CHAPTER IV

AGRICULTURAL CREDIT SYSTEM IN SAMPLE VILLAGES

"It is always dubious to make broad generalisations about economic and social change on the basis of a few selected district studies. It is all the more risky with respect to India where conditions differ not only from district to district but block to block and even village to village".

--------FRANCINE R. FRANKEL

4.0. INTRODUCTION

Two mandals, one from the eastern zone, Srikalahasti and another from the western zone, Ramakuppam, have been purposively selected to represent the dualistic geographical and agroclimatic pattern of Chittoor District. It would be approriate to provide a bird's eye view of the agricultural economy of the sample mandals before we describe and characterise the agricultural economy and the corresponding agricultural credit system in the sample villages, namely Uranduru and Ramakuppam situated in the sample mandals.

4.1. AGRICULTURAL PROFILE OF SAMPLE MANDALS

Srikalahasti mandal is bounded by Thottambedu mandal in the East, Erpedu mandal and Renigunta mandal on the West, Nellore District on the North and Kovur mandal on the South. Ramakuppam mandal is surrounded by Venkatagiri
Kota mandal on the North, Santhapuram mandal and Kuppam mandal on the South, Tamilnadu on the East and Karnataka on the west.

**Table 4.1**

GENERAL PROFILE OF SAMPLE MANDALS

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description</th>
<th>Srikalahasti</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No. of Villages</td>
<td>67</td>
<td>38</td>
</tr>
<tr>
<td>2.</td>
<td>No. of Villages Electrified</td>
<td>67</td>
<td>38</td>
</tr>
<tr>
<td>3.</td>
<td>Population</td>
<td>94,312</td>
<td>33,112</td>
</tr>
<tr>
<td>4.</td>
<td>Percentage of rural to urban Population</td>
<td>45.6</td>
<td>100</td>
</tr>
<tr>
<td>5.</td>
<td>Literacy Levels</td>
<td>36.3</td>
<td>19.5</td>
</tr>
<tr>
<td>6.</td>
<td>Density of population</td>
<td>213</td>
<td>211</td>
</tr>
<tr>
<td>7.</td>
<td>No. of factories</td>
<td>51</td>
<td>1</td>
</tr>
<tr>
<td>8.</td>
<td>No. of workers</td>
<td>1,136</td>
<td>86</td>
</tr>
<tr>
<td>9.</td>
<td>No. of rice mills</td>
<td>36</td>
<td>12</td>
</tr>
<tr>
<td>10.</td>
<td>Fair price-shops</td>
<td>78</td>
<td>30</td>
</tr>
<tr>
<td>11.</td>
<td>A.P. State Housing Corporation Constructed Houses</td>
<td>2,125</td>
<td>268</td>
</tr>
</tbody>
</table>

Source: Chief Planning Officer (C.P.O.), Hand Book of Statistics, Chittoor District, 1989-90.

The sample mandals truly represent the distinctive geographical location of Chittoor district bordering on Tamilnadu and Karnataka and touching the coastal belt of Andhra Pradesh through Nellore district. Srikalahasti
mandal has 67 revenue villages compared with 38 revenue villages in Ramakuppam. One striking feature of the mandals is that all the villages are electrified. Since Srikalahasti mandal includes the Srikalahasti Town, its rural population works out to only 46 per cent compared with 100 per cent in the case of Ramakuppam. However, there is no significant difference in terms of population density as may be noted from Table 4.1. Due to urban impact, the literacy level of Srikalahasti (36 per cent) is higher than that of Ramakuppam (20 per cent). The number of factories and workers is also significantly higher in the former than in the latter. In terms of housing provided by A.P. State Housing Corporation and number of fair price shops also, the former seems to be better than the latter.
Table 4.2

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Items</th>
<th>Srikalahasti</th>
<th></th>
<th>Ramakuppam</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in acres</td>
<td>% to total</td>
<td>Area in acres</td>
<td>% to total</td>
</tr>
<tr>
<td>1.</td>
<td>Forests</td>
<td>37,824</td>
<td>37.9</td>
<td>38,481</td>
<td>55.9</td>
</tr>
<tr>
<td>2.</td>
<td>Barren and unculturable land</td>
<td>13,685</td>
<td>13.7</td>
<td>3,200</td>
<td>4.6</td>
</tr>
<tr>
<td>3.</td>
<td>Land put to non-agricultural uses</td>
<td>10,683</td>
<td>10.7</td>
<td>2,329</td>
<td>3.4</td>
</tr>
<tr>
<td>4.</td>
<td>Cultivable waste</td>
<td>5,847</td>
<td>5.9</td>
<td>441</td>
<td>0.6</td>
</tr>
<tr>
<td>5.</td>
<td>Permanent pastures and other grazing land</td>
<td>2,088</td>
<td>2.1</td>
<td>260</td>
<td>0.4</td>
</tr>
<tr>
<td>6.</td>
<td>Miscellaneous tree crops and groves</td>
<td>990</td>
<td>1.0</td>
<td>502</td>
<td>0.7</td>
</tr>
<tr>
<td>7.</td>
<td>Current fallows</td>
<td>4,821</td>
<td>4.8</td>
<td>818</td>
<td>1.2</td>
</tr>
<tr>
<td>8.</td>
<td>Other fallow land</td>
<td>480</td>
<td>0.5</td>
<td>2,803</td>
<td>4.1</td>
</tr>
<tr>
<td>9.</td>
<td>Net area sown</td>
<td>23,326</td>
<td>23.4</td>
<td>20,046</td>
<td>29.1</td>
</tr>
</tbody>
</table>

Total Geographical Area 99,744 100.0 68,880 100.0


4.2. LAND UTILISATION

Table 4.2 gives an idea of the pattern of land utilisation in the sample mandals. Forests occupy 38 and 56 per cent of the geographical area of the sample mandals, Srikalahasti(S) and Ramakuppam(R) respectively. Barren and uncultivable land is of higher order in S (14 per cent) and 6 per cent only in R. Due to urbanisation, the proportion of land put to non-agricultural uses and cultivable waste is
16.6 per cent in S and only 4 per cent in R. Permanent pastures and other grazing land are fast disappearing from the agricultural scene due to unauthorised occupation and privatisation. Hence, they are insignificant in the sample mandals. Miscellaneous tree crops and groves are also insignificant. The proportion of current fallsows is higher (4.8 per cent) in S and only 1.2 per cent in R. Other fallow land constitutes hardly 0.5 per cent in the S but 4 per cent in R. Net area grown was 23.4 per cent in S.

Table 4.3

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Srikalahasti</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
</tr>
<tr>
<td>1</td>
<td>10,555</td>
<td>11.3</td>
<td>9,510</td>
</tr>
<tr>
<td>2</td>
<td>10,015</td>
<td>10.6</td>
<td>3,637</td>
</tr>
<tr>
<td>3</td>
<td>4,470</td>
<td>4.7</td>
<td>298</td>
</tr>
<tr>
<td>4</td>
<td>12,164</td>
<td>12.9</td>
<td>1,272</td>
</tr>
<tr>
<td></td>
<td><strong>Total main Workers</strong></td>
<td><strong>37,314</strong></td>
<td><strong>14,717</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Per cent</strong></td>
<td><strong>39.5</strong></td>
<td><strong>44.4</strong></td>
</tr>
<tr>
<td>5</td>
<td><strong>Total Population</strong></td>
<td><strong>94,312</strong></td>
<td><strong>33,112</strong></td>
</tr>
<tr>
<td></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>


Table 4.3 describes the occupational distribution of the population in the sample mandals. Occupational distribution is a reflex of the pattern of economic diversification in any society. Economists, since the time
of Collin Clark, advocated that economic progress is linked with decline in the proportion of population dependent on agriculture.

The proportion of labour force, measured in terms of main workers, was 40 per cent in the S and 44 per cent in R. However, the distribution of the work force is more diversified in S due to the predominance of non-agricultural activities within the household industry and other enterprises which account for nearly 18 per cent compared with hardly by 5 per cent in R. The proportion of cultivators is nearly three times in the R in relation to S, though there is no significant difference in the incidence of farm labour.
Table 4.4
SOURCE OF IRRIGATION IN SAMPLE MANDALS  
(Acres)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Source</th>
<th>Srikalahasti</th>
<th>Ramakuppan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tanks</td>
<td>13,095(70.9)</td>
<td>1,900(36.2)</td>
</tr>
<tr>
<td>2.</td>
<td>Tube wells</td>
<td>-</td>
<td>205(3.9)</td>
</tr>
<tr>
<td>3.</td>
<td>Other wells</td>
<td>5,384(29.1)</td>
<td>3,140(59.9)</td>
</tr>
<tr>
<td>4.</td>
<td>Canals</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Total net area</td>
<td>18,479(100.0)</td>
<td>5,245(100.0)</td>
</tr>
<tr>
<td></td>
<td>irrigated (1 to 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Area irrigated more than once</td>
<td>666</td>
<td>1,167</td>
</tr>
<tr>
<td>7.</td>
<td>Cross area irrigated</td>
<td>19,145</td>
<td>6,412</td>
</tr>
<tr>
<td>8.</td>
<td>Intensity of irrigation</td>
<td>3.6</td>
<td>22.2</td>
</tr>
<tr>
<td>9.</td>
<td>Net area irrigated as a percentage of net area sown</td>
<td>79.2</td>
<td>26.2</td>
</tr>
</tbody>
</table>

Note: Figures in parentheses are percentages to total.


4.3 IRRIGATION AND CROPPING PATTERN

Table 4.4 reveals that the proportion of net area irrigated to the sown area is 79 per cent in S and only 26 per cent in R. Tanks constitute the predominant (71 per cent) source of irrigation in S while other wells which mean
mostly dug wells constitute a major source (60 per cent) of irrigation in R. It is well known that tank irrigation is cheaper in relation to well irrigation as the latter involves lifting of water from the underground by mechanical devices involving the use of commercial energy which is costly both from the micro and macro-angles. There are a few tube wells in R while there are conspicuous by their absence in S. The greater reliance on underground water resources through tube wells and other wells is the major factor contributing to higher intensity of irrigation (22 per cent) in R compared with hardly 4 per cent in S.

Cropping pattern has a significant bearing on development of agriculture. It is a function of several internal and external factors. The physical quality and location of land, irrigation, relative prices of farm products, working capital intensity, labour intensity, access to markets are only a few factors that may be easily identified. Besides, there is the tradition in cropping systems. The size of farm holdings also affects the cropping pattern. Small farmers give first priority to food crops because they are more interested in fulfilling their food requirements in the first instance. As against this, large
farmers with substantial holdings may tend to devote a part of their land for growing cash crops.*

The extent and pattern of irrigation is reflected in the cropping pattern on the sample mandals which is shown in table 4.5.

**Table 4.5**

CROPPING PATTERN IN SAMPLE MANDALS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Crop</th>
<th>Srikalahasti</th>
<th></th>
<th>Ramakuppam</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in acres</td>
<td>%</td>
<td>Area in acres</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Paddy</td>
<td>11,288</td>
<td>48.0</td>
<td>3,629</td>
<td>23.8</td>
</tr>
<tr>
<td>2</td>
<td>Jowar</td>
<td>139</td>
<td>0.6</td>
<td>1,897</td>
<td>12.4</td>
</tr>
<tr>
<td>3</td>
<td>Bajra</td>
<td>1,001</td>
<td>4.3</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Ragi</td>
<td>175</td>
<td>0.7</td>
<td>4,291</td>
<td>28.1</td>
</tr>
<tr>
<td>5</td>
<td>Groundnut</td>
<td>10,899</td>
<td>46.3</td>
<td>4,754</td>
<td>31.1</td>
</tr>
<tr>
<td>6</td>
<td>Sugarcane</td>
<td>16</td>
<td>0.1</td>
<td>700</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Total 23,518 100.0 15,277 100.0


Paddy and Groundnut are the major crops grown in Srikalahasti Mandal and they together account for 84 per cent of the area. Jawar, Bajra and Ragi are insignificant in terms of area occupied by these crops though they generate a considerable income to the cultivators with the help of A.P. Seed Corporation whose headquarters is situated at Srikalahasti town and its procurement policies for these crops, sugarcane also is creeping into the cropping pattern of the S. The cropping pattern of Ramakuppam is more diversified which is only an indirect means of assuring subsistence income for the cultivators during drought situation and drought is ubiquitous in Kuppam belt in which Ramakuppam Mandal is situated. The lasting remedy for overcoming drought condition is crops insurance which is slowly being implemented in some select areas of the country, not necessarily in drought prone areas where it is more urgent. It hardly needs to be emphasised that the introduction of crop insurance will not only protect the farmers but also ensure equity in agricultural development. Simultaneously dry farming technologies are to be evolved and adopted to minimise the risk in agricultural production and consequently the risk of agricultural loan default.

4.4 CHOICE OF TECHNIQUES

The persistence of technological dualism in agriculture
is often commented upon in the literature on agricultural modernisation. The choice of techniques in agricultural production in the sample villages, as elsewhere, is guided by a variety of considerations and not merely in terms of economic calculus based in terms of factor endowment and factor price. Details of farm machinery and implements shown in table 4.6 provide an idea of the traditional and modern technologies simultaneously being operated by the different strata of cultivation in the sample mandals.
### Table 4.6

Agricultural Machinery and Implements in Srikalahasti and Ramakuppam Mandal: 1987

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Items</th>
<th>Srikalahasti</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ploughs</td>
<td>8,107</td>
<td>6,686</td>
</tr>
<tr>
<td></td>
<td>a) Wood</td>
<td>3,871</td>
<td>4,951</td>
</tr>
<tr>
<td></td>
<td>b) Iron</td>
<td>4,236</td>
<td>1,735</td>
</tr>
<tr>
<td>2.</td>
<td>Water pumps for irrigation</td>
<td>1,511</td>
<td>1,476</td>
</tr>
<tr>
<td></td>
<td>a) Oil engines</td>
<td>538</td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>b) Electric motors</td>
<td>973</td>
<td>1,304</td>
</tr>
<tr>
<td>3.</td>
<td>Tractors</td>
<td>153</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>a) Power tillers</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>b) Tractors</td>
<td>127</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Sugarcane Crushers</td>
<td>2</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>a) Power</td>
<td>-</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>b) Bullock</td>
<td>2</td>
<td>41</td>
</tr>
<tr>
<td>5.</td>
<td>Sprayers and Dusters</td>
<td>214</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>a) Operated with hand</td>
<td>210</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>b) Operated with power</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Bullock carts</td>
<td>1,276</td>
<td>475</td>
</tr>
</tbody>
</table>


The proportion of iron plough was 52 per cent in S compared with 26 per cent in R. The proportion of electric motors in S was 64 per cent compared with 88 per cent in R. This is due to greater reliance on lifting of underground water in R and less reliance on the same in the case of S due to the predominance of tank irrigation. The incidence of power tillers, tractors, sprayers and dusters is higher in S than in R. Bullock driven as well as power driven sugarcane crushers are found in R due to the higher
incidence of sugar cane cultivation in R. Bullock carts are equally popular in the both the mandals. Thus the choice of techniques and implements simultaneously being used by different categories of farmers who are subject to varying degrees of capitalistic mode of production under changing situation.

4.5 LIVE STOCK

Animal husbandry and agriculture generally go hand in hand mutually reinforcing each other due to backward and forward linkages that operate between them. The density of livestock is higher in R than in S as may be seen from table 4.7

Table 4.7

LIVESTOCK AND POULTRY POPULATION IN SAMPLE MANDALS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Srikalahasti</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. Density</td>
<td>No. Density</td>
</tr>
<tr>
<td>1</td>
<td>Cattle</td>
<td>22,035</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Buffalows</td>
<td>16,584</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Sheep, Goates etc.</td>
<td>54,869</td>
<td>124</td>
</tr>
<tr>
<td>4</td>
<td>Poultry</td>
<td>40,797</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,34,797</td>
<td>303</td>
</tr>
<tr>
<td></td>
<td>Per capita</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The only exceptional in terms of composition of livestock is buffaloes whose density is higher in S. There is a marginal variation in the density in favour of S. The precarious and uncertain agricultural conditions in R have induced the farmers to take resort to dairying and sheep and goat rearing as supplementary sources of employment and income. Hence the higher density of cattle sheep and goat in R compared with S, where agriculture is more stable due to better irrigation facilities.

4.6 ACCESS TO INSTITUTIONAL FINANCE

Srikalahasti Mandal is served by the branches of five commercial banks, 2 branches of reginal rural bank namely, the Sri Venkateswara Grameena Bank which has jurisdiction over the entire Chittoor District. There is a branch of Chittoor District Co-operative Central Bank at Srikalahasti. Ramakuppam Mandal is served by one branch of a commercial bank namely the Vysya Bank which is a scheduled bank in the private sector. The Venkateswara Grameena Bank has opened two branches in the Ramakuppam Mandal to serve the unbanked and underbanked areas. The average population served by bank in the mandals is lower than the national average of 12,000.
Table 4.6

<table>
<thead>
<tr>
<th>Mandal</th>
<th>Commercial Banks</th>
<th>Co-operative Banks</th>
<th>Regional Rural Banks</th>
<th>Primary Agri. Credit Banks</th>
<th>Average Covered by Societies Banks</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Srikalahasti</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>11,789</td>
<td></td>
</tr>
<tr>
<td>Ramakuppam</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>11,403</td>
<td></td>
</tr>
</tbody>
</table>


There are also three primary agricultural credit societies functioning in each mandal with varying degree of success. We may, therefore, conclude that there is an improved access to institutional finance due to penetration of commercial banks into rural areas and the establishment of regional rural bank in 1982 and its expansion into unbanked and under banked rural domain. Against this background of the agricultural situation supported by infrastructural facilities including banking facilities, it is appropriate to examine the agricultural credit delivery system in the sample villages.

4.7 PROFILE OF SAMPLE VILLAGES

As noted earlier in the portion on methodology of the present study, one village from each sample mandal has been purposively selected for intensive investigation. Of the 67
SRI KALAHAITHI MANDAL SHOWING
SAMPLE VILLAGE

[Map showing the location of Sri Kalahtithi Mandal with sample village highlighted]
revenue villages in the Srikalahasti mandal, Urandur has been selected. Similarly of the 38 revenue villages Ramakuppam has been chosen from Ramakuppam mandal. Uranduru is situated very close at a distance of 5 Km. to Srikalahasti town, which is also the mandal headquarters. It is surrounded by Panagalpuram on the East, Cherlopalli on the south, Madharedu on the west and Narayanapuram on the north.

Ramakuppam is the headquarters of Ramakuppam mandal which is situated at a distance of about 45 Kms. from Kuppam which is an important near by trading and commercial center. It is bounded by Karanataka state on the west, Athikuppam on the south, Oddekuppam on the East and Thimmamasudram village on the north.

Table 4.9 presents a general proge of the households of sample villages.
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Items</th>
<th>Urandur</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Households</td>
<td>492</td>
<td>831</td>
</tr>
<tr>
<td>2</td>
<td>Population</td>
<td>2,306</td>
<td>4,090</td>
</tr>
<tr>
<td>3</td>
<td>Electrification of households (%)</td>
<td>93</td>
<td>76</td>
</tr>
<tr>
<td>4</td>
<td>Literacy (%)</td>
<td>57.3</td>
<td>28.4</td>
</tr>
<tr>
<td>5</td>
<td>Density of population</td>
<td>211</td>
<td>733</td>
</tr>
<tr>
<td>6</td>
<td>High school</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Post office</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Veterinary Hospital</td>
<td>1*</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Fair price shops</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Pakka road link</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>11</td>
<td>Telecommunication</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>12</td>
<td>P.H.C</td>
<td>1*</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>P.A.C.S</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Market</td>
<td>Daily *</td>
<td>Weekly</td>
</tr>
<tr>
<td>15</td>
<td>Protected Water supply</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

* Situated at Srikalahasti Town.

Source: C.P.O., Mandal Statistical Abstracts of Srikalahasti and Ramakuppam.

Ramakuppam is considerably a bigger village than Urandur as measured by the number of households, though there in no
difference in the size of the households between the two villages. Electrification of households and literacy rate are higher for Uranduru than Ramakuppam. The density of population is significantly higher at the latter. Educational, health and other communication and infrastructural facilities are available at both the villages. Though Uranduru people have to visit Srikalahasti for veterinary and primary health services besides the sale and purchase of goods at the daily market of Srikalahasti town. The weekly market popularly known as 'Santha' in the vernacular, in one of the market institutions not only for the product generated in agriculture and allied activities but also the credit transactions. The decentralised administrative setup known as the mandal system introduced in 1985 is responsible for bringing some of the infrastructural facilities and services to the village of Ramakuppam which was deprived of these facilities earlier. Against this background we shall examine some of the structural features and characteristics of the agricultural economy of sample villages.

4.8 AGRICULTURAL ECONOMY OF SAMPLE VILLAGES

We have chosen the sample villages with a view to presenting the differential state of the agricultural situation in the relatively developed mandal as well as the
relatively less developed mandal of the district. Table 4.10 incorporates the details on the pattern of land utilisation in the simple villages namely Urundur (U) and Ramakuppam (K).

Table 4.10
LAND UTILISATION IN SAMPLE VILLAGES: 1990-91

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Urundur (in acres)</th>
<th>% to total (%)</th>
<th>Ramakuppam (in acres)</th>
<th>% to total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Forests</td>
<td>554</td>
<td>36.3</td>
<td>989</td>
<td>52.2</td>
</tr>
<tr>
<td>2</td>
<td>Barren and uncultivable land</td>
<td>163</td>
<td>10.7</td>
<td>119</td>
<td>6.3</td>
</tr>
<tr>
<td>3</td>
<td>Land put to non-agricultural uses</td>
<td>127</td>
<td>8.3</td>
<td>89</td>
<td>4.7</td>
</tr>
<tr>
<td>4</td>
<td>Cultivable waste</td>
<td>101</td>
<td>6.6</td>
<td>23</td>
<td>1.2</td>
</tr>
<tr>
<td>5</td>
<td>Permanent pastures and other grazing land</td>
<td>49</td>
<td>3.2</td>
<td>21</td>
<td>1.1</td>
</tr>
<tr>
<td>6</td>
<td>Miscellaneous tree crops and groves</td>
<td>32</td>
<td>2.1</td>
<td>38</td>
<td>2.0</td>
</tr>
<tr>
<td>7</td>
<td>Current fallows</td>
<td>72</td>
<td>4.7</td>
<td>21</td>
<td>1.1</td>
</tr>
<tr>
<td>8</td>
<td>Other fallow land</td>
<td>6</td>
<td>0.4</td>
<td>61</td>
<td>3.2</td>
</tr>
<tr>
<td>9</td>
<td>Net area shown</td>
<td>423</td>
<td>27.7</td>
<td>534</td>
<td>28.2</td>
</tr>
</tbody>
</table>

Total Geographical area: 1,527 100.0 1,895 100.0

Source: Village Revenue Records.

Just as in the case of the sample mandals, the
proportion of area under forest is higher in K (52 per cent) compared with 36 per cent in U. However the proportion of net area sown to the geographical area is more or less the same at about 28 percent in both the sample villages. Barren and uncultivable land as well as land put to non-agricultural uses is of a higher proportion – 11 and 8 per cent respectively in U whereas it is 6 and 5 per cent respectively in K. Cultivable waste in U in 6.6 per cent whereas it is 1.2 per cent in K. Current fallows, permanent pastures and other grazing land, miscellaneous tree crops and groves are also of a higher proportion in U than in K. Reverse is the case villages as shown in table 4.10 is an indirect measure of the state of development which is higher in U than in K. Land utilisation pattern is shown in fig.4.1.
### Table 4.11

**OCCUPATIONAL DISTRIBUTION IN SAMPLE VILLAGES: 1990-91**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Category</th>
<th>Uranduru</th>
<th>Ramakuppan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculturists</td>
<td>618</td>
<td>926</td>
</tr>
<tr>
<td></td>
<td>(26.8)</td>
<td>(22.6)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Agricultural labour</td>
<td>206</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>(8.9)</td>
<td>(2.6)</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Household Industries</td>
<td>46</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>(2.0)</td>
<td>(1.8)</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Others</td>
<td>107</td>
<td>328</td>
</tr>
<tr>
<td></td>
<td>(4.6)</td>
<td>(8.0)</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Total main workers</td>
<td>977</td>
<td>1,433</td>
</tr>
<tr>
<td></td>
<td>(42.3)</td>
<td>(35.0)</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Total population</td>
<td>2,306</td>
<td>4,090</td>
</tr>
<tr>
<td></td>
<td>(100.0)</td>
<td>(100.0)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Percentage in parentheses

**Source:** Village Revenue Records.

The occupational structure of the sample villages as shown in table 4.11 also reveals that the agricultural stage of development is relatively higher in U than in K. In terms of the proportion of cultivators (agriculturists) there is a marginal variation between the sample villages as also in the case of the proportion of workers engaged in the household industry. The proportion of workers in nearly double in K compared with that of U. The dependency ratio is less in U than in the K as main workers account for 42 per cent in the former compared with 35 per cent in the latter.
### Table 4.12

**SOURCES OF IRRIGATION IN SAMPLE VILLAGES: 1990-91**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Source</th>
<th>Uranduru (Acres)</th>
<th>Ramakuppam (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tanks</td>
<td>247 (63.2)</td>
<td>55 (37.4)</td>
</tr>
<tr>
<td>2.</td>
<td>Tube wells</td>
<td>-</td>
<td>8 (5.4)</td>
</tr>
<tr>
<td>3.</td>
<td>Other wells</td>
<td>144 (36.8)</td>
<td>84 (57.2)</td>
</tr>
<tr>
<td>4.</td>
<td>Total net area</td>
<td>391 (100.0)</td>
<td>147 (100.0)</td>
</tr>
<tr>
<td></td>
<td>irrigated (1 to 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Are irrigated more than once</td>
<td>216</td>
<td>26</td>
</tr>
<tr>
<td>6.</td>
<td>Gross area irrigated</td>
<td>607</td>
<td>173</td>
</tr>
<tr>
<td>7.</td>
<td>Intensity of irrigation</td>
<td>55.2</td>
<td>17.5</td>
</tr>
<tr>
<td>8.</td>
<td>Net area irrigated as % of net source area</td>
<td>92.4</td>
<td>27.5</td>
</tr>
</tbody>
</table>

**Note**: Figures in parentheses.

*Source: Village Revenue Records*

There is a striking similarity in the pattern of irrigation in the sample villages corresponding to the sample mandals as can be seen from tables 4.4 and 4.12. Tanks and other wells account for 63 and 37 per cent of irrigation in U. In the case of K other wells account for 57 per cent followed by tanks 37 per cent and tube is more in K than in U which has serious implications for the cost of cultivation.
and agricultural surpluses.

There is also a contrast in the irrigation scenario in the sample villages and sample mandals. The intensity of irrigation is 55 per cent in U in relation to 16 per cent in K whereas it is 3.6 in S and 22.2 in R. The net area irrigated as a percentage of net sown area is 92 per cent in U whereas it is hardly 28 per cent in K which is an approximate indicator of the developed status of the former compared with the latter.
### Table 4.13

Cropping pattern in sample villages: 1990-91

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Crop</th>
<th>Area</th>
<th>% to total</th>
<th>Area</th>
<th>% to total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Paddy</td>
<td>426</td>
<td>43.8</td>
<td>114</td>
<td>17.3</td>
</tr>
<tr>
<td>2</td>
<td>Jowar</td>
<td>49</td>
<td>5.0</td>
<td>61</td>
<td>9.3</td>
</tr>
<tr>
<td>3</td>
<td>Bajra</td>
<td>58</td>
<td>6.0</td>
<td>27</td>
<td>4.1</td>
</tr>
<tr>
<td>4</td>
<td>Ragi</td>
<td>18</td>
<td>2.0</td>
<td>245</td>
<td>37.2</td>
</tr>
<tr>
<td>5</td>
<td>Groundnut</td>
<td>405</td>
<td>41.6</td>
<td>177</td>
<td>26.9</td>
</tr>
<tr>
<td>6</td>
<td>Sugarcane</td>
<td>-</td>
<td>-</td>
<td>25</td>
<td>3.8</td>
</tr>
<tr>
<td>7</td>
<td>Other Crops</td>
<td>16</td>
<td>1.6</td>
<td>9</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td>973</td>
<td><strong>100.0</strong></td>
<td>658</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Village Revenue Records.

The impact of assured irrigation in U is also reflected in its cropping pattern as may be noticed from table 4.13. Paddy and groundnut account for 44 and 42 per cent of the area. Jowar and Bajra account for 5 and 6 per cent of the area only. Therefore we may say that the agricultural economy of U is dominated by paddy and groundnut cultivation. The cropping pattern in K is more diversified. Ragi accounts for 37 percent followed by groundnut 27 percent. Jowar and Bajra account for 9 and 4
percent respectively. Thus those four crops which are raised in the dry land account for 77 percent of the area. Paddy and sugarcane which are wet crops account for 17 and 4 percent respectively. The diversified cropping pattern with greater reliance on Ragi reflects the subsistence nature of farming in K though the cultivation of groundnut and sugarcane points to the emergence of capitalist farming. Details of cropping pattern are furnished in fig. 4.2. The agricultural dualism namely the simultaneous coexistence of traditional and commercial crops is further reinforced by technological dualism as may be perceived from the stock of agricultural machinery and implements in sample villages (Table 4.14).
CROPPING PATTERN IN SAMPLE VILLAGES

DATA 4.2
### Agricultural Machinery and Implements in Sample Villages 1990-91

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Items</th>
<th>Urunduru</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>1) Ploughs</td>
<td>165</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>a) Wood</td>
<td>68</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>b) Iron</td>
<td>97</td>
<td>27</td>
</tr>
<tr>
<td>II.</td>
<td>2) Water pumps for irrigation</td>
<td>49</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>a) Oil engines</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>b) Electric motors</td>
<td>39</td>
<td>27</td>
</tr>
<tr>
<td>III.</td>
<td>3) Tractors</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>a) Power tillers</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b) Tractors</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>IV.</td>
<td>4) Sugarcane crushers</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>a) Operated with power</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>b) Operated with bullocks</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>V.</td>
<td>5) Sprayers</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>a) Operated with power</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b) Operated with manual</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>VI.</td>
<td>6) Bullock carts</td>
<td>36</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Village Revenue Records.

The capital intensity in the agricultural economy of the U is manifested in the higher proportion of iron ploughs (58.8%) electric motors in the total pumpsets (79.6%), net sown area operated by each tractors (60.4 acres), each sprayer (13.2 acres) and each bullock cart (11.8 acres). In the case of K these parameters are 26.5, 64.3, 534, 133.5, 29.7 respectively. There are 2 power tillers in U and 5 sugarcane crushers in K. As there is no sugarcane cultivation in U there is no need for sugarcane crushers in
U. The foregoing analysis of the state of agricultural technology indicates a greater penetration of capital intensive techniques in U compared with K.

\[
\text{Table - 4.15}
\]

Livestock and Poultry Population in sample villages:

1990-91

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Uranduru</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Density</td>
<td>No.</td>
</tr>
<tr>
<td>1.</td>
<td>Cattle</td>
<td>472</td>
<td>43</td>
</tr>
<tr>
<td>2.</td>
<td>Buffaloes</td>
<td>371</td>
<td>34</td>
</tr>
<tr>
<td>3.</td>
<td>Sheeps, Goats etc.</td>
<td>1,076</td>
<td>99</td>
</tr>
<tr>
<td>4.</td>
<td>Poultry</td>
<td>897</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2,816</td>
<td>258</td>
</tr>
</tbody>
</table>

| Per capita | 1.22 | 2.30 |

Source: Village Revenue Records.

As may be seen from the table 4.15 the livestock population per head is nearly twice in K compared with U and it is a measure of diversification due to uncertain agricultural conditions that prevail in K.

The density of cattle, sheep and goats and poultry is nearly 9 times, 10 times and 4 times respectively higher in K compared with that in U. In the case of buffaloes density there is a minor variation. Uranduru is served by the banking branch network that is situated at Srikalahasti and a wide variety of informal credit agencies in the town and
the village besides the Primary Agricultural Credit Society, Ramakuppam is also benefitting from the Vysya Bank branch and the primary Agricultural Credit Society in addition to the plurality of the non-institutional credit delivery agencies.

### Table - 4.16
Sample Design

<table>
<thead>
<tr>
<th>Farmer Categories</th>
<th>Urunduru</th>
<th></th>
<th>Ramakuppam</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total agri. borro-wers</td>
<td>20% of house-holds 1990-91</td>
<td>Total agri. borro-wers</td>
<td>20% of house-holds 1990-91</td>
</tr>
<tr>
<td>Marginal Farmers (below 2.5 acres)</td>
<td>186</td>
<td>131</td>
<td>26</td>
<td>342</td>
</tr>
<tr>
<td>Small Farmers (2.5 to 5.0 acres)</td>
<td>133</td>
<td>103</td>
<td>21</td>
<td>219</td>
</tr>
<tr>
<td>Medium Farmers (5 to 10 acres)</td>
<td>58</td>
<td>55</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>Large Farmers (10 and above acres)</td>
<td>31</td>
<td>26</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td><strong>All categories</strong></td>
<td>418</td>
<td>315</td>
<td>53</td>
<td>676</td>
</tr>
</tbody>
</table>

Source: Field data.

4.9 SAMPLING DESIGN

Ours is a four stage sampling design. The selection of the district, the Mandal and the village has been purposive. The fourth stage units namely the households have been
selected by stratified random method using the table of random members. Of the 492 households at Uranduru 418 are considered to be agricultural households as they derive more than 50 percent of their income from agricultural production. Similarly of the 331 households at Ramakuppam 676 are classified as agricultural households. These households are further stratified into 4 size groups based on their land holding. Non-borrower households are excluded from the purview of our sample. 20% of the borrower households as shown in table 4.16 are covered by our survey. Through this method of sampling we arrive at a sample size of 63 for Uranduru and 87 for Ramakuppam. The total sample size comes to 150 units.

<table>
<thead>
<tr>
<th>Table 4.17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land distribution of sample households</td>
</tr>
<tr>
<td>Category</td>
</tr>
<tr>
<td>No. of Households</td>
</tr>
<tr>
<td>Marginal</td>
</tr>
<tr>
<td>Small</td>
</tr>
<tr>
<td>Medium</td>
</tr>
<tr>
<td>Large</td>
</tr>
<tr>
<td>Total :</td>
</tr>
</tbody>
</table>

Note : Figures in parentheses are percentages
Source : Field data.
Next to water, land is the single largest natural resource available to humanity. But it is getting scarcer everyday due to tremendous population pressure.

The average size of holding in $U$ works out to 4.87 acres and 4.10 acres in the $K$ and the standard deviation, which is an absolute measure of dispersion and the Karl Pearson Coefficient of Skewness ($Skp$) works out to 19.30 and 0.12 in the case of $U$ and 20.15 and -0.10 in the case of $K$. The distribution of land relates to the ownership pattern which has a far reaching effect on the access to institutional credit and socio-economic status of the rural households. It needs hardly to be emphasised that the ownership of land is a significant determinant of income level and its distribution as well as the style of leadership and the nature of functioning of Panchayat Raj institutions. The contributions of Keith Griffin* have abundantly established that the factor prices that the different classes of farmers encounter are quite varied due to their differential access and capacity to influence the power structure.

The skewed distribution of land ownership also leads to

skewed distribution of the assets of rural households and these details are furnished in table 4.18. The assets of rural households are broadly divided into 3 categories - physical, Financial and Business. Physical assets comprise house, agricultural land, livestock, implements and machinery, tractors, motor oil engines, household goods and furniture, utensils, furniture wearing apparel, cycles, car, motor cycle, radio and T.V., Jewellery.

Financial assets include cash in hand, cash in bank, loans to others, deposits in post office, deposits in chit funds, friends and relatives, investments in Government bonds, shares and debentures. Business Assets consist other than physical and Financial Assets. 41 percent of marginal farmers posses 20 percent of total assets, Whereas 3.3 percent of small farmers account for 30 percent of assets. Medium and large farmers together account for 26 percent and posses 50 percent of the total assets in Uranduru. In the case of Ramakuppam (K) 47% of marginal farmers owns 16 percent of assets. While 33 percent of small farmers account for 26 percent of assets, Medium and large farmers together constitute 20% of farmers and account for 58% of assets. Thus the inequality in the distribution of assets is greater in the case of K than that of the U. The Lorenge curve and Gini coefficients (U = .30 & k = .47) shown in fig 4.3 indicate this situation.
Dia 4.3

ASSET DISTRIBUTION OF SAMPLE HOUSEHOLDS

- U
- K

Percentage

Category
<table>
<thead>
<tr>
<th>Category</th>
<th>87</th>
<th>88</th>
<th>89</th>
<th>90</th>
<th>91</th>
<th>92</th>
<th>93</th>
<th>94</th>
<th>95</th>
<th>96</th>
<th>97</th>
<th>98</th>
<th>99</th>
<th>00</th>
</tr>
</thead>
<tbody>
<tr>
<td>(100.0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(100.0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72% (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
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<td>Medium</td>
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<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
</tr>
<tr>
<td>Marginal</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
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<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
</tr>
</tbody>
</table>

Source: Field data.

Note: Figures in parentheses are percentages.
The educational status of heads of households is supposed to be a crucial variable in determining their political socio-economic status. Those with higher educational status, as measured by years of schooling, are supposed to forge better links with the agencies administering infrastructural and allied facilities including farm credit delivery agencies. The impact of education on agricultural development is increasingly recognised. The details relating to literacy levels of the heads of the sample households are presented in table 4.19. There is a strong positive correlation between the size of holding and the level of literacy in both the villages though the value of the 'r' is lower in U (.96) than in K (.97). The proportion of literates with tertiary education is 29 percent in U and it is only 9 percent in K. The overall literacy status is also higher in U (56) compared with K (25). The correlation coefficient between literacy status and access to institutional borrowing is .99 in U and .95 in the K.

The membership in credit cooperatives is a necessary pre-condition for borrowing from these institutions. The cooperative credit institutions in India have a long history and have been intended to provide credit to the farmers at a concessional rate of interest. But the credit cooperatives
<table>
<thead>
<tr>
<th>Category</th>
<th>I11th-Prim. Sec.</th>
<th>Higher Total</th>
<th>% of I11th-Prim. Sec.</th>
<th>Total I11th-Prim. Sec.</th>
<th>% of Total</th>
<th>Primary Total</th>
<th>% of Primary Total</th>
<th>Total Prim.</th>
<th>% of Total</th>
<th>I11th-Prim. Sec.</th>
<th>Higher Total</th>
<th>% of I11th-Prim. Sec.</th>
<th>Total I11th-Prim. Sec.</th>
<th>% of Total</th>
<th>Primary Total</th>
<th>% of Primary Total</th>
<th>Total Prim.</th>
<th>% of Total</th>
<th>I11th-Prim. Sec.</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>Maritza</td>
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<td></td>
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</tr>
</tbody>
</table>

| Literates |              |              |                       |                       |             |              |                 |             |             |                 |             |                  |                      |             |              |                  |             |             |                 |
| Remapped |              |              |                       |                       |             |              |                 |             |             |                 |             |                  |                      |             |              |                  |             |             |                 |

**Note:** The table is likely discussing literacy levels of the heads of sample households.
have been under the grip of the large farmers depriving the weaker sections from cooperative credit delivery system. The origins of the PACS in the sample villages are also shrouded in mystery and the present executives are not in a position to identify their promoters. Since our focus is on the present we have not gone into the historical aspects of the cooperative credit Societies in the sample villages.

Table 4.20 incorporates certain structural factors relating to the membership and borrowership of the societies pertaining to the year of our investigation 1990-91. There is a positive correlation between size of holding and membership, (0.86 & 0.93), size of holding and borrowership (0.99 & 0.98) and size of holding and level of borrowing (1.0 & 1.0) in U and S in that order villages with minor variations which imply that the PACS in the sample villages are very much under the strangle hold of medium and large farmers, sometimes symbolising the operation of semi-feudalism and not the emergence of capitalism in agricultural economy of the sample villages.

Table 4.21 provides information on the category-wise distribution of current borrowings from both institutional and non-institutional agencies by our ultimate sampling units. That there is a positive relationship between the size of holding and institutional borrowing is well
<table>
<thead>
<tr>
<th>Categories</th>
<th>63</th>
<th>52</th>
<th>41b</th>
<th>41a</th>
<th>31</th>
<th>21</th>
<th>11</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
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<td></td>
<td></td>
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</tr>
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<td></td>
<td></td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>21</td>
<td>17</td>
<td>31</td>
<td>3015</td>
<td>29</td>
<td>17</td>
<td>13</td>
<td>81</td>
<td>88</td>
</tr>
<tr>
<td>Marginal</td>
<td>26</td>
<td>29</td>
<td>32</td>
<td>1292</td>
<td>44</td>
<td>73</td>
<td>13</td>
<td>68</td>
<td>199</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Members</th>
<th>Total Borrowers</th>
<th>Average Total Members</th>
<th>Average Total Borrowers</th>
<th>% of Sample Borrowers</th>
<th>% of Sample Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
</tr>
<tr>
<td>Sample</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
<td>in co-op</td>
</tr>
</tbody>
</table>

Membership and Borrowers in Co-operatives

Table 4.20
<table>
<thead>
<tr>
<th>Category</th>
<th>(100) 1972</th>
<th>(100) 1973</th>
<th>(100) 1974</th>
<th>(100) 1975</th>
<th>(100) 1976</th>
<th>(100) 1977</th>
<th>(100) 1978</th>
<th>(100) 1979</th>
<th>(100) 1980</th>
<th>(100) 1981</th>
<th>(100) 1982</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
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<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
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<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
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</tr>
<tr>
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<td>5,000</td>
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<td>5,000</td>
<td>5,000</td>
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<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
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</tr>
<tr>
<td>Medium</td>
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<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Small</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
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<td>1,000</td>
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<td>Marital</td>
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<td>1,000</td>
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<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

**Table 4.21**

*Source: Field data. Figures in parentheses are percentages.*
### Table - 4.22
Agriculture Credit Structure of Sample Households: 1990-91

(Current borrowings of 150 sample households)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Bruandur</th>
<th></th>
<th></th>
<th></th>
<th>Ramakuppan</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Marginal</td>
<td>Small</td>
<td>Medium</td>
<td>Large</td>
<td>Marginal</td>
<td>Small</td>
<td>Medium</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All Cat.</td>
<td>All Cat.</td>
<td>All Cat.</td>
<td></td>
<td>All Cat.</td>
<td>All Cat.</td>
<td>All Cat.</td>
</tr>
<tr>
<td>I. INSTITUTIONAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A) Co-operatives</td>
<td>8.2</td>
<td>14.3</td>
<td>24.5</td>
<td>28.9</td>
<td>18.3</td>
<td>2.6</td>
<td>7.7</td>
<td>15.6</td>
</tr>
<tr>
<td>B) Commercial banks (including RRBs)</td>
<td>43.6</td>
<td>40.6</td>
<td>32.2</td>
<td>33.7</td>
<td>37.9</td>
<td>21.3</td>
<td>22.3</td>
<td>33.8</td>
</tr>
<tr>
<td>C) Government</td>
<td>4.1</td>
<td>2.2</td>
<td>2.6</td>
<td>1.9</td>
<td>2.7</td>
<td>4.6</td>
<td>2.1</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>I. Total</td>
<td>55.9</td>
<td>57.1</td>
<td>60.3</td>
<td>62.5</td>
<td>58.9</td>
<td>28.5</td>
<td>32.1</td>
</tr>
<tr>
<td>II. NON-INSTITUTIONAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D) Landlords</td>
<td>14.4</td>
<td>9.4</td>
<td>5.7</td>
<td>8.2</td>
<td>8.7</td>
<td>6.8</td>
<td>4.4</td>
<td>4.0</td>
</tr>
<tr>
<td>E) Professional money lenders</td>
<td>13.4</td>
<td>12.9</td>
<td>8.2</td>
<td>7.4</td>
<td>10.4</td>
<td>27.7</td>
<td>22.5</td>
<td>12.6</td>
</tr>
<tr>
<td>F) Agricultural money lenders</td>
<td>8.6</td>
<td>8.3</td>
<td>12.8</td>
<td>14.3</td>
<td>10.8</td>
<td>23.7</td>
<td>25.3</td>
<td>16.4</td>
</tr>
<tr>
<td>G) Traders &amp; commission agents</td>
<td>3.1</td>
<td>7.5</td>
<td>7.3</td>
<td>6.5</td>
<td>6.2</td>
<td>6.5</td>
<td>7.6</td>
<td>7.9</td>
</tr>
<tr>
<td>H) Friends &amp; relatives</td>
<td>2.5</td>
<td>4.0</td>
<td>4.7</td>
<td>4.1</td>
<td>3.9</td>
<td>2.8</td>
<td>3.4</td>
<td>4.8</td>
</tr>
<tr>
<td>I) Others</td>
<td>2.1</td>
<td>1.4</td>
<td>1.4</td>
<td>1.7</td>
<td>1.6</td>
<td>2.1</td>
<td>2.3</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>II. Total</td>
<td>44.1</td>
<td>42.9</td>
<td>39.7</td>
<td>37.5</td>
<td>41.7</td>
<td>71.5</td>
<td>57.9</td>
</tr>
<tr>
<td>[I+II] Grand Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>(Amount in Rs.)</td>
<td>205100</td>
<td>273600</td>
<td>211650</td>
<td>216400</td>
<td>906600</td>
<td>260000</td>
<td>398900</td>
<td>261800</td>
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</tbody>
</table>

Source: Field data.
established in the literature on rural credit markets. The specialised rural financial institutions are intended to cater to the requirements of the marginal and small farmers and therefore there is a bias in favour of extensive rationing of institutional credit as revealed by the lendings per acre which are decreasing at least in the middle range borrowers. Due to skewed distribution of holdings per household institutional borrowing tends to rise in both the village though the value of the $r$ is slightly higher ($0.990$) in Urundur village compared with Ramakuppam ($0.986$). Further it may be noted that the inequality in the distribution of institutional finance is higher in the less developed village ($K$) $Skp = 0.10$ than in the developed ($U$) ($Skp = 0.09$). The Lorenz curve and Gini-coefficients ($K = 0.46$ & $U = 0.29$) shown in fig 4.4 reinforce the data presented in table 4.21.

Table 4.22 presents in a summary form the borrowings of our ultimate sampling units by category and source. It may be noted that the single largest sources of agricultural finance in all categories and from all sources is the finance provided by the commercial banks including the RRB. This is an indication of the overall quantitative expansion of bank finance in recent years in the rural economy of the country. This evidence also justifies the characterisation of modern banking in rural areas as mass banking or social
Table 4.23

ANOVA RESULTS

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom (df)</th>
<th>Sum of squares (ss)</th>
<th>Mean squares (ms)</th>
<th>Fc</th>
<th>Ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. within groups</td>
<td>1</td>
<td>7.420887E+08</td>
<td>7.420887E+08</td>
<td>0.9434548*</td>
<td>3.92</td>
</tr>
<tr>
<td>B. Between groups</td>
<td>3</td>
<td>1.976279E+09</td>
<td>6.587597E+08</td>
<td>0.8375144*</td>
<td>2.68</td>
</tr>
<tr>
<td>A+B</td>
<td>3</td>
<td>4.387226E+08</td>
<td>1.462408E+08</td>
<td>0.1859234*</td>
<td>2.68</td>
</tr>
<tr>
<td>Error</td>
<td>64</td>
<td>5.034017E+10</td>
<td>7.865652E+08</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>5.349726E+10</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

* Not significant at 5% level.

Source: Table 4.22.
banking. Co-operatives figure next only to commercial banks for the large, medium and small farmers in both the villages. However, the marginal farmers have had to take resort to borrowing from the landlords and money lenders both professional and agricultural in both the villages. This is the weakest area of rural banking which needs to be strengthened by devising appropriate institutional mechanism and operational measures in the interests of ensuring growth with equity in rural development. The preexistence of traders and commission agents, friends and relatives and other miscellaneous agencies at a significantly higher level of operations in the less developed village (K) is an index of its greater reliance on non-institutional credit systems as may be also noticed from the striking difference in the proportion of non-institutional credit in U (41%) compared with 60% in the case of K. Composition of credit by different agencies is depicted in fig. 4.5.

ANOVA calculated for the absolute figures presented in table 4.22 and the results are shown in table 4.23. As the calculated F values are lower than the table values it indicates that there is no significant difference between the two sample villages in respect of composition of credit and inter-size group variations of credit. Hence the null hypotheses that there is no significant difference between
| Agency | Urandur | | | | | | | | Ramakuppan | | | |
| | Marginal | Small | Medium | Large | All Cat. | Marginal | Small | Medium | Large | All Cat. | Marginal | Small | Medium | Large | All Cat. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. INSTITUTIONAL | | | | | | | | | | | | | | | | |
| B) Commercial Banks (including RRBs) | 11.5 | 12.5 | 12.5 | 13.5 | 12.5 | 11.5 | 11.5 | 12.5 | 13.5 | 12.3 | 11 | 11 | 11 | 13 | 12 |
| C) Government | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1. Total | 11 | 12 | 12 | 13 | 12 | 11 | 11 | 12 | 13 | 12 | 11 | 12 | 12 |
| 11. NON-INSTITUTIONAL | | | | | | | | | | | | | | | | |
| D) Land lords | 28 | 29 | 27 | 24 | 28 | 33 | 31 | 29 | 23 | 31 | 31 | 31 | 31 | 31 | 31 |
| E) Professional money lenders | 34 | 30 | 24 | 22 | 29 | 39 | 36 | 30 | 24 | 35 | 35 | 35 | 35 | 35 | 35 |
| F) Agricultural money lenders | 28 | 25 | 23 | 22 | 24 | 32 | 26 | 26 | 22 | 28 | 28 | 28 | 28 | 28 | 28 |
| G) Traders & commission agents | 33 | 28 | 20 | 18 | 24 | 28 | 24 | 22 | 21 | 24 | 24 | 24 | 24 | 24 | 24 |
| H) Friends & Relatives | 22 | 20 | 15 | 12 | 17 | 24 | 21 | 18 | 18 | 20 | 20 | 20 | 20 | 20 | 20 |
| I) Others | 26 | 23 | 17 | 15 | 20 | 26 | 23 | 21 | 19 | 22 | 22 | 22 | 22 | 22 | 22 |
| 11. Total | 30 | 27 | 22 | 20 | 25 | 34 | 30 | 28 | 22 | 29 | 30 | 30 | 30 | 30 | 30 |
| (Total Grand Total) | 19.5 | 18.4 | 15.8 | 15.7 | 17.4 | 19.5 | 18.4 | 15.8 | 15.7 | 17.4 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 |

Source: Field data.
Table 4.25

RELATIONSHIP (r) BETWEEN SIZE OF HOLDING AND RATES OF INTEREST

<table>
<thead>
<tr>
<th>Agency</th>
<th>Uranduru</th>
<th>Ramakuppam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Institutional</td>
<td>0.93</td>
<td>0.97</td>
</tr>
<tr>
<td>2. Non. Institutional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Landlords</td>
<td>-0.94</td>
<td>-1.00</td>
</tr>
<tr>
<td>b) Professional money</td>
<td>-0.92</td>
<td>-0.99</td>
</tr>
<tr>
<td>money lender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Agricultural money</td>
<td>-0.89</td>
<td>-0.96</td>
</tr>
<tr>
<td>money lender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Traders &amp; commission</td>
<td>-0.91</td>
<td>-0.86</td>
</tr>
<tr>
<td>agents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Friends &amp; relatives</td>
<td>-0.97</td>
<td>-0.83</td>
</tr>
<tr>
<td>f) Others</td>
<td>-0.93</td>
<td>-0.97</td>
</tr>
<tr>
<td>Total Non-institutional</td>
<td>-0.93</td>
<td>-0.97</td>
</tr>
<tr>
<td>I+II Grand Total</td>
<td>-0.87</td>
<td>-0.91</td>
</tr>
</tbody>
</table>

Note: r = Srp correlation.

Source: Table 4.24
the two sample villages in respect of composition of credit and inter-size group variations of credit are accepted.

4.10 INTEREST RATE STRUCTURE

The interest rate structure of our sample households is presented in table 4.24. We notice that the average rate of interest for all categories of borrowers from institutional agencies works out to 12 per cent in both the villages, whereas the corresponding rates from non-institutional agents are 25 and 29 percent for U and K respectively. It may also be noticed that the government loans are slightly cheaper than the co-operatives and the commercial banks. The rates of interest paid by the large farmers are slightly higher than the rest of their counterparts due to a comparatively larger size of the loan borrowed. There is an inverse relationship between farm-size and the rate of interest paid to non-institutional agencies in both the villages. Table 4.25 gives the values of the r. The divergent rates of interest that are found to be operative provide a miniature picture of the degree of imperfection in the credit market confronted by our sample units. It also throws some light on its fragmentation. However the dichotomy in the credit market that is self evident would have been aggravated but for the penetration of social banking in the rural domain. The rates of interest charged
by landlords are slightly lower than those of professional money lenders in the case of small and marginal farmers due to interpenetration of the rural land, labour and credit markets. Similarly the comparatively lower rates of interest charged by the traders and commission agents are due to the interlinkage of credit and product markets. The inverse relationship between farm size and rates of interest may be explained in terms of the famous lenders’ risk hypothesis* and the nature of the collateral which are very much evident in our sample.