

# VILLAGE COMMUNITY AND PADDY AGRICULTURE IN SOUTH INDIA

## —A Case Study of Abinnimangalam Village—

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THE AUTHOR OF the present study undertook a village survey on rural economic structures during January–April of 1967 and January of 1969 at Abinnimangalam, located in Musiri Taluk of Tiruchirapalli District, Madras State (Tamil Nadu).<sup>1</sup> Based on this survey, two independent studies have previously been published, one on methodological problems in the study of rural economic structures [6] and the other on the character of an *inam* village as viewed in the light of the history of land administration [5]. In this paper the author will focus on the rural economy centered on rice culture to clarify the economic structure of Abinnimangalam village.

The village for the survey was selected according to the following criteria:

- (1) A village suitable in size and population to permit observation of overall economic activities and to permit the interview of each villager.<sup>2</sup>
- (2) A village which had sent a good number of emigrant plantation workers to the wet zone of Ceylon.<sup>3</sup>
- (3) A village centered on irrigated rice agriculture but supplemented by dry farming.<sup>4</sup>
- (4) A multi-caste village as is commonly seen in south India.
- (5) A village which had not experienced drastic economic and social changes in recent years.
- (6) A village where land reform was carried out after the independence of India.

We made it a rule to start out on bicycle in the morning with questionnaires

<sup>1</sup> In Madras State, there have been comparatively many village surveys on Thanjavur delta along the lower reaches of the Cauvery River (where there are many Brahman villages), but few surveys of this kind have been conducted so far in Tiruchirapalli District. The reasons why this district was chosen for survey are as follows: (1) many plantation workers have been sent from here to Ceylon since the nineteenth century, and (2) changes in irrigation agriculture can be seen here according to the distance from the Cauvery River.

<sup>2</sup> Random sampling was avoided, for it was essential for us to examine the social and economic relationships among villagers.

<sup>3</sup> The survey on the actual situation of Abinnimangalam village was conducted as a part of a study comparing the economic structures of rice-cultivating villages surrounded by tea and rubber plantations in Ceylon.

<sup>4</sup> It was selected bearing in mind farm villages in the Japanese rice-cultivating zone and in the wet zone of Ceylon.

and to return in the evening to the adjoining village, Puthanampatti, where we had accommodations.<sup>5</sup> However, on some days we stayed at the *panchayat* office in Abinnimangalam, being admitted to the village *panchayat* court when cases were tried. Also, by staying overnight we could interview villagers who were not available in the daytime. A comprehensive questionnaire which was revised during the survey was taken by the author to every household in the village. Besides the interview and questionnaire the records of institutions like *panchayat* and schools were examined. Records maintained by the *karnam* (village level revenue officer) on land ownership and utilization have also been perused although they did not prove to be very useful. Thus, the data for this study have been secured primarily by means of first-hand observation.

### I. GENERAL SETTING OF THE VILLAGE

Abinnimangalam village is situated in the east of Musiri Taluk.<sup>6</sup> This *taluk* consists of five *panchayat* development blocks,<sup>7</sup> as shown in Figure 1, and Abinnimangalam village is part of the Musiri Panchayat Development Block. It is twenty miles from Tiruchirapalli where the district government office is located, nineteen miles from Musiri where the *taluk* office is located, and ten miles from Turaiyur which is the commercial center of the neighborhood.<sup>8</sup> Privately-operated busses run between the village and these three towns two to four times a day, serving as the principal means of transportation for the villagers.

Tiruchirapalli District is considered an agricultural region as there are no industries worthy of note and rapid industrialization is not anticipated [3]. Although there are no marked temperature variations throughout the year, it is hottest and driest during the months from March through August. The southwestern monsoon brings rain beginning September, when the main farming season sets in.

The cultivated land in Musiri Taluk is roughly divided into the following three

<sup>5</sup> Mrs. Nobuko Nagasaki, research staff of the Institute of Oriental Culture, the University of Tokyo, and Mr. M. Bazlulla Badsha, post-graduate student of Madras University worked with the author respectively as a co-investigator and an interpreter, and helped him in numerous ways. It would not have been possible to carry out the survey without the whole-hearted assistance extended by both of them. However, full responsibility for the method of the survey and the results must be assumed by the author. The amount of help, encouragement, and hospitality which the author received in India in conducting this survey makes it impossible to mention all persons by name to whom the author is greatly indebted and to whom he wishes to express his profound gratitude. However, the author would like especially to thank the villagers of Abinnimangalam and Puthanampatti.

<sup>6</sup> In Madras State, the principal unit for local administration is the district, under which there are revenue regions called *taluk*. Tiruchirapalli District is divided into ten *taluks*.

<sup>7</sup> These *panchayat* development blocks overlap the area of *panchayat* unions consisting of *panchayats* in each administrative village.

<sup>8</sup> Offices of the Ceylon Emigration Commission had been set up in Musiri and Turaiyur to employ plantation workers for Ceylon from these areas. After the independence of Ceylon, the business of these offices was taken over by the branch office of the Ceylon Planters' Association in Tiruchirapalli.

types according to the methods of water utilization (this is also a farmland classification for the collection of land revenue): (1) wet land fed by water channels from the Cauvery River, (2) garden land relying on water from wells, and (3) dry land depending entirely upon rainfall.

On the wet land along the Cauvery River it is possible to produce three rice harvests each year, with each crop showing a high per unit area yield. As one moves toward the hilly region in the north, the land in general becomes drier and the average yield diminishes. In the former region there are many *raiyatwari* villages, while in the latter there are many *zamindari* and *inamdari* villages. Abinnimangalam village is situated midway between the two regions. It has no wet land but a mixture of *nanja* land (garden land) where water is obtained from wells and small reservoirs and *punja* land (dry land) where farming relies on rainfall.<sup>9</sup>

Some figures indicating the rough size and character of Abinnimangalam village are given in Table I.

## II. THE INHABITANTS AND CASTE

Tiruchirapalli District, unlike Thanjavur District, has only a small Brahman population, and the areas inhabited by Brahmans are also limited chiefly to the villages and towns along the Cauvery River. In contrast, the Vellala (who belong to the Sudra, namely the fourth Vedic order in Indian society) have an advantage in rural districts in their number as well as in their status in the village community.<sup>10</sup> In Abinnimangalam village, too, although the Brahman was clearly regarded as foremost in the order of ritual pollution, the influence of the Vellala was overwhelming in other respects.

Table II shows the inhabitants of Abinnimangalam classified by caste, occupation, and sex. The inhabitants comprise a total of seventeen castes, but for administrative purposes they are roughly divided into three categories. The Caste Hindu, which excludes the Harijan for which special protective provisions have been established on the basis of the Constitution, is divided by the state government into forward and backward communities. For the castes designated as belonging to the backward community, preferential measures are being taken

<sup>9</sup> Cultivated land which can be irrigated by some means is called *nanja* in this region. The chief water utilization facilities in Abinnimangalam are wells, reservoirs, and waterways from small rivers. Under the land revenue system, *nanja* is classed as garden land. A *punja* is a cultivated field depending solely on rainfall, and it can be changed into *nanja* by providing irrigation facilities. When the irrigation has become impossible because the wells have run dry, the land changes conversely from *nanja* into *punja*.

<sup>10</sup> According to a census in 1921 when population statistics were classified by each caste, the Vellala had the largest population in Tiruchirapalli District with 230,000 members (total population: 1,900,000). This was followed by the Paraiyan in the category of Harijan (or the untouchables) with 170,000. The population of the Brahmans was only 40,000.

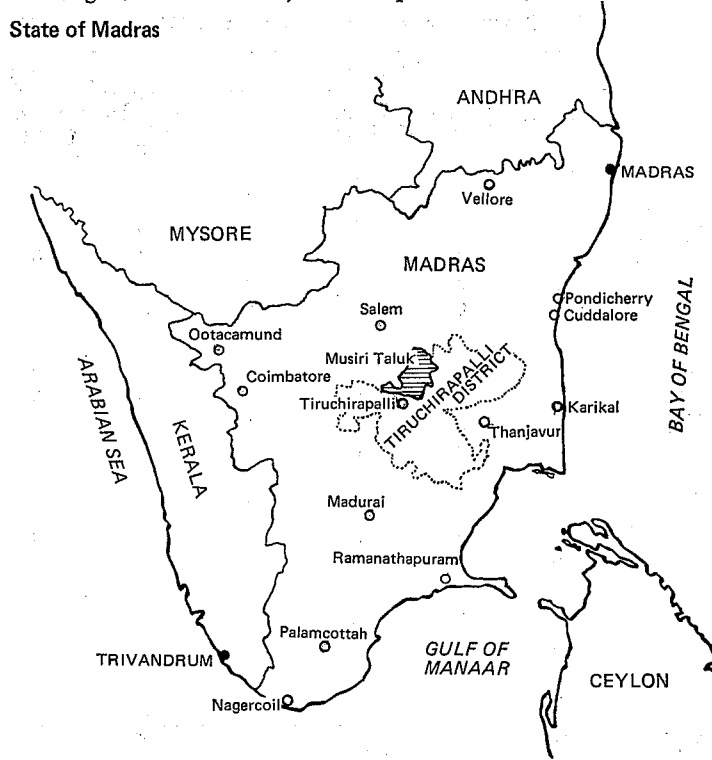
TABLE I  
ABINNIMANGALAM VILLAGE: A RESUME (1967)

Population*:	677 (178 households)
Total area:	2,244.4 acres
<i>Nanja</i> land (chiefly paddy fields):	121.79 acres
1967 land revenue assessment:	255.11 rupees
<i>Punja</i> land (chiefly dry land):	1,259.57 acres
1967 land revenue assessment:	1,087.19 rupees
Revenue-free land	984.69 acres
Roads:	37.96 acres
Building lots:	16.75 acres
Burial grounds:	1.75 acres
Crematories:	0.37 acres
Temple estates:	14.01 acres
Reservoirs:	74.00 acres
Grazing land:	302.60 acres
Wild land:	537.27 acres
Common wells (domestic water):	5
	3 for Caste Hindu; 2 for Harijan
Wells for irrigation:	175
Reservoirs:	5
Number of houses:	215
School buildings:	3
Public reading room (set up in 1966):	1
<i>Panchayat</i> office:	1
<i>Panchayat</i> court:	1
Provision stores (foodstuffs and sundry goods):	5
Clothing stores:	2
Tea stall:	1
Laundry and barber:	1 each
Post office:	1
Agent for Life Insurance Corp. of India (no business is done currently):	1
Indoor electricity†	
Wiring installed:	9 houses
Applied for as of April 1967:	26 houses
	} All belonging to the Vellala
Electric motor pumps	
Already purchased:	11 houses
Applied for as of April 1967:	8 houses
	} All belonging to the Vellala
Diesel pumps (in use):	2 houses
Land prices per acre	
<i>Nanja</i> land:	2,000-5,000 rupees
<i>Punja</i> land:	100-500 rupees

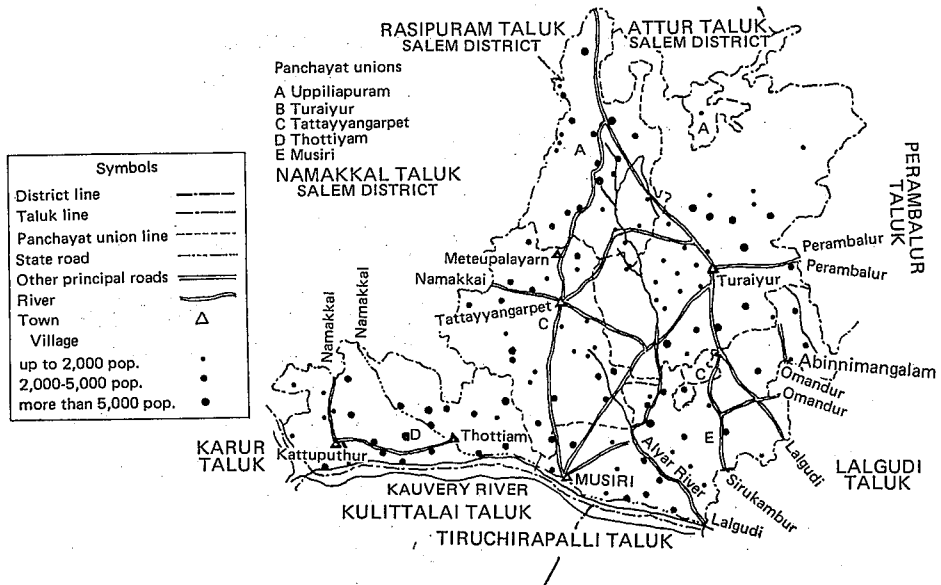
\* In the census of 1961 this village had a population of 698, larger than that in 1967. However, as this figure includes the households of some road construction workers temporarily assigned to Abinnimangalam, it does not necessarily mean that the population decreased. For 1961 census figures, refer to [2, pp. 162-63].

† Electricity had not been supplied as of January 1969.

Fig. 1. Musiri Taluk, Tiruchirapalli District, Madras State



Musiri Taluk

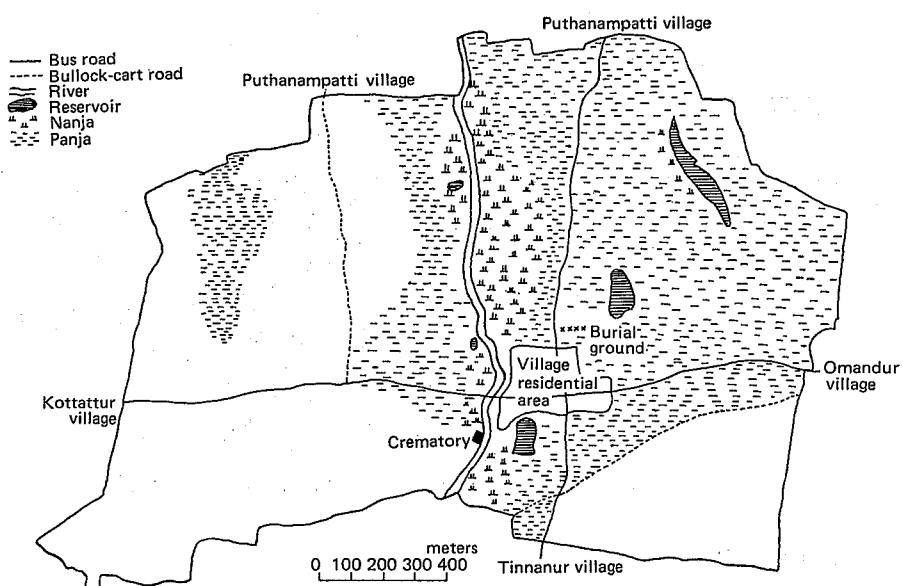


Source: [2]

TABLE  
POPULATION OF ABINNIMANGALAM VILLAGE AND NUMBER OF

Caste	Agriculture				Artisans		
	Farmer	Stock-breeder	Farm Laborer	<i>Panniyal</i>	Carpenter	Leather Worker	Stone Mason
Category I	41	0	7	0	0	0	1
Brahman	0	0	0	0	0	0	0
Vellala (A)	41	0	7	0	0	0	0
Vellala (C)	0	0	0	0	0	0	1
Chettier	0	0	0	0	0	0	0
Category II	3	9	9	2	4	0	11
Pandaran	1	0	0	0	0	0	0
Muthurajan	0	0	1	1	0	0	0
Gounder (Ku)	1	9	6	0	0	0	1
Gounder (Ko)	0	0	0	1	0	0	0
Achari (P)	1	0	0	0	0	0	0
Achari (M)	0	0	0	0	1	0	0
Achari (T)	0	0	0	0	3	0	0
Odder (K)	0	0	2	0	0	0	10
Odder (M)	0	0	0	0	0	0	0
Vannan	0	0	0	0	0	0	0
Periyari	0	0	0	0	0	0	0
Category III	10	0	12	5	0	6	0
Paraiyan	10	0	11	5	0	0	0
Chakliyan	0	0	1	0	0	6	0
Total	54	9	28	7	4	6	12

Fig. 2. Rough Sketch of Abinnimangalam Village



II  
HOUSES BY CASTE AND OCCUPATION OF HOUSEHOLDER

Well Digger	Services			Unem- Ployed	Number of Households	Population		Total
	Merchant	Salaried Man	Barber, Laundryman			Male	Female	
1	7	9	0	30	96	141	171	312
0	0	1	0	0	0	1	1	2
1	6	8	0	30	93	136	168	304
0	0	0	0	0	1	2	1	3
0	1	0	0	0	1	2	1	3
4	1	0	2	1	46	95	112	207
0	1	0	0	0	2	3	3	6
0	0	0	0	0	2	3	2	5
0	0	0	0	1	18	24	38	62
0	0	0	0	0	1	2	1	3
0	0	0	0	0	1	2	4	6
0	0	0	0	0	1	1	0	1
0	0	0	0	0	3	9	5	14
0	0	0	0	0	12	32	37	69
4	0	0	0	0	4	13	13	26
0	0	0	1	0	1	3	4	7
0	0	0	1	0	1	3	5	8
0	0	3	0	0	36	82	76	158
0	0	3	0	0	29	68	64	132
0	0	0	0	0	7	14	12	26
5	8	12	2	31	178	318	359	677

concerning education, employment and so forth. Below, each caste is briefly examined.<sup>11</sup>

Category I (forward community)

Brahman (1 household): There is one household of a village *karnam* engaged in the collection of land revenue who moved to the village from a neighboring village in 1957 when Madras Estate Land Act of 1947 (for reduction of rent) was enforced [5, p. 262]. In performing his duty as a village officer, he generally holds consultations with influential persons of the Vellala caste.

Arunadu Vellala (93 households): This is the dominant caste in the village. The literal translation of Arunadu is six *nadu* or six villages; the *nadu* was an old administrative unit. At the present time, only two *nadu* are known, one being the neighboring Omandur-nadu. The Arunadu Vellala in Abinnimangalam belong to this *nadu*, and it can be considered that Abinnimangalam was once a branch of Omandur village. In this paper, excepting special cases, this caste will be referred to simply as Vellala.

<sup>11</sup> In regard to the castes within one category, there was some difference of opinion among the villagers as to the correct order, but here the view taken by the Arunadu Vellala, which controls the order within the village, has been followed.

Cholai Vellala (1 household): This is a household which came from Turaiyur twenty-five years ago. It means a Vellala in the Chola region. Although the Cholai occupation as a caste is agriculture, this family is engaged in masonry in the village.

Chettier (1 household): This is the household of a lumber merchant who has been living here for fifty years. Chettier is administratively included in the backward community, but in this paper the family is included in Category I in view of its status (especially its economic position).

#### Category II (backward community)

Pandaran (2 households): This caste undertakes the management of the temples constructed by the Vellala (Siva sect), and offers prayers.

Muthurajan (2 households): This is said to be one of the farming castes and is also known as a caste in which divorce and remarriage are permitted. It consists of two households which came to this village a few years ago.

Kurumba Gounder (17 households): This is a caste whose traditional occupation is breeding goats (or sheep) and supplying their excrements as fertilizer. In this village there are an increasing number of Kurumba families who have moved into farming.

Konga Gounder (1 household): This is a farming caste in Mysore and Coimbatore. The family came to the village in 1952 in search of a job. They use the Kannada language as their mother tongue.

Porkollar Achari (1 household): This is a caste that traditionally worked as goldsmiths. A goldsmith left the village in 1960, so this family came here then from a neighboring village. The family lost its job after the government took over the control of gold in 1964, but was paid a subsidy of 500 rupees.

Malabar Achari (1 household): This family is from a carpenter's caste in Malabar and came to the village in 1938. The head of the household is engaged exclusively in the manufacture of furniture and speaks the Malayalam language.

Thachu Achari (3 households): This is a carpenter's caste manufacturing farming tools and is also engaged in farming.

Kal Odder (13 households): This is a masonry caste. The families came here thirty years ago. Although those belonging to this caste have been living in Tiruchirapalli District for several generations, even now they continue to use the Telegu language at home. They eat all kinds of meat except beef.

Mun Odder (5 households): This is a caste which digs wells (chiefly for agricultural use). The families raised pigs until 1965, but the pigs were slaughtered by order of the *panchayat* court. They also speak Telegu.

Vannan (1 household): This is a laundry caste, washing clothes of villagers other than the Harijan.

Periyari (1 household): This is a caste engaged in hair dressing. The family also renders services on such occasions as weddings and funerals for all villagers except for the Brahman and Harijan.



### Category III (Harijan)

The castes belonging to this category are also called Adi-Dravida. They are severely discriminated against as are the tribes not Hinduized who live in mountainous regions.

Paraiyan (29 households): This is a caste of farming workers. It is charged with the duty of disposing the dead bodies of animals. In this village the number of Paraiyan families eating beef is decreasing.

Chakliyan (7 households): This is a caste handling leather products. In this village the families are engaged in the repair of leather bags used for well irrigation and in the manufacture of *chappal*, leather footwear.

As the above introduction suggests, the caste formation in Abinnimangalam works roughly so that the non-Vellala families serve the Vellala caste. Table II shows that except in the case of the Kurumba Gounder, most villagers have not yet departed from the traditional vocation of their respective castes. This too leads us to the hypothesis that village order consolidated by the Vellala has not been greatly weakened.

There are a conspicuous number of unemployed households. This is partly due to a practice among the Vellala families that when the youngest son marries, his parents retire from active life and live separately from their children while depending upon the children for allowances. Also, many of the male heads are living and working away from home. In the case of the Vellala, twenty-five out of the ninety-three houses are occupied by single persons.

### III. ACTIVITIES BY THE PANCHAYAT

Undertakings in community development are pushed forward by the *panchayat*, but in Abinnimangalam there are two kinds of *panchayat*: One is the formal development *panchayat* for which all the committee members, including representatives of women and of the Harijan, are elected from among the villagers, while the other is the informal *gram panchayat* consisting of the Vellala.

The development *panchayat* is part of a system introduced to villages throughout India after independence in order to carry out the Union Government's village development policies. In Abinnimangalam the organization was established in 1958. The *panchayat* has been promoting development projects in road construction, community wells (*pakka* wells using cement) for domestic water, education and so on. Since 1960 bus routes have been improved with government subsidies amounting to 5,979 rupees. The road improvement has regularized the bus services and expanded the scope of activities by the villagers, which had heretofore been limited to Turaiyur, to as far as Tiruchirapalli and Musiri. The construction of deep public wells (9,223 rupees spent during the 1959-1966 period) reduced by half the labor of villagers in the dry season. This was a big blessing especially for the Harijan who had no wells for their own domestic use.

In contrast to these projects which are said to have been successful, others

have enjoyed less success. For example, public lavatories were constructed with a subsidy of 3,500 rupees in 1964. However, because of habits developed from time immemorial, villagers have not taken advantage of these modern facilities but continue their traditional ways. The electrification of the village also became bogged down administratively. Eleven farm households had purchased electric water pumps after 1965 and nine houses had wiring installed, which satisfied the conditions set forth by the Madras State Electricity Board.<sup>12</sup> In spite of this, because of administrative tardiness, electricity still was not available in 1969.

The *panchayat* subsidizes the elementary school in the village at an annual rate of two rupees per pupil. The history of elementary education in Abinnimangalam is relatively long. The Saraswati Elementary School was set up in 1898 by young teachers from Kothatur village in the neighborhood and still exists at present. According to some villagers, the reason this school remains private and does not become public is that such action would destroy the traditional order by making it unavoidable for teachers of the Adi-Dravida (Harijan) to teach the children of the Vellala. Of the 115 children who have reached school age, 74 regularly attend this school. The free school lunch system of the Madras State Government contributed to raising attendance among children not having satisfactory meals at home, and yet the number of children (especially girls) attending from low castes is small. In the low-caste households where both parents work outdoors, their children must take care of infants and cattle.

The Nehru High School<sup>13</sup> in nearby Puthanampatti village was founded by a rubber plantation owner at his own expense. This man had worked on the Malay Peninsula before World War II. An enthusiastic follower of Gandhi, he has been making great efforts to raise the educational standards of the Harijan, offering scholarships to poor Harijan students in the neighborhood to help them continue their studies.<sup>14</sup> This school is becoming the center of Harijan education in Tiruchirapalli District. In Abinnimangalam, this has resulted in an unusual phenomenon where more Adi-Dravida are receiving higher education than non-Vellala caste Hindu children. (Of twenty-two persons attending school for eleven years, five were from Adi-Dravida and fourteen from Vellala.)

Other jobs being tackled by the development *panchayat* are: (1) purchasing of *panchayat* books (costing 500 rupees), (2) maintenance and management of insecticide sprayers (200 rupees in 1961), (3) maintenance and management of radios (360 rupees in 1962), and (4) planting and management of tamarinds (100 tamarind trees planted along roads in 1962 at a cost of 1,000 rupees).

The income of the development *panchayat* was 7,237.53 rupees during the

<sup>12</sup> Conditions for electrification of farm villages by the Electricity Board of Madras were as follows: (1) at least fifteen households within a village must intend to use electric power for farming purposes, and (2) more than half (eight) of these households must purchase electric water pumps.

<sup>13</sup> The Nehru High School was promoted to college status in 1968, and has been a center of higher education in Musiri Taluk.

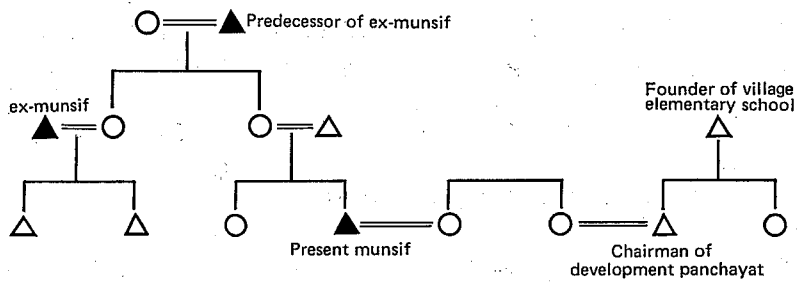
<sup>14</sup> Even in 1969 when the Nehru School became a college, 50 per cent of the students were from the Harijan.

1965–1966 period, chiefly consisting of grants and loans from the government. This shows that most of the activities of the development *panchayat* are undertaken on appointment from the union *panchayat* or the block development office.

In the field of village government, the important organ is the *gram panchayat*. This *panchayat* is in the form of a village coparcenary (consisting of four members, all Vellala) and is called *karai-karan*. Its members who thus are hereditary are not necessarily determined by primogeniture. Among the Vellala people, it is believed that Abinnimangalam is a coparcenary village founded by the ancestors of these four persons, though this is not mentioned in any historical literature.

The *gram panchayat* has for many years settled village disputes and preserved the agrarian order. A *munsif* (often translated as village head) carries out decisions made by the *gram panchayat*. The *munsif*, like the Brahman *karnam*, is a government employee, but his role in the village has been made hereditary by government appointment whereas the *karnam* is hired by examination.<sup>15</sup>

Fig. 3. Genealogy of Successive *Munsifs*



It is a village tradition to hold all-village assemblies (*gram sabha*) at least four times a year, but it is only the Vellala who actually speak out, and even this seldom is anything more than ex post facto approval of decisions of the *gram panchayat*. But what should be noted here is that the members of this all-powerful *gram panchayat* are not limited to landowners, as in the case of the traditional Japanese village. The village social order does not correspond to the area of land owned.

The development *panchayat* is presided over by seven members and the *gram panchayat* by four members, but two members sit on both committees, and further the wife of the *gram panchayat* chairman is a member of the development *panchayat*. Therefore, administrative differences seldom arise even when important matters are decided by the *gram panchayat*. Parenthetically, the Harijan committee member is not permitted to sit at the same table as the others during a

<sup>15</sup> A three-generation genealogical chart of the *munsif* is given in Figure 3. The *munsif* is not necessarily a male on the father's line; ability is also taken into consideration for the post. The same is true of the *karai-karan*. The term *munsif* originally meant a village judge, but in Tamil Nadu its emphasis shifted to the function of a person responsible for village administration, and it gradually became the post of village head. Even now the *munsif* is consulted on the contents of decisions by the *gram panchayat* court, and is also authorized to carry out these decisions [7, p. 217].

meeting. He must choose between standing throughout or sitting on the ground.

The *gram panchayat* arbitrates in matters under dispute within the village, decides on the wage level for agricultural workers, prepares for the festival at the Mariamman Kovil which is the village temple, punishes minor crimes committed in the village, prohibits anyone from keeping pigs in the village etc. Thus any knotty question in the village is brought here, and after a decision a Paraiyan person is asked to run about the village beating on a drum and reporting on what has been decided. Anybody who violates the decision of the *gram panchayat* is excluded from the relations of mutual dependence in the village community. For example, if they belong to the Vellala, they become unable to enter the village temple or observe funerals for their immediate relatives. If they belong to the Paraiyan, they are shut out from any opportunity to work in the village.

Chief revenue sources for the *gram panchayat* are given below.

- (1) Income (rent) from the temple *nanja* (1.54 acres).
- (2) Fifty rupees annually collected from each of two dairymen who come to buy milk.
- (3) A toll called *mahimai* imposed on all products going out of the village. The rate is fifty paise for a bullock-cart load of firewood, one rupee if it is cereals, etc.
- (4) Income from tamarind trees planted by the development *panchayat* (forty rupees in 1966).
- (5) The fines collected at the *panchayat* court which has sessions on full-moon nights.
- (6) Contributions from villagers working in Malaysia or Ceylon.

The funds thus collected for the *gram panchayat* are disbursed for matters regarded as necessary for the benefit of the whole village, such as repair of the school and the temple, the festival at the Kovil, and improvement of the temple estate.

#### IV. RICE CULTIVATION AND LAND OWNERSHIP

Agriculture, which is the major economic activity of the Abinnimangalam villagers, can be classified roughly into rice cultivation (on *nanja*), dry farming (on *punja*) and livestock breeding. Because the wet rice cultivation plays the central role in defining the nature of agriculture in Abinnimangalam, while the other two economic activities play supplementary roles in assisting the former, our attention will be focused primarily on the wet land cultivation.

The data on land ownership varies somewhat according to whether one uses the acreage of the *nanja* land registered with the village *karnam* or figures that were obtained in interviews with the individual villagers.<sup>16</sup> As a final authority,

<sup>16</sup> Land registration by the *karnam* of owned acreage according to land classification was made sometime between the years 1936 and 1957, but the precise year of recording is unknown. Moreover, the records do not show the acreage converted from *punja* to *nanja* or reverted from *nanja* to *punja* or eventually to uncultivated land. As a result, the registered land frequently differs from the land which is actually cultivated.

the transcript of a cadastral survey which was being carried out for land reform was relied upon. According to our survey, the *nanja* land owned by villagers was 76.73 acres with an additional 1.54 acres of *nanja* in the temple estate. Approximately 20 more acres belong to landowners in neighboring villages and the remaining land belongs to absentee landowners of the village who are at present working overseas. As shown in Table III, the majority of the village

TABLE III  
NUMBER OF FAMILIES OWNING AND OPERATING FARMS  
BY SIZE OF *NANJA* LAND

	Number of Families Owning Farms							Number of Families Operating Farms					
	0-0.5 acre	-1 acre	-1.5 acres	-2 acres	-4 acres	4- acres	Total	0-0.5 acre	-1 acre	-1.5 acres	-2 acres	-4 acres	Total
Category I	32	30	7	6	3	1	79	3	15	8	9	2	37
Category II	1	3	0	0	0	0	4	2	2	2	0	1	7
Category III	0	0	0	0	0	0	0	1	7	2	2	0	12
Total	33	33	7	6	3	1	83	6	24	12	11	3	56

*nanja* land is owned by Vellala. Other *nanja* land belongs to Gounder (two households), Pandaran (one) and Vannan (one), but these plots were acquired in fairly recent years. This also serves to prove that Abinnimangalam belonged to the Vellala. No Harijan farmer owns *nanja*.

The *nanja* extends along a small river (one of the Cauvery tributaries which runs through the village) and around five reservoirs. However, for only two to three months during the rainy season can water for agriculture be obtained from this small river. The most favorable reservoir likewise provides water for only five months of the year while the others are good only for two months. It becomes essential, as a supplementary water source, to draw water from wells in addition to the supply from the river and reservoirs. Nevertheless, these areas are still fortunate in comparison to about 70 per cent of the *nanja* which depends almost entirely upon well water (supplementing for the shortage of rainfall).

Water is drawn from the wells in large, rounded tin-plate buckets with long leather bags (called *toll*) attached which are pulled by a pair of bullocks. It is said that an average of 2,000 gallons of water can be lifted per hour from a well twenty feet in depth, and an eight-hour supply of water per day can flood land of about 0.3 acre. However, as eight hours continuous labor is extremely strenuous work for both the men and the bullocks, and as it is impossible to work in the midday sun, the day must begin as early as 2 A.M. Because the major part of *nanja* irrigation is dependent on water from wells, paddy operation in Abinnimangalam virtually demands a pair of sturdy bullocks and a strong male laborer. It is, therefore, a subject of foremost concern to the family as to how to satisfy these requirements (at least until pumps utilizing petroleum or electricity become available).

The major patterns of crop rotation on *nanja* are as follows.

Millet (*keevul*)—paddy (*samba*): This is the traditional rotation system which has been in effect for hundreds of years. Land cultivation starts at the end of May and five days later the sowing of millet takes place. Usually, weeding is done twice with an interval of fifteen days in between. Harvesting is finished during October and the cultivation of *samba*, which is a five-month rice variety begins by mid-November. Ten *madras* or *pakka* measures of seeds per acre (one *madras* measure equivalent to about 2.5 lbs. and termed simply "measure" hereafter) are sown directly in paddy fields. Five to six weeks later, the seedlings are transplanted into rows in the same fields and the remainder is disposed of. Although this method of transplanting requires more labor than the Japanese method, it is said to yield at least five more bags (one bag being forty-eight measures). Harvesting and other related work is completed by mid-April, which is the new year on the Tamil calendar. Harvested volume ranges from fifteen to twenty-five bags for millet and thirty-five to fifty bags for *samba*. In 1966, 35.61 acres were cultivated by this method.

White sorghum<sup>17</sup>—paddy (*kuruwai*)—paddy (*samba*): This pattern of rotation has gradually increased since 1960. The sowing of white sorghum seeds takes place in February. After one weeding about twenty days later, the harvesting will be done toward the early part of May. In June, seeds of 3.5-month rice variety called *kuruwai* are sown in a rice nursery, while the main paddy fields are fertilized with manure at the same time. The young rice plants will be transplanted after thirty days. This is called the Japanese method of rice planting. Harvesting takes place during September. Seeds of *samba* are then sown in rice nurseries (eighteen measures of seed-rice per acre) while the *kuruwai* is being harvested. Harvesting of *samba* is completed either in January or February.

By using a rice nursery the farmer saves labor on paddy irrigation compared with the former method of flooding the main rice field from the start. Land under this method of rotation grew to 33.42 acres in 1966 and is still on the increase. The yield is about ten to twenty bags of white sorghum, twenty-five to thirty-five bags of *kuruwai* and thirty to forty-five bags of *samba*, totalling approximately seventy-five bags on the average.

Apart from these two major patterns of rotation, there are some farmers who are engaged solely in the growing of *samba* due to a shortage of labor; others rotate white sorghum and millet because of shallow wells which fail to provide enough irrigation water for the paddies.

Red peppers are grown by three farmers as a cash crop. Planting starts in the early part of September and harvesting continues for three months during the March-May period. As this crop requires a large labor force, it tends to be grown only by upper class farmers who can afford to employ as many agricultural laborers as necessary. In 1966 red peppers were planted on 1.70 acres and the

<sup>17</sup> There are two kinds of sorghum. In this village, white sorghum is the name for the sorghum planted on *nanja* while black sorghum is grown on *punja*.

three upper class Vellala families gained gross income to the extent of 3,000 or 4,000 rupees per acre.

Sugar cane requires less labor than red peppers but takes ten to twelve months from planting to harvesting. Planting and harvesting takes place during the March–May period. There are three large sugar refineries in the city of Tiruchirapalli, and with the stability of the price, more farmers rely on it as a cash crop than on red peppers. Eight families grew sugar cane on 2.8 acres in 1966, realizing approximately the same gross income as did the families growing the peppers.

In the case of limes, long-term planning is important as it takes five to ten years after planting a tree before it begins to bear maximum yield. However, at the time of our survey, it was the most profitable of the cash crops. (The market is Tiruchirapalli.) Nursery trees are purchased from Salem district and planted during the rainy season. Limes have been planted by two Vellala farmers and one Gounder farmer on 1.54 acres of *nanja*. Encouraged by the success of a neighboring farmer who has made 2,000 rupees net profit per acre, three other Vellala families were planning to begin lime planting the next year.

More than 80 per cent of Vellala households own *nanja* land as shown in Table III. Although this undoubtedly serves to maintain the dominance of the Vellala in the village, the scope of land ownership in *nanja* alone is not an adequate indication of influence on village socio-economic life, as, to mention one possibility, *punja* or uncultivated land can always be turned into *nanja* by means of developing irrigation facilities.<sup>18</sup> Again, one Vellala widow who owned two acres of *nanja* had to abandon its cultivation as the maintenance and management of wells and irrigation water became too much for her without her husband. There are as many as three other families who have turned their land to pasture after the death of the husband as it became impossible to irrigate the *nanja*.

As a result of such circumstances, the great majority of non-cultivating landowners (approximately 80 per cent) in the village consist of widows and their children. Table IV shows the relationship between landlords and tenants. Other than widows, landlords consist of the aged where a strong labor force does not

TABLE IV  
CLASSIFICATION OF VILLAGE FAMILIES  
BY TYPE OF *NANJA* MANAGEMENT

	Landowner	Owner-Cultivator	Owner-Tenant	Tenant Paying Fixed Rent	Rent Sharing Tenant	Total
Category I	43	22	14	0	1	80
Category II	2	0	2	1	4	9
Category III	0	0	0	2	10	12
Total	45	22	16	3	15	101

<sup>18</sup> The difference is marked in contrast to pre-land reform rural Japan where the size of landownership in paddies was directly translatable into social prominence in the village.

exist, those where the main body of the family is working overseas, and others who have abandoned agriculture for commercial activities.

Among the *nanja* landlords is one Vellala who has mortgaged his one acre of *nanja* for the past twenty years and let others cultivate it freely instead of paying the debt interest. This custom is called *bhūgiyam* and is the only such example on the village *nanja*, but another case from outside the village might be introduced here. A Vellala man worked in Ceylon from 1915 to 1955 beginning as a tea plantation laborer. From this he became a cook, a store clerk at a clothing shop and an accountant at a pawn shop.<sup>19</sup> He lent a part of his savings (5,000 rupees) to a farmer outside Tiruchirapalli and obtained 1.37 acres of *bhūgiyam* land as security. Then, while letting the same farmer cultivate this *nanja* again, he receives twenty-seven bags of unhulled rice annually as rent for the land. This contract will last until the principal is completely paid back.<sup>20</sup>

Apart from *bhūgiyam* land, there are fourteen Vellala households which own *nanja* outside the village of Abinnimangalam. The general tendency is that those who can afford it tend to purchase *nanja* with higher fertility along the river Cauvery where three crops per year are possible in some places rather than land within the village. For such acquisition, the main sources of funds are savings accumulated overseas or remittances from relatives who live in Ceylon or Malaysia. The sizes of the plots acquired range from 0.64 to 10 acres, and they are leased to farmers living nearby who return a certain tenancy rent.

In the cases of *nanja* cultivation where a family tries to harvest a crop with three times the yield of *punja* by means of irrigation, we have already stated that a pair of bullocks and a strong male worker are vital. The area of *nanja* which can be covered by a pair of bullocks and a laborer is said to range between 1.0 and 1.5 acres in this village, although it varies to a certain extent depending upon the quality of the soil and the depth of water in the wells. Farmers who cultivate around 0.5 acre of *nanja* can be considered as having room to expand their operation, except for those with side jobs or where aged people are the workers. We did in fact find many farmers who wished to expand their operation.

Farmers who run more than 1.5 acres of *nanja* often own more than three bullocks, and have in their household young, unmarried workers<sup>21</sup> or a permanently employed labor force to be discussed later. Both the largest farmer in *nanja* management size (chairman of the development *panchayat*) and the parents of the most successful overseas emigrant from the village (a large trader who ranked third in the volume of food imports in Ceylon in 1966) have installed

<sup>19</sup> Compared with emigrant workers of other castes, Vellalas who belong to a high caste have greater opportunity in changing employment to cook or cookshop (particularly so in plantation areas where many emigrant Tamil are found).

<sup>20</sup> From this actual example, the *bhūgiyam* should be interpreted as a custom in village financing rather than an indication of a land-owning relationship.

<sup>21</sup> The fact that the life cycle could be a factor in the scale of operation is entirely unlike the management of Japanese paddy fields. See [6, p. 50].



diesel pumps in the place of bullocks and human labor for drawing water from wells.<sup>22</sup>

Apart from the pump units or the buckets and bags which are necessary for lifting water,<sup>23</sup> the main agricultural tools are a plough with an attached iron plate for a pair of bullocks, hoes for cultivation and weeding, sickles for harvesting, and bullock carts and bicycles for transportation. Ploughs are made by the Thachu Achari, the village carpenters, and are sold at 5 rupees per unit. The bullock carts, durable for about fifteen years, cost 500 to 700 rupees per cart. There were twenty-eight carts in the village and twenty-three belonged to the Vellala. Farm families without bullock carts have no alternative but to rent them at 1.5 rupees per day. A total of twenty bicycles were owned by the villagers (each costing 250-300 rupees) and sixteen of these were owned by Vellala families. Besides these, ten bicycles can be rented from two provision stores in the village.

The varieties of agricultural tools are strictly limited, and according to the older people in the village, they are the same as were employed in the previous century with the exception of pump sets and bicycles. In this village, the most indispensable item in order to stabilize and improve the agricultural output is a steady and secure supply of irrigation water, for without water any remarkable increase in production can hardly be expected even with the introduction of better agricultural tools.

Turning now to the social stratification of the villagers employed in paddy agriculture, the first point to be noted is that unlike the Japanese villages, there is no decisive significance as to whether one is a landlord or a tenant. For example, the *munsif* who plays an influential role in the village administration is a tenant of 0.5 acre of land in which he cultivates limes and red peppers, in addition to his own cultivated land of 1.12 acres. He employs a large number of laborers and his profits are prominent in respect to other villagers. On the other hand, the village landlord with the largest acreage in *nanja* leases his 4.25 acres to three households as tenant and uses the remaining 0.75 acre as pasture land, simply because he cannot afford to employ regular labor for irrigation purposes. As seen from these examples, it is not impossible for a tenant to be in a superior position both in economic terms as well as social prominence in the village. One could even say that the very fact that the *munsif* is holding a ruling position in the village society provides him with the opportunity of becoming a tenant of better *nanja*. Therefore, status in the village often comes with the degree of influence over the village labor.

The relationship of the powerful families to the class of farm laborers overlaps the caste system itself. In Abinnimangalam, there are eight Vellala households

<sup>22</sup> A diesel pump unit operated by fuel oil costs about 4,000 rupees. As operating cost is high compared with electricity, diesel pumps have not been so popular.

<sup>23</sup> The price of a pair of bullocks suited for drawing water from wells ranges from 600 to 1,000 rupees.

employing fourteen annually contracted laborers called *panniyal*, and these eight families constitute the ruling class of the village. A *panniyal* is under contract for one year from one Tamil new year in April to the next. These *panniyals* include one Vellala, one Muthurajan, one Konga Gounder and one Kal Odder and the remaining ten are Paraiyan. The *panniyals* work from early morning until sunset and receive sixteen bags of unhulled rice a year as payment. In addition, at the annual festivity of Mariamman Kovil held in May, they customarily receive thirty to forty rupees in cash, one *dhoti* or loin cloth, one shirt, one pair of leather sandals and one towel. However, unmarried *panniyals* (regardless of age) receive only twelve bags of unhulled rice instead of sixteen bags. It is generally considered in the village that sixteen bags of unhulled rice is sufficient to feed a whole household.

Although their lives are said to be more stable than living as a temporary laborer or *padiyal*, who is employed on daily basis, at present there are few applicants for the position of *panniyal* among the Paraiyan who are the source of agricultural laborers. Every year the upper-class Vellala families try to find more *panniyals*. But because the labor intensity is quite high, and that there are few holidays and little free time for working on one's own land such as *punja* when he becomes a *panniyal*, more farm workers are inclined to become *padiyal*.

The chairman of the development *panchayat* is the farmer who employs the largest number of *panniyals* (three) in the village. Four other farmers have two *panniyals* each. They are (1) the family of the food and provisions importer in Colombo (he returns home once a year), (2) the *munsif* of the village, (3) the vice-chairman of the development *panchayat*, and (4) the owner of a tea plantation in Ceylon. Among these families, (2) and (4) have converted *punja* into *nanja* (0.6 and 1.0 acre, respectively) by constructing wells several years ago and are now cultivating cash crops.<sup>24</sup> In addition, the *munsif* has begun poultry farming which other Vellalas avoid as they believe that they would become "polluted." Due to the progressive activities of the *munsif*, taboos of the caste system are now gradually changing in the village. This, however, does not mean that the restrictions of the caste system are weakening, but that various customs of caste continuously change, rather than being of a rigid nature, to meet the needs of the society, thus maintaining the caste order in the village community.

The three Vellala farmers who each employ one *panniyal* are the village postmaster, a member of the *gram panchayat*, and the owner of the largest store in the village. These farmers employing *panniyals* are influential men in the village (and of course within the Vellala as well). The rest of the Vellala farmers are either owner-cultivators or combined owner-cum-tenants (including several tenant-cum-owner farmers) who employ only *padiyals* occasionally. Apart from these, there is only one family of Vellala which does not own any *nanja* at all and is engaged in share-cropping. Two households of owner-cum-tenants are found in

<sup>24</sup> The land revenue is still paid under the category of *punja*.

the backward community of Category II. They are members of Kurumba Gounder and Vannan.

The dominant system of tenancy in the village is the share-cropping, and tenancy with fixed rent is carried out mainly on the land of absentee landlords working overseas. Their rent is paid in kind with one exception, and the amount is said to be equivalent to about one-third of the gross yield.

There are two patterns of the share-cropping system. In either pattern, it is an established custom for the harvested crop to be divided between the landowner and the tenant in the field. If the landowner provides the share renting tenant with seeds and fertilizers as well as the water-rate (in case water has been drawn from a river into the field), half of the total harvest will go to the landowner. This is the most common pattern. The second pattern arises when the share-cropper has no bullocks, ploughs, or leather bags for drawing water and thus everything has to be supplied by the landlord. Here the landlord gets two-thirds of the total harvested crops. At the time of our survey we found only three such cases. These three share renting tenants were Paraiyan who had been agricultural laborers up to 1966. They each expressed their hopes of receiving loans from the landlord so that they could move into the former types of contract as soon as possible after purchasing a pair of bullocks, a plough and leather bags.

The contract period is for one year and is usually renewed three or four times. There are no written contracts; all rely only on an oral bond. If any dispute arises as to the contents of a contract, it is arbitrated by the *gram panchayat* court. A right to perpetual tenancy does not exist.

Although tenant contracts have been used by the Vellala since olden times, there were never occasions when Vellala would work in the land of lower caste landlords. Since no caste other than the Vellala could own land, this was to be expected. However, when one young Vellala farmer decided in 1966 to begin tenancy on the *nanja* of a lower caste family instead of staying idle, this custom was overturned. He became a share-cropping tenant of a Kurumba Gounder. Although there were some Vellalas who admonished him for diminishing the authority of the caste, the majority accepted this as a necessity of circumstance.

Lastly let us look at the economic status of the farm laborers. Table V shows a classification of the farm laborers in the village. No male Vellala was *padiyal*, but there is no alternative for the landless widows or their families but to live as farm laborers.

As exemplified by the Kal Odder and Gounder families, when castes lose the tools and techniques of their traditional occupations, they tend to become agricultural laborers after abandoning their professions. The Harijan are the main source of farm labor, as about 80 per cent of their working population is engaged in agriculture. No special relationship exists between employers and employees; the workers take jobs as they are called on.

The standard wage of the farm laborer has hardly changed during the past ten years. A male *padiyal* gets 2.5 measures of crop (mainly unhulled rice) plus lunch or cash of 1 rupee plus lunch while a female gets 1.5 measures of crop or 0.5

TABLE V  
FARM WORKERS IN ABINNIMANGALAM VILLAGE

	<i>Padiyal</i>		<i>Panniyal</i>		Total
	Male	Female	Male	Female	
Category I (A)	0	7	0	0	7
(B)	0	7	1	0	8
Category II (A)	6	3	2	0	11
(B)	2	36	1	0	39
Category III (A)	7	5	5	0	17
(B)	9	45	5	0	59
Total	24	103	14	0	141

Note: (A) family heads; (B) others.

rupee in cash. However, during the 1966 harvesting season (spring) the farm workers demanded in a collective voice that the Vellala raise the male wage to 3 measures per day. In the midst of the farming season and faced with the difficulty of securing alternative labor, the Vellala accepted this demand and paid the wage for several months. In November of the same year, however, the Vellala judged this demand to be too stiff and decided at a meeting of the *gram panchayat* to lower the wage to 2.5 measures plus lunch or 3 measures without lunch. In the case of cash payment, the traditional wage was raised from 1 rupee to 2 rupees plus lunch. The village *veteyan* who performs odd jobs of the *panchayat* then broadcast this decision throughout the village while beating a drum.

As the price of unhulled rice fluctuates sharply, farm workers usually prefer to receive payment in the actual crop rather than cash. The price fluctuations (one bag of *samba*) from March 1966 to March of the following year were: 24 rupees in March 1966, 35 rupees in July, 45 rupees in November, 50 rupees in January 1967, and 35 rupees in March. In other words, the actual crop payment of three measures per day fluctuated from 1.5 rupees to 3.1 rupees during this period. The demand of the Paraiyan eventually was rebuffed, but the point to be noted and which even the Vellala could not ignore was that whereas traditionally the Paraiyan had been obliged to remove their footwear and bow as they passed the Vellala, this time they had made a demand which while not presented in the formal framework of collective bargaining had at least been brought forward by a united body.

## V. FEATURES OF NANJA LAND MANAGEMENT

It is difficult to accurately determine the crop-yield or sales volume of an agricultural product, and this is true not only in Abinnimangalam but also in other Indian villages. Further adding to the difficulty of obtaining accurate data during the survey period were concurrent tactics of the Madras Government in mobilizing police power to uncover hoarded rice so that the state could procure its own

rice.<sup>25</sup> The government neither kept production statistics on a village basis nor conducted crop cutting surveys.

Although the agricultural output in 1966 was extremely poor due to bad weather, based on figures obtained from individual farmers it can be calculated that at least 700 bags of unhulled rice were sold. By variety it is 400 bags of *kuruwai* and 300 bags of *samba* (more *samba* is consumed domestically as it is better in tastes). The sales figures for white sorghum and millet are 100 bags and 40 bags, respectively. The above figures include 25 bags of unhulled rice purchased by the government and 35 bags of unhulled rice sold within the village (mainly to agricultural laborers). While the price fluctuation of *kuruwai* was approximate to that of *samba*, white sorghum prices fluctuated from twenty-four to sixty rupees per bag and millet from forty to forty-eight rupees per bag.

Although it is impossible to accurately work out the cost of production in a village such as Abinnimangalam where natural economy still persists, we have tried to make the best estimate possible in order to clarify the nature of the agricultural economy. We chose thirty-eight households from whom comparatively reliable survey answers were obtained among the farmers managing *nanja* in order to study production costs. We would like to postulate here, based on the results of this research, a typical example of a farmer who is producing three crops (*samba*, white sorghum and *kuruwai*) per year. For this example, the cultivated acreage is one acre and the main family labor consists of one male and one female.

Work begins with the repair of irrigation channels for moving water from wells to the fields. For this, two or three skilled laborers must be employed (usually Mun Odder or Paraiyan). Repair of embankments between paddy fields and weeding are, as is customary, undertaken by family members. For cultivation, a traditional system of reciprocal labor termed *kaimat* is employed.<sup>26</sup> This system works by mutual agreement among farmers and labor is offered free of charge. Although normally the exchange is among farmers belonging to the same caste, it is not rare for labor to be exchanged among castes. Generally speaking, caste restrictions are eased when people are engaged in agriculture compared with other phases of village life, and sometimes communal dining among castes can be observed in the fields. In addition to the family members, ten to fifteen workers are needed for cultivation of the fields, and when sufficient labor cannot be secured by means of *kaimat*, six rupees will be paid for one pair of bullocks, a plough and one laborer.

It is customary for fertilizer to be used on the *samba* crop. The fertilizers that are available consist of goat (or sheep) manure, green manure (cutting branches of trees and spreading them on the paddy), compost and chemical fertilizers. One manner of fertilizing, called *patti*, is done by enclosing *nanja* within tem-

<sup>25</sup> The purchase price of rice set by the government was pegged at twenty-six rupees per bag, a price lower than the market price. See [4].

<sup>26</sup> The term *kaimat* literally means "aid by hands" and is also applied when borrowing money or goods without interest.

porary fences and raising goat herds within. This occupation forms the main source of income for Kurumba Gounder. Although extension officers of the Agriculture Department of the Madras Government are recommending a switch to chemical fertilizers as *patti* fertilizing is not considered very efficient, many farmers still utilize this method once every three years in the belief that the effects of *patti* last longer than those of chemical fertilizers. For keeping one hundred goats twenty-seven days and nights to provide manure for one acre of *nanja*, 1.5 bags of unhulled rice must be paid to the Gounder family which owns the goats (and which also takes care of the goats in the field).

The branches for green manure can be freely obtained from unutilized public land called *poromboke*. On an average, about two hundred bunches are put on one acre of *nanja* and this involves a total of ten laborers.

About 55 per cent of the farmers cultivating *samba* utilize five to twenty bullock cartfuls of compost. In most cases, they produce it in their own yard; otherwise they pay five rupees for one cartful of compost. Chemical fertilizers are used on all the *nanja* without exception. Substances used are either ammonium sulphate or compound fertilizer, and the application ranges from one bag to five bags per acre, which falls behind the standard set by the Agriculture Department. There is no store in Abinnimangalam dealing in chemical fertilizers, and therefore buyers have to go to the Kottattur Agricultural Cooperative Society in the neighboring village. The fertilizer is often in short supply and the result is a price increase as much as 50 per cent beyond the official price of seventeen rupees per bag.

For one acre of *nanja*, one-third of a bag of seed rice is sown in a nursery bed. This does not normally require employing laborers. Getting water from the wells to irrigate channels is also looked after by the family members, but should any employed labor be necessary, two measures of unhulled rice are given for an early labor shift from 3:00 A.M. to 8:00 A.M.

Transplanting is taken care of by female labor and involves fifteen to thirty laborers per acre. Wages are 1.5 measures of unhulled rice for one day's work (from 9:00 A.M. to 4:00 P.M.) and 1.0 measure for half a day's work (9:00 A.M. to 1:00 P.M.). Weeding is done twice, also by female labor, and this work requires a slightly greater number of workers than does transplanting. The volume of insecticide used in 1966 worked out to an average of twenty rupees per acre.

For harvesting, ten female and five male workers are employed on the average. There are two methods of paying (female) wages for harvesting: two measures of unhulled rice and lunch are provided for cutting plants and carrying them in bunches for threshing; or, plants are left in the field after having been cut and bunched and only 1.5 measures are paid without lunch. It is considered that transporting the plants is harder work than the actual cutting. Threshing, in many cases, is carried out by using the *kaimat* system as in the case of ploughing. But even with such a system, an additional five to ten male workers are employed. If this work is continued until the late evening, the daily wage is 4 measures plus meals.

Expenses paid for production of *kuruwai* are equivalent or slightly less than those for *samba*. However, neither *patti* nor green manure is applied in the production of *kuruwai*. White sorghum, which is planted after *samba*, requires much less labor than paddy. There is no need to plough the land and manure is rarely applied. The field is customarily weeded once but there are some farmers who do not weed at all.

Apart from the specific expenses necessary for cultivating each crop, there are some outlays to be taken into account in managing the *nanja*. The leather bags for drawing water from the wells must be changed once or twice a year.<sup>27</sup> These bags cost thirty to forty rupees each. As they tend to wear out with continuous use, the repair is left to the Chakliyan, the village cobblers. Those farmers who draw river water into the paddy fields must pay about five rupees as a water fee in addition to the land revenue, road tax, *panchayat* union tax and public tax imposed as surcharge (totalling about five rupees in all).

Cost calculations can be taken one step further by assuming that the various charges are roughly two hundred rupees including rent for bullock carts and bicycles, grazing charges for the animals, depreciation and repair charges for agricultural tools, etc. which vary considerably depending upon the conditions of the individual farmer.

On the other side of the balance sheet, supposing the producer's price for unhulled rice is forty-eight rupees per bag, the gross take for an acre of *nanja* will be roughly thirty-six hundred rupees. Excluding the family's labor wage equivalent and the landowner's land rent equivalent, production cost and income by types of farm management can be related as in Table VI.

TABLE VI  
COST OF PRODUCTION AND FARM INCOME  
BY TYPE OF FARM MANAGEMENT

	Cost of Production (in rupees)	Income (in rupees)
Owner-farmer	1,000	2,600
Tenant paying fixed rent	1,000	1,400
Share-cropping tenant	710	1,090
Share-cropping tenant without tools	510	690

The actual crops which a *panniyal* receives as his wages are worth eight hundred rupees a year after being converted into cash. Assuming that his wife is engaged in daily labor for 1.5 and 1.0 measures, each for ten days a month, her annual income would amount to three hundred rupees in cash equivalent. Combining these incomes, the family income would almost equal that of a share-cropping tenant (the *nanja* farmer tilling one acre). In the case of a share-cropping tenant without tools who is engaged on one acre of *nanja*, as his income is smaller than the annual income of one *panniyal*, it is not a stabilized form of

<sup>27</sup> The buckets are said to be good for several years.

management. Therefore it could be expected that this is a transitional and temporary form of management before he moves into the usual share-cropping tenancy on obtaining a pair of bullocks and a plough.

It takes 320 working days per year for one *padiyal*, at a wage of 2.5 measures per day, to earn the same annual income as a *panniyal*. Actually, the working days are less than 320 days as he has opportunities to earn more than 3.0 measures a day during harvesting and crop preparation periods. Nevertheless, taking into account the diminished opportunities to find work during the slack seasons, one could postulate that the occupations of *padiyal* and *panniyal* are nearly interchangeable in form. Furthermore, this interchangeability is not only a likelihood with these two types of farm laborers, but it may also apply more or less to the share-cropping tenant.

Although rent for the share-cropping tenant in Abinnimangalam village is generally on a fifty-fifty basis, this cannot be considered a fixed rate for the entire Tiruchirapalli District but varies depending upon the conditions of the land (especially irrigation conditions). For the rich alluvial soil near the Cauvery River, two-thirds of the yield is taken by the landowner. In the limited areas where water can be constantly drawn from the Cauvery River and drained off without stagnation, three crops of paddy rice are possible and landowner takes as much as three-fourths of the share. Thus, the higher the yield the more rent the tenant has to pay, making it unlikely for a share renting tenant to foresee an increase in his income.

In consideration of the above facts it would be feasible to reinterpret the conclusion we drew from our survey that the income level of farm workers occasionally equals that of share-cropping tenants on *nanja* (with family management of approximately one acre) in the following way. It is not by chance that the share of tenants coincides with the wage of farm laborers. On the contrary, farm labor wages are used as a standard to determine the rate of rent paid by the tenant. In fact, as far as can be judged by our survey, the areas where the wage levels of farm workers were equal were more extensive than those where the tenancy rates were in line with each other. For example, the wage levels of farm workers were almost the same both in a village at the foot of a mountain where the share of the landlord was one-third and in another village along the Cauvery River where the landlord took two-thirds of the harvest as his share.

In the case of Japan, the basis of the high tenancy rent of the small farmers is partly the result of continuous investment in land improvement which increases the value of the land [1] [6, Section III]. In south India, it seems necessary to analyze the extent to which high tenancy rates are based on the wage level of farm laborers. Our provisional conclusion with regard to this point is as follows.

Despite the fact that the supply of agricultural water is largely based on rain, water still has to be drawn from wells to irrigate *nanja* (with small rivers and reservoirs as secondary sources). Second, there must always be even allocation of paired bullocks and human laborers for each one or two acres in order to



maintain this supply of irrigation water. Therefore, and insofar as irrigation techniques remain at the present level, establishment of either stabilized large scale farm operations or smaller scale independent farm units requiring only family labor is not a feasible possibility. Given these conditions a large number of farm workers outside the farm unit will probably continue to exist.

As was indicated above, the economic terms of share-cropping and farm labor are identical and interchangeable. These circumstances are convenient for the dominant Vellala caste because they permit the efficient allocation of the village labor force. In this sense, it can be argued that this system of farm labor management by the Vellala caste has been essential to the economic structure of the village community.

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