.50

Note : HH : Households.

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Category of households		Agrie	cultural Inc	omes ear	ned within	the village	from the	
	Hiring out labour	Owned bullock labour	Hiring out bullocks	Use of own tractor	Hiring out tractor	Sale of pumpet water for irrigation	Supply of owned inputs to agri- culture other than land, labour and tractor	Agri- cultural income earned within the village
1. Big farmers		7 <u></u> 1	i - j.	92200	54480	69381.33	201918	1301931
2. Medium farmers	34 5000	-		- 55	-			
3. Small farmers	<u></u>	7320	2770			26018	22936	254217.28
4. Marginal farmers		<u></u>	- <u></u> -	5.03 8053	<del></del>	-	17850	159137.40
5. Pure tenants	87720	6375	6000			-	23897.50	246324.83
6. Agricultural labourers	408092	-	7000		_	_	1575	443881.31
7. Non-agricultural workers with regular salaried employment	<del></del>	·				-2 <u>1</u>	300	8966.51
8. Non-agricultural casual workers							1230	25399.33
9. Artisanal and service households	1. <del>- 3.</del>	1 <del></del>	1 <del>15</del> 61			2. 	<b>500</b>	4488.60
Total	495812	13695	15770	92200	54480	95399:33	270206.50	2444346.20
As percentage to the total production	20.15	0.5	6 0.64	3.7	<b>'4 2.2</b> 1	3.88	10.98	99.32
2• 25						(Tabl	e continue	as overleaf

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Note : HH : Households.

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Category of households	Agricultural income eamed outside the village	Total agricultural income earned	As percentage of the total village agricultural income	Average agricultural income eamed per HH	H.H. Size	Per capita agricultural income earned in 1993-94
1. Big farmers	16800	1318731	53.58	164841.37	8.63	19100.97
2. Medium farmers	-	1	~			
3. Small farmers	-	254217.28	10.33	28246.36	5.00	5649.27
4. Marginal farmers	-	159137.40	6.47	7233.52	4.09	1768.59
5. Pure tenants	-	246324.83	10.01	12316.24	4.40	2799.14
6. Agricultural labourers		443881.31	18.03	10322.82	3.70	2789.95
7. Non-agricultural workers with regular salaried employment		8966.51	0.36	1494.42	3.67	407.20
8. Non-agricultural casual workers		25399.33	1.03	1058.31	3.54	298.96
0 Ationnal						

9. Artisanal

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and service households	_	4488.60	0.18	2244.30	6.50	345.28
Total	16800	2461146.20	100.00	18366.76	4.26	4311.44
As percentage to	: :					
the total production	0.68	100.00		2 <del></del>	3 <b>—</b> 1	<u></u> 0

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Note : HH : Households.

Source : Estimates based on the filed data (sample).

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#### CHAPTER IV

#### NON-AGRARIAN ECONOMY OF THE VILLAGE

Between 1985-86 and 1993-94, the number of non-agricultural workers doubled.<sup>17</sup> There were 64 nonagricultural workers working mainly outside the village in 1993-94, in comparison to only 34 in 1985-86 (in Table 4). And there were very few female non-agricultural workers engaging in very low income occupations such as cooks in noon meal centres and ayas in balwadis (Kinder Garten) in 1993-94. The castewise composition of non-agricultural workers (in Table 2) reveals that out of 64 only 10 belonged to the scheduled castes with the remaining 54 belonging to the upper castes. Thus the non-agricultural occupations available outside the village were taken advantage of mainly by the upper caste landed households in the village. However, out of the 64 non-agricultural workers in the village, only 6 were engaged in regular salaried employment outside the village. And they too belong to the upper caste land owning households in 1993-94. Hence a majority of non-agricultural workers (58 out of 64) were engaged in low wage casual occupations available outside the village. These casual non-agricultural occupations were available mainly in industry and in urban informal sector.

Some of the sources of non-agricultural incomes to the households within the village include the rearing of livestock, petty trade, government employment and pensions in 1993-94. By contrast, some of the additional non-agricultural occupations available within the village in 1985-86 include trading in paddy and money lending. Nevertheless, there developed no worthwhile non-agricultural occupations within the village even in 1993-94. Even tractor and pumpset repairing, rice milling, dairy and poultry development which could all have been done within the village were carried out in the nearby town of Gummidipundi. As far as the non-agricultural occupations available outside the village are concerned, they included the employment in the construction of factory sheds at Gummidipundi, government employment available mainly in Madras city and employment in private trades in neighbouring towns and the Madras city. And all the non-agricultural workers commute to their work places even while residing in the village.

The non-agricultural incomes earned by different categories of households in 1993-94 are shown in Table 21. According to the table, the total non- agricultural income earned by all categories of households, both within and outside the village, in 1993-94 worked out to Rs.6,50,580. The same in 1985-86 was Rs.1,89,340. In short, the total non- agricultural income of the village had gone up by 243.60 per cent between the two survey years. Thus there was a significant increase in the total non- agricultural income earned by the households of the village over the years. Along with the increase in the absolute incomes earned from non- agricultural sources, there had also been an increase in the share of non-agricultural income contributed by the sources outside the village in our resurvey year. While the non-agricultural sources outside the village contributed to 72.26 per cent of the non- agricultural income, the non-agricultural sources within the village contributed to the remaining 27.74 per cent in 1993-94. On the contrary, within and outside the non-agricultural sources each contributed to half of non-agricultural income in 1985-86. However, the expansion in non-agricultural employment to the workers of the village between the two survey years had helped to reduce the concentration of non-agricultural incomes among the households. The Glni coefficients calculated for this purpose showed them to be 0.5058 in 1985-86 and 0.4764 in 1993-94.

Of all the sources of non- agricultural incomes earned by the hosueholds in 1993-94, while casual labour occupations available outside the village accounted for two-fifths, the regular salaried employment available outside the village accounted for one-fifth of the non- agricultural income in 1993-94. Thus these two sources emerged as the major non- agricultural sources of incomes to the households by 1993-94. The livestock rearing within the village and the employment in trade and transport services available outside the village came to account for considerable proportions (12 to 15 per cent) of non-agricultural income earned in 1993-94.

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# Sourcewise Estimates of Non-agricultural Incomes Earned by Different Categories in Enathimelpakkam in 1993-94

		Sources	Sources of non-agricultural incomes within the village							
Category of households	No. of HHs	Rearing live stock	Money- lending	Trade	Services	Govt. employment & pensions	cultural income earned within the village			
1. Big farmers	8	15900	6300	<u> </u>						
2. Medium farmers		No. 24	~~	<u>800</u>	"(a		22200			
3. Small farmers	9	10100			13 <b></b>		:::			
4. Marginal farmers	22	16200		18000	1200	<del>, 1</del>	10100			
5. Pure tenants	20	15600	~~	-	1200	2 <sub>10</sub>	35400			
6. Agricultural labourers	43	33100		× 19			15600			
7. Non-agricultural workers with regular salaried	-12									
employment	6	2300	50 <b></b>	-	11-20106. 		2300			
8. Non-agricultural casual workers	24	2300	-	36000	10800	1800	50900			

#### 9. Artisanal and

service households	2	900	-		10000		10900
Total	134	96400	6300	54000	22000	1800	180500
As percentage to the total		14.82	0.96	8.30	3.38	0.28	27.74
				222 a			

•

No : Number

(Table continues overleaf)

52

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HH : Households

52

35

35

-1

42

Category of households	Sources incomes	of non-agr outside the	icultural • village	Non- agricultura	Total I non-	As percen-	Average non-agri-	House- hold size	Per capita non- agricul- tural income
	Regular salaried employ- ment	Trade and transport services	Casual labour occu- pations	income earned outside the village	agricul- tural income earned	tage to the total	cultural income earned per HH in 1993-94		
1. Big farmers	- 41.4 2 <sup>- 1</sup> .	20000	51000	71000	93200	14.33	11650	8.63	1349.94
2. Medium farmers	-		_		_	_	_	_	-
3. Small farmers	32400	25200	•	57600	67700	10.41	7522.22	5.00	1504.44
4. Marginal farmers	10 <del></del>	_	53600	53600	89000	13.68	4045.45	4.09	989.11
5. Pure tenants	6000	_	21000	27000	42600	6.55	2130	4.40	484.09
6. Agricultural labourers		-	10000	10000	43100	6.62	1002.32	3.70	270.89
7. Non-agricultura workers with	ป ศ ะ		<i>A</i>						
regular salarie employment	94800		6480	101280	103580	15.92	17263.33	3.67	4703.90
8. Non-agricultura casual worker	al 's —	36000	78600	• 1 <b>14600</b>	165500	25.44	6895.83	3.54	1947.97

and service households			35000	35000	45900	7.05	22950	6.50	3530.76
Total	133200	81200	255680	470080	650580	100.00	4855.07	4.26	1139.68
As percentage to the total	20.47	12.48	39.30	72.26	100.00		_	-	_

Source : Field survey (census and sample).

9. Artisanal

Among the categories, whereas the non-agricultural casual workers earned one-fourth of the nonagricultural income the rest of 8 categories earned the remaining three-fourths of the non-agricultural income in 1993-94. Between 1985-86 and 1993-94, while the per household non- agricultural income earned increased from Rs.1786 to Rs.4855, the per capita non-agricultural income earned increased from Rs.390 to Rs.1139. Thus, per household and per capita non-agricultural incomes in the village went up by several times thanks to the increased diversification of the village economy between the two survey years. And, it is worth noting that the increased diversification of the village economy was brought about even while the intesification of agriculture within the village was taking place. However, compared to 1985-86, the particular group of landless agricultural labourers came to depend more on non- agricultural occupations such as sheep and goats rearing within the village and casual employment in nearby industry mainly to supplement their agricultural incomes earned within the village in 1993-94.

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#### **GROWTH CENTRES AND THE WEAKER SECTIONS**

The increased dependence on the external economy, at least by one-fourth of the households in the village in the resurvey year, necessitates the discussion on rural, urban and industrial growth centres — all of which came up within a commutable distance of the village. And these growth centres had produced differential effects on the economic conditions of the weaker sections. With the intensification and modernisation of agriculture, Enathimelpakkam itself emerged as one of the rural growth centres in the taluk over the years attracting a large number of in-migrant agricultural labourers almost every year even from far away places. Besides, the village had also attracted 10 in-migrant scheduled caste hosueholds to settle down there on a permanent basis between the two survey years. However, as against the employment of a large number of in-migrant agricultural labourers in the resident agricultural labourers preferred to secure employment in the neighbouring villages. Instead, they opted for non-agricultural employment available in the neighbouring towns. Hence the village which by Itself emerged as one of the rural growth centres in the taluk benefited a large number of in-migrant agricultural labourers to go for non-agricultural work available <sup>4</sup> outside the village.

Thus the adult workers of the village had to depend mainly on urban and industrial growth centres which came up in their neighbourhoods in the 1980s. As has already been said out of 64 non-agricultural workers in the village, while 6 worked as regular salaried employees in Madras city and in the neighbouring towns, the remaining 58 were employed mainly in low wage paid casual labour occupations available mainly outside the village. Again ten of the 58 non- agricultural casual workers, worked within the village as cooks in the noon meal centres, ayas in Kinder gartens, watchmen at drinking water pumpsets and in running petty shops. While those who run petty shops in the village earned about Rs.600 per month, all others who worked within the village who earned less than even Rs.200 per month in 1993-94. Out of the remaining 48 non-agricultural casual workers who worked outside the village, while 10 workers were engaged in selfemployment as masons, painters, electricians and traders, the remaining 38 were employed in the urban informal sector and in the construction of sheds for medium scale industries set up by the Small Industries Promotion Corporation of Tamil Nadu (SIPCOT) at Gummldipundi in 1993-94. Whereas those who engaged in self employment in some non-agricultural cocupations available outside the village could earn about Rs.1000 per month, all others eamed a daily wage rate of Rs.25 which was often lower than the wage rates paid to agricultural labourers within the village in 1993-94. However, these workers could earn Rs.500 to Rs.600 per month in our resurvey year. And at the outset it is very clear that most of the non-agricultural casual workers could not have overcome their poverty with these kinds of incomes earned in the urban and industrial growth centres in 1993-94. But remaining in agriculture could have further worsened their economic condition because of the reduced average agricultural employment and incomes earned within their own village. Thus they provided cheap labour to their industrial and urban employers who exploited them to the maximum. However, compared to 1985-86, the spread effects of urban and industrial growth centres were becoming more and more visible with the weaker sections of the village depending on them either for their major sources of income or for their supplementary sources of income<sup>18</sup> by 1993-94.

#### GROWTH AND DISTRIBUTION OF TOTAL INCOME

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The calculations of total incomes earned by the households both from agricultural and non- agricultural sources are provided in Table 22. Between 1985-86 and 1993-94, the total income of the village had gone up from Rs.9,83,402.48 to Rs.31,11,726.20 representing an increase of 216.42 per cent. During the same period, while the per household total income increased from Rs.9277.33 to Rs.23,221.83, the per capita income increased from Rs.2025.63 to Rs.5451.13. Thus as against the per household income which increased by 150 per cent, the per capita income increased by 169 per cent between the two survey years. The simple annual rate of growth of per capita income in money terms worked

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# Agricultural and Non-agricultural incomes : Categorywise Distribution in Enathimelpakkam in 1993-94

Category of households		No. of HHs	Agricul- tural income	As per- centage to the categ- ory's income	Non- agri- cultural Income	As %age to the categ- ory's income	Total income eamed by the category	As %age to the total village income	Average income eamed per HH	House- hold size	Per capita Income eamed in 1993-94
			(in Rs.)		(in Rs.)		(in Rs.)		(in Rs.)		(in Rs.)
1.	Big farmers	8	1318731	93.40	93200	6.60	1411931	45.37	176491.37	8.63	20450.91
2.	Medium farmers		-	3 <del></del> 77			-	-	_		
3	Small farmers	9	254217.28	78.97	67700	21.03	321917.28	10.35	35768.58	5.00	7153.71
4.	Marginal farmers	22	159137.40	64.13	89000	35.87	248137.40	7.97	11278.97	4.09	2757.69
5.	Pure tenants	20	246324.83	85.26	42600	14.74	288924.83	9.29	14446.24	4.40	3283.23
6.	Agricultural Iaboure <b>rs</b>	43	443881.31	91.15	43100	8.85	486981.31	15.65	11325.14	3.70	3060.84
7.	Non-agricultural workers with regular salaried employment	6	8966.51	7.97	103580	92.03	112546.51	3.62	18757.75	3.67	5111.10
8.	Non-agricultural casual workers	24	25399.33	13.31	165500	<b>8</b> 6.69	190899.33	6.13	7954.13	3.54	2246.92
9.	Artisanal and service households	.2	4488.60	8.91	45900	91.09	50388.60	1.62	25194.30	⊶ 6.50	3876.04
Tơ	al	134	2461146.20		650580	1. <b></b>	3111726.20	100.00	23221.83	4.26	5451.13

As percentage

to the total - - 79.09 - 20.91 100.00 - - - - - Source : Estimates based on the field data (census and sample).

out to 21 per cent. But the conversion of the same into real incomes (deflated by the Consumer Price Index for Agricultural Labourers relating to Tamll Nadu) showed them to be increasing from Rs.377 in 1985-86 to Rs.512 in 1993-94. The simple annual rate of growth of real per capita income between the two survey years worked out to 4.47 per cent. And this is not much different from the rates of growth obtained at the state and national levels during the recent years. However, the per capita money income of the village at Rs.5451.13 in 1993-94 was not much different from the state level per capita income<sup>19</sup> of Rs.5078 (Quick estimates) in 1991-92. The Gini coefficient for the total incomes among the households revealed them to be declining from 0.5547 in 1985-86 to 0.5175 in 1993-94. Thus, there had been a considerable decline in the concentration of total income among the households thanks to the increased inflow of non-agricultural incomes earned from outside the village between these years.

Of the total income of Rs.31,11,726 earned in 1993-94, while agricultural sources accounted for 79.09 percent, the non agricultural sources accounted for the remaining 20.91 per cent. Due to simultaneous increases in the incomes earned from both agricultural and non-agricultural sources, their proportional contributions to total income more or less remained the same both in 1985-86 and 1993-94. But, as against one-fifth of the households depending on non agricultural occupations as their major sources of income in 1985-86, one-fourth of the households came to depend on the same as their major sources of income in 1993-94.

Over the categories, while the 8 big farmers themselves accounted for 45.37 per cent of income, the remaining 8 categories representing the rest of 126 households in the village accounted for 54.63 per cent of income. Though there had been a decline in the concentration of total income among the households between the two survey years the total income is still highly skewed among them. This is also because of the high concentrations of owned and operated areas among the households even in our resurvey year of 1993-94. However, across the categories, with the exception of big and small farmers and the artisanal and service households, all other categories of households earned less than the village average per household income in 1993-94. In the same manner, with the exception of big and small farmers, all other categories of households earned less than the village level per capita income in 1993-94.

#### CREDIT

Based on the sample data we have estimated (see Appendix-3) both the incidence of borrowing and the amounts of borrowing by purposes and sources across the categories in 1993-94 are given respectively in Tables 23, 24 and 25. According to Table 23, out of 134 households, 122 households were in debt. And the incidence of borrowing among the households had gone up from 83.96 per cent in 1985-86 to 93.04 per cent in 1993-94. The estimated average total debt amount outstanding per indebted household had gone up from Rs.8,403.90 to Rs.10,284 between these two years. Thus both the incidence and the volume of borrowing among the households had gone up between the two survey years. Over the categories, with the exception of half of the non-agricultural casual worker households, all others were in debt in 1993-94. Again, with the exception of big and small farmers, all other categories average total debt amount outstanding per indebted household was lower compared to the same at the village level in 1993-94.

#### TABLE 23

Incidence of Borrowing among Different Categories in EnathImelpakkam in 1993-94

Cate	egory of seholds	Total No. of HHs	Number of sample HHs	Number of sample HHs in debt	Estimated number of HHs in debt	Estimated average total debt amount outstanding per indebted HH (in Rs.)
1.	Big farmers	8	4	4	8	64750
2.	Medium farmers	<u> </u>		-	-	<u></u>
3.	Small farmers	9	3	:: 3	<b>9</b> .	25000
4.	Marginal farmers	22	6	× 6	22	8550
5.	Pure tenants	20	7	7	<b>20</b>	6600
6.	Agricultural labourers	43	10	10 👒	43	2478
7.	Non-agricultural workers with regular salaried employment	6	2	2	6	8000
8.	Non-agricultural casual workers	24	6	3	12	2375
9.	Artisanal and service households	2	2	2	2	4250
- <u>-</u>	Total	134	40	37	122	10284
As	percentage to the total				91.04	

Source : Estimates based on the field data (sample).

Table 24 provides the data on purposes of borrowing by different categories of households in 1993-94. At the village level, while 53 per cent of the amount was borrowed for productive purposes, the remaining 47 per cent of amount was borrowed for unproductive purposes. By contrast, in 1985-86, whereas two-thirds of the amount was borrowed for porudctive purposes, the remaining one-third of the amount was borrowed for unproductive purposes. Thus, there had been an increase in the amounts borrowed for unproductive purposes both in absolute and relative terms between the two survey years. In absolute terms, while the productive debt incurred per household had gone up from Rs.4181.43 to Rs.4970, the unproductive debt incurred per household had gone up from Rs.2194.35 to Rs.4393 between 1985-86 and 1993-94. Between these two years, as against the productive borrowing increasing by 50.26 per cent, the unproductive borrowing Increased by 153 per cent. The total debt amount outstanding at the village level had gone up from Rs.6,75,835 to Rs. 12,54,654 representing an increase of 85.64 per cent between the two survey years. However, the construction of new houses and the renovation of old houses as well as the purchases of costly consumer durables such as television sets by the households largely explain the sharp increase observed in the unproductive borrowing by the households largely explain the sharp increase observed in the unproductive borrowing by the households largely explain the sharp increase observed in the unproductive borrowing by the households between 1985-86 and 1993-94.

#### TABLE 24

# Estimated Amounts of Borrowing by Purpose over the Categories in Enathimelpakkam in 1993-94

(All in Rs.)

Category of households		Total No.	Estimated amount	Purposes of borrowing		Estimated average	d Estimated average unprodu-	d Estimated average J- total	Estimated Iotal average	Per HH income to debt
		HHs	borrowing	Produ- ctive	Unprodu- ctive	tive debt per HH	tive dept per HH	dept per HH	income earned per HH	ratio
1.	Big farmers	8 (5.97)	518000 (41.29)	240000 (46.33)	278000 (53.67)	30000	34750	<b>647</b> 50	176491.37	2.72
<b>2</b> .	Medium farmers	\$1 <u></u> 7	-	-			-	-		-
3.	Small farmers	9 (6.72)	225000 (17.93)	162000 (72.00)	63000 (28.00)	18000	7000	25000	35768.58	1.43
4.	Marginal farmers	22 (16.42)	188100 (14.99)	93500 (49.71)	94600 (50.29)	4250	4300	8550	11278.97	1.32
5.	Pure tenants	20 (14.93)	132000 (10.52)	100000 (75.76)	32000 (24.24)	5000	1600	6600	14446	2.19
6.	Agricultural labourers	43 (32.08)	106554 (8.49)	64500 (60.53)	42054 (39.47)	1500	<b>978</b>	2478	11325.14	4.57
<b>7</b> :.	Non-agricultural workers with			بر				·		
	regular salaried employment	6 (4.48)	48000 (3.83)	 (100.00)	48000		8000	8000	18757.75	2.34
8.	Non-agricultural casual workers	24 (17.91)	28500 (2.27)	6000 (21.05)	22500 (78.95)	250	937.50	1187.50	7954.13	6.70
9.	Attisanal and <sup>s</sup> service households	2 (1.49)	8500 (0.68)	 (100.00)	8500	æ	4250	4250	25194.30	5.93
T	otal	134	1254654	666000	588654	4970	4393	9363	23221.83	2.48
A to	s percentage the total	алынана на Ф <u></u>	091 • 	53.08	46.92	2 2 2			1996 - 1997 - 199 	

Note : While figures in parantheses in columns 1 and 2 are percentages to their respective village totals, the figures in parantheses in columns 3 and 4 are percentages to their respective category's total.

Source : Estimates based on the field data (sample).

Among the categories, with the exception of non-agricultural regular salaried employees and the artisanal and service households, all other categories borrowed both for productive and unproductive purposes. And of all the categories, the non-agricultural casual workers borrowed the least either for productive or for unproductive purposes in the village. In the remaining categories, whereas the big and small farmers, pure tenants and agricultural labourers borrowed more for productive purposes, marginal farmers borrowed more or less equal amounts for productive and unproductive purposes. The artisanal and service households borrowed only for unproductive purposes.

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in the table we have also calculated the per household income to debt ratios across the categories. Between 1985-86 and 1993-94 the village level per household income to debt ratio had gone up from 1.45 to 2.48 indicating a declining debt burden of the households (while the low income to debt ratio indicates the high debt burden, the high income to debt ratio indicates the low debt burden). Over the categories, whereas the small and marginal farmers experienced high debt burdens, all other categories experienced low debt burdens in 1993-94. And, this had implications for the incomes earned by different categories of households in the village. Nevertheless, the increased incomes earned by the households both from agricultural and non-agricultural occupations explain the declining debt burdens of the households between the survey years.

The estimated sources of borrowing by different categories of households in 1993-94 are presented in Table 25. Out of the estimated total debt amount of Rs.12,54,654, while the low interest rate charging banks provided 33.21 per cent, the high interest rate charging money lenders provided 24.95 per cent. Merchants provided 21.63 per cent of total debt amount in 1993-94. Thus, these three sources of credit accounted for four-fifths (79.79 per cent) of the estimated debt amount in 1993-94. Compared to 1985-86, when the low interest rate charging banks provided more than half of the credit requirements of the village in 1993-94, they provided only one-third of the credit requirements of the village with the remaining three-fourths being provided by private sources. Thus private sources of credit gained importance over public sources of credit between the survey years. And it is interesting to note that the merchants who provided

only one-eight (12.43 per cent) of the credit requirements of the village in 1985-86 came to provide more than one-fifth of the credit requirements by 1993-94. Hence the village had witnessed increasing merchant activity consequent to increased commercialisation of agriculture over the years. They also provided more credit because of the increased cash costs of paddy cultivation in the village.

Over the categories, while the big farmers emerged as the major beneficiaries of low interest rate charging institutional sources of credit, the small and marginal farmers continued to borrow more from the high interest rate charging money-lenders. As far as merchants who provided mostly the short term loans for production purposes are concerned, the big farmers borrowed the most from them followed by small and marginal farmers and the pure tenants. And the merchants provided loans largely against the grain purchases in the post-harvest season when the prices of paddy were low. Of the estimated amounts of borrowing by each of the categories, the big farmers themselves borrowed more than two-fifths of the total credit amount of the village in 1993-94. And a large proportion of this debt amount was incurred by them either to acquire more assets such as tractors and pumpsets or to meet short term working capital requirements of agriculture.

#### UTILISATION OF COMMON PROPERTY RESOURCES (CPRs)

18 16

The village has no common lands except its tank and ponds. There is also no grazing land for animals. And it has no poromboke lands even for firewood collection by the households. Hence the households usually depend on the neighbouring village common lands for animal grazing and firewood collection. In 1985-86, we noted the auctioning of fish available in the tank and ponds and tamarind fruits from the trees grown on the tank bund. The incomes from auctions were also shared equally by scheduled castes

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# Estimated Amounts of Borrowing by Source Across Different Categories in EnathImelpakkam in 1993-94

(All in Rs.)

Category of households	<b>Total</b> No	Sources of borrowing							
	of HHs	Banks	nks Employer organi- sations	Employers in non- agricultural occupations	Landlords	Money lenders	Merchants	Others (including friends & relatives)	borrowing by each category
1. Big farmers	8	<b>328000</b> (63.32)	-		-	20000 (3.86)	110000 (21.24)	60000 (11.58)	518000 (100.00)
2. Medium farmers	31 3 <del></del> 5	_	-	-		_	-	-	: <b>—</b> s
3. Small farmers	9	-	<u>1999</u>		12 <u></u> 22	135000 (60.00)	9000 (40.00)		225000 (100.00)
4. Marginal farmers	22	41433 (22.02)	-	» <del>–</del>		121000 ( <del>6</del> 4.33)	18333 (9.75)	7334 (3.90)	188100 (100.00)
5. Pure tenants	20	-	-	2 <del></del>	25714 (19.48)	20000 (15.15)	37143 (28.14)	49143 (37.23)	132000 (100.00)
6. Agricultural labourers	43	47300 (44.39)	-	-	43000 (40.35)	<b>.</b>	12900 (12.11)	3354 (3.15)	106554 (100.00)
7. Non-agricultural workers with regular salaried employment	6	-	30000 (62.50)	-		15000 (31.25)	<del>a -</del> izi	3000 (6.25)	48000 (100.00)
8. Non-agricultural casual workers	24	-	-	16000 (56.14)	-	-	-	12500 (43.86)	28500 (100.00)
9. Artisanal and service households	2	<u></u>	-		3000 (35.29)	2000 (23.53)	3000 (35.29)	500 (5.88)	8500 (100.00)

Total	134	416733	30000	16000	71714	313000	271376	135831	1254654
As percentage to the total	-	33.21	2.39	1.27	5.72	ت 24.95	21.63	10.83	100.00

Note : Figures in brackets are percentages to the respective category's total debt amount.

Source : Estimates based on the field data (sample).

by scheduled castes and non-scheduled caste leaders so as to spend on the renovation of old temples and in conducting ceremonies for the deities of these temples. But there was no evidence of either these old temples being renovated or ceremonies being conducted to the deities of these temples till 1993-94. Instead, three new temples were constructed by each of the caste groups of Mudaliars, Chettlars and the scheduled castes in their respective residential areas of the village by our resurvey year. And the appropriation of incomes earned earlier through fish and fruit auctions by upper caste and scheduled caste leaders necessitated the people to agitate and withdraw their consent for auctions in the early 1990s. Hence the incomes earned from these sources were simply neglected. Thus the households neither collectively nor individually benefited from the availability of these common property resources in the village. However, the fuel needs of the poor households such as the landless agricultural labourers and the small land owning chettiar households were met by the collection of twigs and branches of trees grown in the neighbouring village common lands and the cow dung collected from road sides. (cow dung is converted into cakes and dried up on the walls before being used as fuel). And none of the households was seen using crop residuals for fuel purposes. The animals owned by the households were taken everyday for grazing in the neighbouring village common lands.

In our earlier survey, we observed the sale of encroached (illegal occupation) lands by the scheduled caste households in the neighbouring village tank foreshore which is at a distance of one kilometer from their residences. Twenty scheduled caste households belonging to the village encroached about 60 acres of land in the neighbouring village tank foreshore in the late 1970s and the early 1980s taking advantage of the livestock distributed to them by the government under its Integrated Rural Development Programme (IRDP). By mid-80s, we observed half of these households selling half of the encroached lands at Rs.3000 per acre. By 1993-94, we observed even the other half of these households which retained their encroached lands in the mid-80s selling away their lands at Rs.5000 per acre. They also sold away the livestock supplied to them under IRDP along with their encroached lands in 1993-94. This has resulted in a substantial reduction in the incomes earned from common property resources by the households in 1993-94. And the common property resources were slowly replaced by the collective property resources such as the caste group owned temples in the village. Besides, the development of private property resources such as the installation of new pumpsets led to the total negligence of common property resources such as tak to a stark and ponds.

#### IMPLEMENTATION OF PUBLIC PROGRAMMES

In the mid-80s, we found the village to be receiving preferential treatment from the government in implementing some of the specific target and household - development programmes. Starting in late 1970s, the government had first constructed 40 pucca houses in new sites for the scheduled caste agricultural labourers and tenants. This was followed by the distribution of livestock on loan-cum-subsidy basis to the same households under IRDP in the early 1980s. Later some of the SC households which were not provided with pucca houses earlier were given housing loans at concessional rates of interest. This was also followed by the inclusion of some of the scheduled caste old women in the government's Widow Relief Pension scheme. Hence between mid-70s and

mid-80s, government had concentrated very much in the development of landless scheduled caste agricultural labourers in the village. This had led to the open discrimination of upper caste landless poor households in the village by the government then.

By 1993-94, the developmental agencies of the government had turned their attention to the general development programmes of the village. This shift in government attention also came because of the failure of the scheduled caste households either to retain the livestocks provided to them or to repay the loans taken while purchasing the animals under the IRDP. As part of the general development programme of the village, the government had provided drinking water facilities to all the households in the village through overhead tank. It also laid a metal road linking the village to the neighbouring towns by buses. The period between our two surveys had also witnessed the construction of new buildings for Panchayat office and primary school located in caste quarters of the village and Balwadi (Kinder garten) located in the scheduled caste colony. Of these three buildings, the panchayat office and Balwadi were constructed with the help of funds provided by the government under its Jawahar Rojgar Yozana. Between the two survey years we found the village being included in the telecommunication map of India. As a result, a tall telecommunication tower has been erected in the center of the village for the benefit of the households to have trunk call and STD dialing facilities. By our resurvey year, three big farmers had already acquired the telephone facilities. One another facility which has been implemented in the village for a long time is the running of a fair price shop by the government under its public distribution system (PDS). For reasons unknown, this has been run by a non-resident in the place provided by a residenbt big farmer in the village. Hence some misappropriation and bias in the running of the fair price shop are becoming inevitable. Though the distribution of essential consumer • items such as sugar and kerosene among the households improved considerably between the survey years, the distribution of staple food item such as rice, especially among the landless scheduled caste

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agricultural labourers, had yet to be improved. Very often the rice, supplied to the fair price shop was substandard. In addition since the fair price shop was opened only for one or two days in a month it was not possible for the landless households to buy their daily requirements of rice. Hence they continued to depend on the open market for the purchases of reasonable quality rice at much higher prices. However, compared to 1985-86, there was not much of a difference in the open market and PDS prices of rice. Whereas in 1985-86 PDS supplied its rice at less than hall of the open market price (Rs.1.50 as against the open market price of Rs.3.50 per Kg. in 1985-86), in 1993-94 PDS supplied the same at two-thirds of the open market price (Rs.5.00 per kg. as against the open market). Some times the government allotted rice did not reach the fair price shop because its contractor preferred to sell the same in the open market for a profit.

#### CHANGES IN LEVELS OF POVERTY

The sample and estimates of different types of poverty (absolute, abject and relative) prevailing in the village in 1993-94 are presented in Tables 26 and 27. (the procedures adopted for the estimations of poverty are given in appendix - 4). For the calculations of head-count ratios of absolute poverty, we have taken the rural poverty line of Rs.15 at 1960-61 prices. This poverty line income is corrected by the consumer price Index for Agricultural Labourers (CPIAL) relating to Tamil Nadu in the year 1993-94. By using this index which was 1064 in our resurvey year, we obtained the current poverty line income as Rs.1920 per capita per year.<sup>20</sup> For the calculations of abject poverty, we have taken half of this poverty line income of Rs.960. Relative poverty is calculated based on the village level per capita income of Rs.5451 in 1993-94.

Table 26 shows that an estimated 42.53 per cent of households and 45.18 per cent of population were in absolute poverty in 1993-94. While there was none in abject poverty, there were 77.61 per cent of households and 71.97 per cent of population in relative poverty in our resurvey year. However,

the absolute poverty prevailing in the village in 1993-94 was higher compared to the state level figure of 43.13 per cent (both rural and urban) in 1987-88 for which the latest data are available. Compared to the village (in Table 27) in 1985-86, we found that, while the head-count ratio of absolute poverty declined marginally, the head-count ratio of relative poverty declined considerably by 1993-94. And, it is encouraging to note that the abject poverty was completely eliminated between the two survey years. However, Tables 26 and 27 show the continued high levels of poverty without any significant declines over the years. And this situation was brought about despite significant increases in agricultural production and productivity ever since the introduction of green revolution technologies in the village in 1970-71. But for the occupational diversification of a part of the workforce, the poverty levels in the villave could have been much higher in 1993-94.

As far as occupational poverty prevailing in the village in 1993-94 is concerned, Table 26 shows that absolute poverty was concentrated among the non-agricultural casual workers. About 93 per cent of non-agricultural casual workers were found to be in absolute poverty in 1993-94. They were followed by the pure tenants with 60 per cent of them living in absolute poverty in the same year. And half of the marginal farmers and agricultural labourers were in absolute poverty. Comparisons between 1985-86 and 1993-94 in Table 27 reveal that while small farmers were not at all in absolute poverty in the later year, there had been considerable declines observed in the absolute poverty levels of marginal farmers and agricultural labourers thanks to the increased intensification of agricultural activities between these years. But the level of absolute poverty in the case of pure tenants had gone up mainly due to the declining area under tenancy and the increased rent charged per acre. Further, as against the small farmers and the artisanal and service households experiencing the lowest and highest levels of absolute poverty respectively in 1985-86, none from these

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# Sample and Estimated Numbers of Households and Persons in Poverty among Different Categories in Enathimelpakkam in 1993-94

					Sam	ple		12 - 20215, 20215, 20215
Category of households	gory of No. of sample		Absolute poverty		Relative	Poverty	Abject	Poverty
	HHs	persons	No. of HHs	No. of persons	No. of HHs	No. of persons	No. of HHs	No. of persons
1. Big farmers	4	26	3 <del>14</del>	_		_	***	-
2. Medium farmers	1.000		***		and the second s	3 <del></del>	19 <del>1 - 1</del> 9	ä
3. Small farmers	3	18	3	-		—	-	-
4. Marginal farmers	6	30	3	16	6	30	***	<u></u> 51
5. Pure tenants	7	33	3	20	5	26	-	-
6. Agricultural labourers	10	51	4	25	10	51	т. —	_
7. Non-agricultural workers with regular salaried employment	2	11				_	1 <del></del> (1)	
8. Non-agricultural								
casual workers	6	28	5	26	6	28		3 <del></del>
9. Artisanal and service households	2	13		31 2 <del>000</del> 1	1	8		13 <del></del> -
Total	40	210	15	87	28	143	in an	_
As percentage to the total			37.50	41.43	70.00	68.09	8 <del>-3</del>	
Note : No: Number; HHs	: Househo	olds.					( Tat	ole continues)

2.1

· · · · · · · · · · · · · · · · · · ·		81				Estimat	es		
Category of households	Total No. of	Total No. of	Absolute	poverty	· Relative	poverty	Abject	poverty	Percentage of cate-
3	HHs	persons	No. of HHs	No. of persons	No. of HHs	No. of persons	No. of HHs	No. of persons	gory's population in absolute poverty
1. Big farmers	8	89		s <u></u>		<b></b> 0	<u> 1960-197</u>	51 <u></u>	
2. Medium farmers		<del></del>	=	<del></del>	-	-	-		
3. Small farmers	9	45	1 <del></del>		3	3 <del></del> 51	<del></del> 01		
4. Marginal farmers	22	90	11	48	22	90	<u></u> -	•	53.33
5. Pure tenants	20	88	9	53	14	69	-	-	<b>60.23</b>
6. Agricultural labourers	43	159	17	78	<b>43</b> **	159	÷		49.05
7. Non-agricultural workers with regular salaried									
employment	6	22		-	1 1221	3 <del>. 3</del>	-	<b></b>	-
8. Non-agricultural casual workers	24	85	20	79	24	85	-	<del>~~</del>	92.94
9. Artisanal and service household	ds 2	13	-	***	1	8	<u>2.05</u>	0 <u></u> 1	5- <u></u>
Total	134	571	57	258	104	411		-	
As percentage to th	ne total	_	-	42.53	45.18	77.61	71.97	_	

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Source : Estimates based on the field data (sample).

TABLE 26 (continued)

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# Changes in the Estimated Levels of Poverty Across the Categories In Enathimelpakkam between 1985-86 and 1993-94

		1985-86		1993-94				
Category of households	Percer	ntage of categ population in	jory's	Percentage of category's population in				
2	Absolute poverty	Relative - poverty	Abject poverty	Aþsolute poverty	Relative poverty	Abject poverty		
1. Big farmers	1			: <del></del> :		1		
2. Medium farmers			-	: <del></del>	<u>4980</u> 9	<del></del> )		
3. Small farmers	38.24	85.28	200	-	÷	=		
4. Marginal farmers	84.38	100.00		53.33	100.00			
5. Pure tenants	53.34	100.00	13.34	60.23	78.41			
6. Agricultural labourers	60.24	100.00	15.65	49.05	100.00	_		
7. Non-agricultural workers with regular salaried employment	30.75	69.22	, <del>,,,,,</del> ,,		9) 19 <del></del> ,	.≍ -		
3. Non-agricultural casual workers	J	-		92.94	100.00	ic <b></b> )		
9. Artisanal and service households	80.00	100.00	· <u>—</u>	38 <u> </u>	61.54	-		
Percentage of			ks.	53 <b>42</b> 6.45 (54	8 8 w m	<u> </u>		

total village population

in poverty	47.10	76.07	6.19	45.18	71.97	
(N 12) 10 10			: <b>•</b>			

Source : Estimates based on the field data (sample).

occupational groups experienced any absolute poverty in 1993-94. Again, whereas the absolute poverty was concentrated among the marginal farmers in 1985-86, the same was concentrated among the non-agricultural casual workers in 1993-94. Thus there had been a shift in the concentration of absolute poverty from agricultural households to non-agricultural households over the years. And this shift was only a spill over effect of changes in agricultural activities in the village between the two survey years. Moreover, Table 27 provides some evidence for the trickling-down benefits of agricultural growth to the small and marginal farmers and agricultural labourers during the recent years.

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#### CHAPTER V

#### CONCLUDING OBSERVATIONS

Between 1985-86 and 1993-94 the village witnessed some of the crucial changes both in its agricultural and non-agricultural sectors of the economy. Demographically, the village had a higher rate of growth of population compared to its own taluk and district thanks to the in-migration of scheduled caste agricultural labour households in the late eighties. The village continued to have not only half of its population illiterate but also unfavourable sex-ratios over the years. The village also experienced greater diversification of its economic activities with one-fourth of its households depending on non-agricultural occupations available outside the village for their livelihoods. Of the eleven caste groups, the scheduled castes continued to dominate the demographic structure of the village accounting for two-fifths of the total population. While a large number of cultivators and non-agricultural workers belonged to the land owning upper castes a large number of agricultural labourers and the pure tenants belonged to the scheduled castes in 1993-94.

The residents and non-residents continued to own each about half of the land in the village even in our resurvey year. Within the village, the land ownership was found to be highly concentrated among the resident households despite a marginal reduction observed in it between the two survey years. The total livestock ownership had also gone up despite a sharp decline observed in the number of bullocks owned by the residents. And, it is encouraging to note that that the declining number of bullocks was associated with the increasing number of sheep and goats reared by the scheduled caste agricultural labour households in the village. The period under study also witnessed further additions to the numbers of pumpsets and tractors indicating increased degree of mechanisation of agriculture in the village. This was also associated with the sharply declining number of wooden implements owned and used in agriculture. Between 1985-86 and 1993-94, there had been a decline observed in the area under tenancy. But the owner-cum-tenants had leased in larger extents of land compared

to the pure tenants. The rent charged per cropped acre had also gone up from 6 to 7 bags of paddy between these two years. Some of the absentee landlords had resumed the cultivation of their lands by evicting the pure tenants. But, residents leased out more lands in 1993-94 compared to 1985-86 as part of their labour mobilisation process. And the practice of sub-letting of temple lands had also gone by 1993-94. Thus some of its earlier pure tenants had not only sold out their bullocks, but also returned some of their leased in lands to the owners. Thus the institutional setting of the village remained more or less the same even in 1993 -94. If at all some minor changes observed, they were only with respect to institutional conditions which tended to work against the economic conditions of the weaker sections in the village.

Though the village continued to have a monocropped cultivation of paddy, the farmers envisage the changes in the cropping pattern in near future. A few big farmers had also started substituting the chemical fertilisers by bio-fertilisers in the cultivation of high yielding varieties of paddy. And the farmers have already started thinking about the sustainable development of agriculture within their own village. The continued exploitation of underground water resources through borewells and pumpsets led to the further deepening of water tables from about 70 feet to about 100 feet even within a short period of 5 years. Hence many borewells were deepened further between the two survey years. And how long these borewells will supply water for agricultural purposes is increasingly becoming unpredictable. However, between the survey years, the increased number of pumpsets owned and operated by the farmers in the agricultural ayacut led to the increased negligence of tank irrigation with negative effects for the incomes earned by the non-pumpset owners in the village.

Between 1985-86 and 1993-94, the intensity of crop cultivation had increased thanks to the increase in the number of pumpsets owned and operated by the farmers in the village. The sales and purchase

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of pumpset water had also increased between these years. And compared to 1985-86, the per acre yield rate of paddy had gone up by 1993-94. But still it was not higher compared to the per acre yield rate of paddy achieved in the state in the early 1990s. The number of man-days used per acre in paddy cultivation remained the same in 1993-94. But there had been an increase in the employment of in-migrant agricultural labourers in paddy cultivation between the survey years, with negative implications for the incomes earned by the resident agricultural labourers. Though the money wage rates paid to casual agricultural labourers in many operations declined, there were some improvements observed with respect to the payment of real wage rates to the female casual agricultural labourers over the years. Despite the increased mechanisation of agriculture the number of days of employment secured by male casual agricultural labourers increased considerably between 1985-86 and 1993-94. However, the number of days of employment secured by female casual agricultural labourers had gone up only marginally between these years. Nevertheless, an agricultural labour household consisting of one male and one female casual agricultural labourer could hope to earn about Rs.7500 from employment in agriculture in 1993-94.

The further intensification of agriculture within the village was also associated with some changes in labour process. There had been a complete casualisation of agricultural labour force in the village. And none of the agricultural labourers were employed on a permanent basis with annual wages paid in kind in 1993-94. Instead, some of the earlier permanent farm servants were converted into beck and call labourers by paying them some cash as advances by the employer - cultivators in the village. The cowherds were also no longer employed by individual employers on annual kind wage payment basis. Instead, they were employed collectively by all the livestock owners on the basis of cash wage rates paid per animal per month. While there were no irrigation workers employed to regulate the tank irrigation in the village, the field guards were continued to be employed, mainly for the benefit of big and small farmers in the village in 1993-94. The employment of artisans and services persons on fixed annual kind wage payment (Jajmanl system) basis had also disappeared. By 1993-94, they were seen working mainly outside the village. The changing labour process also led to the complete monetisation of wage payments in village agriculture.

The per acre costs of cultivation of paddy had more than doubled between 1985-86 and 1993-94. So also the per acre net incomes earned by farmers from paddy cultivation. But the per acre paid-out costs of cultivation had gone up very much thanks to the sharp increases in the prices of purchased inputs such as chemical fertilisers and pesticides consequent to the part withdrawal of fertilizer subsidy by the government in the new economic reform period. By contrast, the state government has helped the farmers with the supply of free electricity for agricultural purposes. However, the calculations of input-output ratios had revealed that the village agriculture had become more efficient by 1993-94 compared to 1985-86.

Both in 1985-86 and 1993-94, we observed the inverse relationship prevailing between farm size and productivity on the one hand, and the farm-size and intensity of cropping on the other hand. These are against the arguments of some of the other studies conducted on agrarian economy in the country. However, the ownership of agriculturally related assets such as pumpsets and tractors had enabled the big farmers to achieve highest per acre yield rate, intensity of cropping, per acre net incomes earned (based on both total cost and paid-out cost), in comparison to all other categories of households in the village. They, along with small farmers, cultivated crops most efficiently in comparison to all others In the village in 1993-94. Consequently, a few big farmers themselves accounted for more than half of total agricultural production and for about two-thirds of total net income earned from crop cultivation in 1993-94. Their share of income earned from crop cultivation was considerably higher compared to their share of total production indicating the advantages taken by them even in the product market. However, four-fifths of total paddy production in the village continued to be marketed indicating a higher degree of commercialisation of agriculture. Between the survey years, the quantities of paddy marketed

had gone up considerably both in absolute and relative terms thanks to the increased production of paddy and the worsening distribution of agricultural produce among the various categories of agricultural labourers and the artisanal and service households.

Cropwise estimates of agricultural incomes earned by different categories of households in 1993-94 revealed that the cultivation of owned land provided the largest source of agricultural income followed by hiring-out agricultural labour. These two sources accounted for half of the total agricultural income generated in the village in 1993-94. And it is interesting to note that tractors and pumpsets had accounted for about 10 per cent of the total agricultural income generated in the same year. While the per household agricultural income earned was Rs.18,366, the per capita agricultural income earned was Rs.4311 in 1993-94. As far as the distribution of agricultural income across the categories is concerned, the big farmers themselves earned more than half of the total agricultural income generated in 1993-94. And the concentration of agricultural incomes among the households had gone up substantially with the Glni coefficients showing 0.6724 in 1985-86 and 0.7954 in 1993-94.

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Between 1985-86 and 1993-94, the village economy had been considerably diversified with the number of non-agricultural workers doubling and one-fourth of the households depending on non-agricultural occupations for their major sources of income. But, a majority of non-agricultural workers were working in low paid casual occupations available mainly outside the village in industry and in urban informal sector. And the daily wage rates paid to non-agricultural casual workers were no better than the wage rates paid to agricultural labourers within the village in 1993-94. And it is interesting to note that the modern agriculture had pushed out a considerable number of workers for employment in non-agricultural occupations available outside the village even while attracting a large number of in-migrant agricultural labourers into it over the years. However, due to the increase in the number of non-agricultural workers, the total non-agricultural income earned by the households had increased by two to three times between 1985-86 and 1993-94. And the concentration of non-agricultural incomes among the households, as

has been reflected by Gini coefficients, declined marginally from 0.5058 to 0.4764 between these two years. Nevertheless, it is worth noting that while upper caste land owning educated workers availed high wage urban employment, the low caste landless educated workers availed only low wage paid casual employment in industry and in urban informal sector. Besides, the non-agricultural employment was very much restricted to adult male workers of the village.

However, the combined incomes earned from agricultural and non-agricultural sources by the households resulted in a considerable decline in the concentration of total income among them between the survey years. The Gini coefficients calculated for this purpose turned out to be 0.5547 in 1985-86 and 0.5175 in 1993-94.

The analysis of data on credit for the two survey years revealed increased incidence of borrowing among the households. Not only the proportion of households borrowing increased but also the amounts borrowed by them. And there had been a sharp increase in the amounts borrowed for unproductive purposes in comparison to the amounts borrowed for productive purposes. Between 1985-86 and 1993-94, the share of total borrowing from high interest rate charging private sources had gone up substantially. In particular, merchants came to play a major role in providing production credit to the cultivator households. But like in 1985-86 even in 1993-94, big farmers emerged as the major beneficiaries of low interest rate charging institutional sources of credit. And the calculations of per household income to debt ratios in 1993-94 revealed the declining debt burdens of the households thanks to the increased incomes earned by them both from agricultural and non-agricultural occupations between the survey years.

Of the rural, urban and industrial growth centres the latter two benefited the village most. This is because the village itself emerged as one of the rural growth centres in the taluk and attracted a large number of in-migrant agricultural labourers into it over the years. And hence there arose no need for resident

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workers to go in search of employment in other rural growth centres. However, compared to 1985-86, the spread effects of urban and industrial growth centres benefiting the weaker sections in the village became more and more visible by 1993-94.

Between 1985-86 and 1993-94, the incomes earned from the utilisation of common property resources in the village had declined. And the encroached land from the neighbouring village commons by the scheduled caste agricultural labourers had all been sold out. They also sold out the livestock provided to them by the government under the IRDP without repaying the loans taken from the banks. Between the two survey years, there had also been considerable shift observed in the implementation of public programmes in the village. The focus of the public programmes changed from the target and household - beneficiary approach adopted in 1985-86 to general development of the village in 1993-94. As a result, all the households of the village came to enjoy certain common benefits provided by the government such as drinking water, transport and telecommunication facilities. The government had also constructed new buildings for schools and panchayat office in the village. However, the landless low caste agricultural labour households could no longer count on governmental support to them which they enjoyed till the mid-80s.

Between 1985-86 and 1993-94, we observed marginal reductions in the levels of absolute and relative poverty in the village. And by 1993-94, abject poverty was completely eliminated from the village. There was also a considerable decline observed in the levels of poverty among the marginal farmers and the agricultural labourers between the two survey years. Small farmers and the artisanal and service households were completely free from any type of poverty prevailing in the village in 1993-94. However, while absolute poverty was very much concentrated among the agricultural households in 1985-86, the same was concentrated among the non-agricultural households in 1993-94. Nevertheless, the head-count ratio of absolute poverty prevailing in the village was still higher compared to the same at the state level in late 1980s. Anyhow, but for the diversification of the village economy, the absolute poverty level in the village could have been even higher in 1993-94. And the discussions made so far points to the trickling-down effects of agricultural growth on the poor in the village.

#### Appendix - 1

# A Note on the Calculations of Costs of Cultivation in Enathimelpakkam Agriculture in 1993-94

In the calculations of costs of cultivation we have strictly followed the procedures adopted by the *Studies in the Economics of Farm Management* with some minor modifications taking into account the variability of agro-economic conditions in our particular village of Enathimelpakkam in 1993-94. Hence accordingly, we have calculated the costs of cultivation on Cost A1 Cost A2, Cost B and Cost C basis. In addition, we have also calculated owned and paid-out costs of cultivation which are crucial for the profitability of cultivation for certain categories of farmers in the village in 1993-94. Now let us turn to how actually the individual costs of cultivation are computed in Enathimelpakkam agriculture in 1993-94. And all figures are in value terms.

- 1. Hired Human Labour It is computed by multiplying the number of man-days (of 8 hrs.) employed in the per acre cultivation of paddy with the prevailing wage rate of Rs.25 per day.
- 2. Hired bullock labour it is calculated by multiplying the number of bullock labour days (i of 8 hrs.) with the wage rate of Rs.25 paid to bullocks per day of ploughing. However, this excludes the wage rates paid to plough men.
- 3. Owned bullock labour This is imputed at the going wage rate of Rs.25 paid per pair of bullocks per day of ploughing.
- 4. Tractor hiring This is calculated by multiplyiong the number of hours of ploughing or threshing with the prevailing hire charges of Rs.200 per hour or per acre of ploughing.
- 5. Owned tractor services These are first imputed at the going hire charges of Rs.200 either per acre of ploughing or per hour of threshing as the case may be. But in the case of owners since they also incur expenditures on drivers, diesel and replacements of machine parts (depreciation) only half of the imputed value is taken into account in the calculations of costs of cultivation. This is to avoid the double counting of a particular cost of cultivation incurred by tractor owning farmers in the village.
- .6. Owned Seed It is imputed at the prevailing prices of Rs. 5 per kg. of paddy. And this is multiplied with the per acre seed requirement of 40 Kgs of paddy in the village in 1993-94.
- 7. Domestic manure This is imputed at the going prices of Rs.20 per bullock cart load of cowdung (which normally weighs 400 Kilograms of dung per cart load) in the village in 1993-94.
- 8. Depreciation This is worked out based on the life of a tractor (20 years), pumpset (20 years) and bullocks (10 years). First the prices of these assets are divided by the number of years which they can serve and then these amounts are divided by the number of acres cultivated with poaddy. (i.e. gross cropped area) in 1993-94.
- 9. Irrigation charges These are calculated either based on the hourly charges of pumpset water which was Rs.15 per hour in 1993-94 or six bags of paddy per cropped acre irrigated. Since only core crop is raised in a year based on pumpset irrigation with the other being raised based on tank irrigation, we have taken the value of half of this quantity of paddy charged per acre i.e. 3 bags paddy multiplied by the prevailing price of Rs.300 per bag in 1993-94.
- 10. Interest on owned working capital it is calculated at the going bank interest rate of 12% per year. Since the crop is raised only for a duration of 4 months in a year, the yearly interest rate amount charged on the working capital invested on an acre of paddy cultivation is divided by three. In case, the crop's duration is longer, then, accordingly the interest rate is calculated.

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- 11. Interest on borrowed capital This is calculated based on the actual interest amount paid on the actual amount borrowed for the cultivation of an acre of paddy for 4 to 6 months in a year.
- 12. Rent on leased in land it is calculated by the rental charges of 7 bags of paddy per acre per year. Since two crops are raised in a year, we have taken half of this quantity of paddy paid as rent per cropped acre and multiplied it with the prevailing prices of paddy in the post harvest season i.e. the number of bags multiplied by Rs.300 per bag.
- 13. Rental value of owned land it is imputed by multiplying the prevailing rental charge of three and a half bags of paddy perscropped acre with the average price of paddy prevailing in 1993-94 i.e. Rs.300 per bag.
- 14. Interest on fixed capital This is calculated by computing the bank interest amount of 12% on the fixed capital amount invested in the farm in 1993-94. Then, this interest amount is divided by the gross cropped area in 1993-94 in order to arrive at per acre cost.
- 15. Value of family labour This is imputed by multiplying the number of family labour days used in the per acre cultivation of paddy with the going wage rate of Rs.25 per day.

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#### Appendix-2

# Procedures Adopted for the Computations of Agricultural and Non-agricultural Incomes in 1993-94.

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- 1. Income from cultivation of owned land The extent of owned land cultivated in 1993-94 is obtained first by deducting the leased out land from the actual ownership of land, then that extent of land is multiplied by the intensity of cropping achieved by a particular category of farmers in the village in 1993-94. Then, this extent of land is multiplied by the per acre net income earned from paddy cultivation on Cost C basis in 1993-94.
- 2. Income from the cultivation of leased in land First, the extent of leased in land by a category is multiplied by the category's intensity of cultivation in 1993-94. Then, this extent of land is multiplied by the net income earned per acre on Cost C basis.
- 3. Rental Income earned from the cultivation of owned land First, the leased out land is deducted from the owned land. Then, it is multiplied by the category's intensity of cultivation in 1993-94. Then, that extent of land is multiplied by the prevailing rental value of land in the village in 1993-94 viz. Rs.1050 per cropped acre.
- 4. Rental Income earned from the leased out land First, the leased out land by a category is multiplied by the pure tenants intensity of cultivation (who actually pay the rents for the leased out lands to other categories in the village) in 1993-94. Then, that extent of land is multiplied by the going rental charge of Rs.1050 per cropped acre in 1993-94.
- 5. Auctioning of fish and fruit These are calculated at the actual amounts of autotions in 1993-94 and the shares earned by different categories of households in the village.
- 6. Incomes earned from the collection of fuels from the common lands. The collection of twigs

and branches of the thorny trees grown in the poromoboke lands is valued at the going market prices of Rs.2 to Rs.3 per a 20 kg bundle used per day. Hence the income earned from this source varied from Rs.50 to Rs.100 per month per household in 1993-94.

- 7. Self-employment in agriculture This is computed, first, by multiplying the number of family labour days used per acre with the gross cropped area of the category in 1993-94. Then, this total number of family labour days provided by a particular category is multiplied by the going wage rate of Rs.25 in the village in 1993-94.
- 8. Income from hiring-out labour it is computed by multiplying the total number of male and female labour days hired-out in agricultural operations in the year 1993-94 with the going wage rate of Rs.25 per day.
- 9. Income earned from the use of owned bullock labour First, the number of owned bullock labour days used in the per acre cultivation of paddy is multiplied by the gross cropped area of the category. Then, the total number of own bullock labour days is multiplied by the going wage rate of Rs.25 per day in 1993-94.
- 10. Income earned from hiring-out bullocks This is calculated by multiplying the total number of bullock labour days hired-out by a particular category of households with the going wage rate of Rs.25 per day in 1993-94.
- 11. Income earned from the use of own tractor This is calculated by multiplying half of the prevailing rental charges (Rs.200 per acre or per hour) for tractor services per acre with the gross cropped area of the tractor owners in the village in 1993-94. We have taken only half of the tractor rental

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charges for owners because we have to deduct the amounts incurred on tractor drivers, diesel purchases and depreciation or cost of replacements in tractor which the non-owners of tractors do not incur while paying the full rental charges for tractor services.

- 12. Income earned from hiring-out tractors This is calculated as net of Incomes earned by hiringout tractors by owners both within and outside the village in 1993-94. The incomes earned from hiring-out tractors is netted by deducting the payments made to the tractor drivers, diesel and replacements of machine parts.
- 13. Incomes earned from the sale of pumpset water The incomes earned by the sale of pumpset water in 1993-94 by resident owners is calculated at the actual number of hours of pumpset water sold and the actual number of acres of paddy irrigated on payment basis by pumpset owners in 1993-94. The going charges for pumpset water in 1993-94 were Rs.15 per hour or 6 bags of paddy per cropped acre. The pumpset water was normally sold at 6 bags of paddy per cropped acre rather than at Rs.15 per hour.
- 14. Income earned from the supply of owned inputs to agriculture other than land, labour and tractor services These include the incomes earned from the use of owned inputs in agriculture such as domestic manures, seed and the interest income earned from the use of own capital in agriculture in 1993-94. This income is calculated by multiplying the per acre value of owned inputs used in paddy cultivation with the gross cropped area of the category in 1993-94.
- 15. Incomes earned from outside the village This refers to the cultivation of owned land or leased out land by a particular category in the neighbouring villages in 1993-94. In calculating the income earned from the land owned and cultivated outside the village; first, we have multiplied those extents of lands with the particular category's intensity of cultivation in 1993-94 and then the total cropped area is multiplied by the per acre net income earned by the category from paddy cultivation on Cost C basis. In case the lands were leased out the actual rental incomes collected by a particular

category in 1993-94 are taken into account. However, in 1993-94 only big farmers owned totally 8 acres of land in the neighbouring villages which they had leased out at 7 bags of paddy per acre per year. Then, this total quantity of paddy collected as rent is multiplied by the prevailing price of Rs.300 per bag.

#### Non-agricultural Incomes

Some of the sources of non-agricultural incomes earned by the households both within and outside the village in 1993-94 include the: a) rearing of livestock, b) money-lending, c) trade and transport services, d) government employment and pensions, and e) casual labour occuaptions available outside the village. The procedures adopted for the calcualtions of these incomes are given below.

- 1. Incomes earned from rearing livestock These incomes are earned mainly by rearing milch animals and sheep and goats by the households. Incomes earned by selling milk are calculated by multiplying the average daily quantity of milk with the going price of Rs.4 per litre in the village for the lactation period of 9 months in a year. Goat incomes are calculated with the average prevailing price of Rs.500 (for a goat weighing 6 to 7 kgs) per goat in 1993-94.
- 2. Income earned from money-lending This includes the actual interest incomes earned from money-lending by the households during the year 1993-94.
- 3. Incomes earned from trade within the village These include the incomes earned from running petty shops, tea-shops and mutton shops during the year 1993-94.

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- incomes earned from providing services within the village These include the incomes earned 4. from the provision of services by the babers, carpenters, washermen, blacksmiths, masons and priests to the households in the village in 1993-94,
- 5. Government employment and pensions within the village These include the incomes earned within the village by working as school teachers, ayas in the Balwadis (Kinder garten), cooks in the noon-meal centres, peons in panchayat office, drinking water pumpset operators. Under this category we have also included the incomes earned by the Widow Relief Pensioners.
- 6. Non-agricultural incomes earned within the village These include all those non-agricultural incomes eamed within the village during the agricultural year of July 1993 to June 1994.
- Incomes earned from regular salaried employment outside the village These include the formal 7. employment in government offices, railways and companies - both public and private - for a regular monthly salary earned on a permanent basis by the employees who reside in the village and commute for their jobs available outside the village.
- Incomes earned from trade and transport services These include the incomes earned by hiring 8. out tractors and lorries owned by the households for non-agricultural operations available outside the village. The trade services include the running of shops and laundries in the neighbouring towns in the year 1993-94.
- 9. incomes earned from casual occupations available outside the village These include the incomes earned outside the village in companies, factories, government establishments and in the urban informal sector mainly as casual workers either on daily or weekly or monthly wage payment basis.
- 10. Non-agricultural incomes earned outside the village These include the incomes earned from a) regular salaried employment, b) trade and transport services, and c) casual occupations in 1993-94.
- Total non-agricultural income it is a sum of all non-agricultural incomes earned both within and 11. outside the village during the agricultural year of July 1993 to June 1994.



#### Appendlx-3

#### A Note on the Procedures. Adopted for the Estimations of Borrowing

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- 1. Estimated number of households in debt This is obtained first by dividing the number of sample households and the figure is multiplied by the total number of households in the category.
- 2. Estimated average total debt amount outstanding per indebted household This is obtained by dividing the total debt amount of the sample households by the number of sample households in debt.
- 3. Estimated amounts borrowed for productive and unproductive purposes These are obtained first by dividing the sample households total debt incurred for a purpose by the number of sample households in debt and the average is multiplied by the estimated number of households in debt in the respective category.
- 4. Estimated average productive, unproductive and total debt amounts per household Debt per household by purpose has been computed by dividing the estimated debt amounts borrowed for productive, unprodutive purposes and the total by the total number of households in each category.
- 5. Per household income-debt ratio This is obtained by dividing the estimated average total income earned per household in the category by the estimated average total debt incurred per household in the category.
- 6. Estimated aources of borrowing These are obtained first by dividing the sample households total amount borrowed from a particular source by the number of sample households in debt in each category and then the average is multiplied by the estimated number of households in debt in each

category.

#### Appendix - 4

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#### Procedures Adopted for the Estimations of Poverty in 1993-94

In the estimations of poverty we have used the household income data rather than the consumption data collected through our sample enquiry. This is because while the consumption data are very much affected by the seasonality in agriculture, the per household annual incomes are not. Further, our computations relate mainly to the head-count ratios of "absolute" "abject" and "relative" poverty prevailing in the village in 1993-94. However, for the purpose of analysis we have solely relied on the calculations of "absolute" poverty.

- 1. Poverty-line income The poverty line income is taken as equivalent to the official poverty line expenditure of Rs.15 per capita, per month at 1960-61 prices. This is corrected for the year 1993-94 by using the Consumer Price Index for Agricultural Labourers (CPIAL) relating to Tamil Nadu. The CPIAL for Tamil Nadu relating to the year 1993-94 stood at 1064 points with 1960-61 as the base. Using this index we have obtained the current poverty line income as Rs.160 per capita per month or Rs.1920 per capita per year. While we have used the poverty line income of Rs.1920 per capita per year for the calculations of "absolute" poverty we have taken half of this poverty-line income of Rs.960 for the calculations of "abject" poverty prevailing in the village. But the "relative" poverty is calculated based on the per capita annual income earned in the village in 1993-94.
- 2. Head-count ratio of poverty it is obtained by counting both the number of sample households and the persons in them falling below a particular poverty line income. And the poverty ratios are obtained by dividing the estimated numbers of households and persons living below a particular poverty line income with the total number of households and population in the village.
- 3. Estimates of poverty These are first calculated by dividing the numbers of sample households and persons living in different types (absolute, abject and relative) of poverty with the numbers of sample households and persons, respectively, in the category. Then, these ratios are multiplied with the respective total numbers of households and persons in the category.
- 4. Occupational poverty it is obtained by dividing the category's estimated numbers of persons in absolute property with the total number of persons in the category. This ratio is multiplied by 100 in orde to get the percentage of total category's population living in absolute poverty.
- 5. Total poverty it is a sum of estimated numbers of households or persons living in each type of poverty across various categories in the village. Total estimated poverty ratios are obtained by dividing the total estimated numbers of households or persons living in each type of poverty with the total number of households or population in the village in 1993-94.

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#### **Notes and References**

- The weighted average is obtained by using the population weights. The population weights are calculated 1. by dividing the number of land operating households in each of the categories by the total number of land operating households in the village. Of course, the total number of land operating households in the village varied depending on the number of categories covered in particular tables. The procedure adopted for the calculations of weighted averages is the multiplication of sample averages by the population weight of each category and summing up the same for the whole village.
- For the state and district level data on demographic aspects, see Tamil Nadu : An Economic Appraisal 2. 1992-93, issued by the Evaluation and Applied Research Department, Government of Tamil Nadu.
- 3. In the collection of data on workforce we have followed the census definitions relating to the industrial classification of workers in the rural areas.
- 4. The Gini Coefficient is estimated by trapezoidal approximation method, namely,

$$G = 1 - \sum_{i=1}^{n} \Delta Pi (Qi + Qi - 1)$$

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- 5. Even at a macro level of the economy the concentration of agricultural land has changed only little. For details, see Second India Study Revisited, brought out by the World Resources Institute, August 1994. Also, see extracts in The Hindu Business Line dated 28th November 1994. The same view has also been expressed by Vaidyanathan (1994). See, his article on "Agrarian Relations in the Context of New Agricultural Technology: An Issues paper" in Indian Journal of Agricultural Economics, vol.49, No.3, July-September 1994.
- There has been a slight increase observed in the total landlessness in the rural areas over the 6. years. See, for more information in Second India Study Revisited, August 1994. Ibid.
- 7. Vaidyanathan (1994) also found the declines both in the proportion of households leasing in and the proportion of area leased in in the rural economy of the country over the years. See, op.cit.
- 8. For more details on changes in livestock ownerships at the state and district levels, see Tamil Nadu : An Economic Appraisal, 1992-93, p.407, issued by the Evaluation and Applied Research Department, Government of Tamil Nadu.
- See, Tamil Nadu : An Economic Appraisal, 1992-93, Ibid. 9.
- 10. Same view has also been expressed with the data at the macro level. See, Vaidyanathan (1994): op.cit.
- In fact, a study conducted on farm employment in India reveals the stagnation during the last 11. two decades despite the intensive use of irrigation, fertilisers and high yielding seed varieties in Indian agriculture, See, Second India Study Revisited, op.cit.
- 12. The proportion of agricultural labourforce to workforce had gone up steeply even at a macro level of the economy. See, Vaidyanathan (1994), op.cit.
- 13. See Agricultural Situation in India, December 1993, issued by Directorate of Economics and Statistics, Dept. of Agriculture and Co-operation, Ministry of Agriculture, New Delhi, p.708.
- First, the per hectare yield rate of rice is converted into per acre yield rate of rice by dividing it 14. with 2.47. Then, the per acre yield rate of rice is converted into per acre yield rate of paddy by taking the quantity of rice as two-thirds of the quantity of paddy. Such an exercise yielded the peracre yield rate of paddy as 23.65 bags (of 80 kgs each) in 1991-92 at the state level. For relevant data, see, Tamil Nadu : An Economic Appraisal, 1992-93, op.cit. p.383.

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15. See, Indian Express, August 31, 1994.

- 16. See, for instance, Hanumantha Rao,C.H. (1977) "Agricultural Growth and Rural Poverty:Some Lessons from Past Experience" EPW, Special Number, August, pp.1369-1374.
- 17. Some of the macro level studies have already pointed out that along with the increased casualisation of agricultural labour force the non-agricultural employment also grew substantially as outlets for the rural labour force during the last 20 years. See, Second India Study Revisited, (1994) op.cit.
- 18. For a discussion on growth centres and their spread effects, see Misra, R.P. (1972): "Growth pole Policy for Regional Development in India", in Lahiri, T.B.(ed.) : Balanced Regional Development: Concepts, Strategy and Case Studies, Oxford and IBH, Calcutta.
- 19. See, Statistical Hand Book of Tamil Nadu, 1993, issued by Commissioner of Statistics, Dept. of Statistics, Madras, p.64.
- 20. For CPIAL see, Monthly Abstract of Statistics, Vol.47, Number 7, July 1994, issued by Central Statistical Organisation, Department of Statistics, Ministry of Planning and Programme Implementation, New Delhi, p.125.

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