

# **LAND REFORM AND THE DEVELOPMENT OF COCONUT LANDS**

A Case Study of Selected Villages and Estates  
in the Class II Coconut Lands of Colombo District



**AGRARIAN RESEARCH AND TRAINING INSTITUTE**

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## LAND REFORM AND THE DEVELOPMENT OF COCONUT LANDS

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## FOREWORD

The first phase of the Land Reform Programme carried out during the period 1972-74 resulted in about 560,000 acres of land being taken over by the Land Reform Commission. The lands that were taken over were distributed in a variety of ways to institutions and individuals for development purposes. The Institute in keeping with its broad objective of undertaking problem-oriented studies considered it relevant to focus attention on some of the issues associated with the implementation of the Land Reform Programme. After careful examination of the priority areas for research, it was decided that a study of land reform and productivity in Class II coconut lands in the Colombo District should be undertaken as a first step in order to make recommendations for improving performance and generating more employment in lands vested with the Land Reform Commission.

The coconut lands formed about 20.6% (115,360 acres) of the 560,000 acres of land vested with the Land Reform Commission. It was observed that both the land and the human resources in the coconut growing areas and more specifically in the areas that were broadly classified as "Class II coconut lands" had been greatly under-utilised. In view of the fact that 73% of the coconut lands falling within the Class II category is in the Colombo District it was decided to confine the study to this District.

The study was broadly aimed at obtaining an overall view of the position relating to the development of the vested lands *vis-a-vis* their impact on the surrounding villages. Six selected villages and 13 estates vested with the Land Reform Commission were studied by an inter-disciplinary team consisting of Agricultural Economists, Sociologists and Extension specialists. In view of the need to make available the findings of the research study at the earliest possible opportunity a preliminary report was issued in February 1975. This document which sets out the main findings has been up-dated utilising information collected during subsequent visits to the estates in 1975, 1976 and 1977.

This report has to be read along with two other sub-studies undertaken simultaneously. One sub-study which is already published under the title "A Study of Agricultural Extension, Training and Communication in the Colombo District with Special Reference to Six Selected Villages in the Class II Coconut Area", while utilising information collected for the main study also extended its coverage to include information on extension activities in the Colombo District. The second sub-study which is being issued simultaneously under the title "The Role of Local Groups in Rural Development" along with this report is a case study of a village focussing attention on forms of associative behaviour and participation of local groups in their own development.

The report while examining the potential for development in the areas selected for the study also pinpoints the deficiencies that exist in the management of lands that were vested under the Land Reform Law and highlights certain areas that have policy implications for the future. Though the findings specifically relate to Class II coconut areas in the Colombo District they have wider applicability and relevance to such lands in other parts of the country as well. It is hoped that this document will prove useful to researchers as well as those engaged in policy formulation.

The names of officers who had contributed to the preparation and finalisation of the various sections of the report are given below:-

INTRODUCTION	A.S. Ranatunga T. Sanmugam W. Gooneratne
SOCIO ECONOMIC CONDITIONS IN THE VILLAGES	W. Gooneratne P. Wickramasekara A.S. Ranatunga T. Sanmugam R.D. Wanigaratne M.P. Perera P.J. Gunawardena S.B.R. Nikahetiya
ESTATES VESTED WITH THE LAND REFORM COMMISSION	W. Gooneratne
POTENTIAL FOR DEVELOPMENT: AGRICULTURE INDUSTRIES	A.S. Ranatunga P. Wickramasekara
INTEGRATION OF ESTATES AND VILLAGES	W. Gooneratne P. Wickramasekara R.D. Wanigaratne
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	A.S. Ranatunga T. Sanmugam

It must, however, be stated that the main sections of this report and the subsequent revisions were done by four senior Research Officers - Mr. A.S. Ranatunga, Dr. W. Gooneratne, Miss T. Sanmugam and Dr. P. Wickramasekara with Mr. A.S. Ranatunga acting as co-ordinator of the study.

As this was one of the important studies undertaken by the Institute in its formative stage, a number of officers other than those referred to in the preceding section also worked together with their colleagues at different times. Messrs. A. Wanasinghe, Tudor Silva,

Jayantha Perera (Research and Training Officers) and Messrs. A. Ellman and G. Krause (foreign advisors) assisted the research team in collecting necessary data for this study. A number of officers in the field, particularly from the Department of Agriculture, the Coconut Research Institute, the Coconut Cultivation Board, the Land Reform Commission and the Colombo Kachcheri have also been extremely helpful in obtaining some basic information required for the study. The Institute gratefully acknowledges the assistance rendered by all these officials. We also wish to place on record our appreciation of the services rendered by the Investigators of ARTI in field data collection and processing of information and Mrs. S. Weeratunga, Secretary-cum-Stenographer in providing secretarial assistance.

The Chief Advisor of the Institute, Mr. Frank Saunders who left us in December 1976 was also associated with the study in the early stages and had been a source of encouragement to the research team.

C. Narayanasamy  
Director

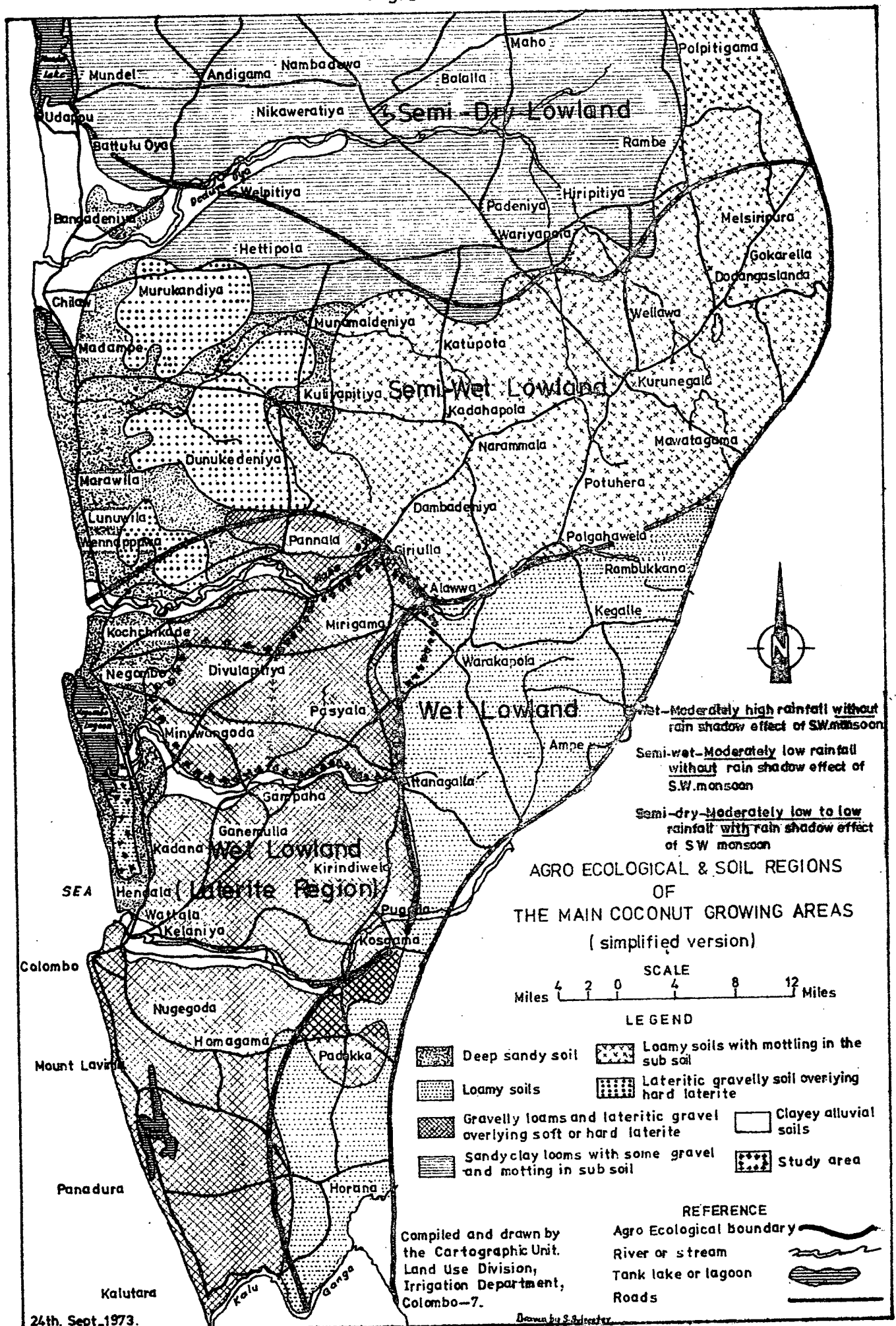
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Fig. I





## INTRODUCTION

Coconut ranks second to paddy in the use of agricultural land in Sri Lanka. According to the Agricultural Census of 1962, 1.15 million acres were under this crop constituting 29% of the 4 million acres of agricultural land. The coconut lands lying within the districts of Kurunegala, Colombo and Puttalam are popularly referred to as the main 'Coconut Triangle' and constitutes 70% of the country's coconut acreage. Coconut is essentially a small holder's crop, 73% of the acreage being in small holdings of less than 50<sup>1</sup> acres. Following the Land Reform Act No.1 of 1972 nearly 100,000 acres<sup>1</sup>, 40% of the land in estates over 50 acres in the main coconut triangle were vested with the Land Reform Commission. In the Colombo district the vested estates covered 13,615 acres constituting 25% of the land in such estates.

Two broad categories of land have been identified in this Triangle; Class I lands where both soil and climate are ideal and Class II lands where either soil or climate can be slightly limiting for coconut cultivation. Class II coconut land which is the concern of this study is mostly to be found in the Colombo district<sup>2</sup>.

The cultivation of coconut is generally land extensive and generates very low levels of employment compared to other important plantation crops such as tea. Cultivated as a mono crop, 8-10 acres of coconut on the average could provide employment for about one person.

The Class II coconut lands which have lateritic, gravelly soils provide scope for cultivation of a wide range of intercrops. Further, the wet zone coconut land offers prospects for developing a viable livestock

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<sup>1</sup>Vide Interim Report of the Panel Appointed to Examine and Report on Development Proposals for LRC Lands in the Coconut Triangle (5th December, 1974).

<sup>2</sup>An approximate breakdown of the pure stand of coconut growing land in the main coconut triangle by the two categories is given below.

District	Class I		Class II	
	Acres	%	Acres	%
Kurunegala	188,640	71	28,800	21
Colombo	18,270	7	98,730	73
Puttalam	<u>56,960</u>	<u>22</u>	<u>7,500</u>	<u>6</u>
Total	263,870	100	135,030	100
	=====	===	=====	===

industry as continuous natural grazing is feasible under the land use practice of growing coconut. However, these potentials have hardly been exploited. In these lands the productivity of the coconut crop itself is very low, the average yield being in the region of 1,500 nuts per acre per annum. This is only about 50% of the potential yield of Class II lands.

### Objectives of the Study

The aims of the study were

- (1) to ascertain the land use, land productivity and employment situation in a "selected area" of Class II coconut lands in the Colombo district;
- (2) to examine the possibilities of increasing the productivity of land and employment in such lands falling within the following broad categories:-  
estates vested with the Land Reform Commission,  
private estates and small holdings in the villages.
- (3) to suggest ways and means of integrating the development of the land vested with the Land Reform Commission with that of village lands in order to achieve better economic and social development of the area.

### The Study Area

The area selected for the study<sup>1</sup> is bounded by the Kelani Ganga in the South and the Maha Oya in the North and covers the agricultural extension ranges of Minuwangoda, Mirigama, Divulapitiya and Nittambuwa. The topography varies from undulating to rolling terrain. The higher slopes are eroded and the soils gravelly, while the middle and particularly the lower slopes have deep and fertile soils. The soil types vary sharply even within short distances necessitating 2 or 3 different land use patterns even in areas of limited extents<sup>2</sup>. The study area covers 600 village units.

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<sup>1</sup>Reference Fig. I.

<sup>2</sup>Vide Interim Report of the Panel Appointed to Examine and Report on Development Proposals for LRC Lands in the Coconut Triangle.

## Survey Methodology

Six of the 600 villages were purposively selected for the survey<sup>1</sup>. The number of villages surveyed in the study was mainly determined by the resources available to the Institute. The representativeness of the different village types in the area and the presence of Land Reform Commission lands in the immediate neighbourhood influenced the purposive selection of the 6 villages.

The selection was based on information provided by the extension staff of the Department of Agriculture, members of village level institutions and the Research Officers of the ARTI. Random samples of households were chosen from each of the selected villages. In all, 319 households were surveyed, 72 from Mabodale and around 50 from each of the other 5 villages. The heads of households were interviewed by administering a structured questionnaire. Thirteen investigators, supervised and assisted by six Research Officers conducted the field inquiries during the period 26th November to 18th December 1974.

Further data was had from on the spot investigations, informal conversations and by examining records relating to estates, local agricultural enterprises and different types of settlements. These inquiries were conducted by Research Officers assisted where necessary by one or two investigators. Thirteen estates vested with the LRC were visited during the initial survey in 1974 and subsequently at the end of 1975 and mid 1977 to examine the progress of settlement and development of these lands.

In addition, a village which showed various residential groupings was studied in-depth by the Sociology Unit of this Institute over a period of 8 weeks. The data which were collected mostly through participant observation helped to give a better understanding of social problems connected with group formation and group living.

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<sup>1</sup> Villages	DRO Divisions
Ullalapola	Divulapitiya
Mabodale	Minuwangoda
Korasa	Minuwangoda
Tennigama	Mirigama
Andana	Mirigama
Humbutiyawa	Nittambuwa

<sup>2</sup>The findings of this in-depth study are published separately\*

\*The Role of Local Groups in Rural Development, ARTI Case Study

The report of this study is set out as follows:

Chapter 1 describes the socio-economic situation of the six villages studied;

Chapter 2 sets out the conditions of the 13 vested estates at the time of visits in 1974, 1975 and 1977;

Chapter 3 examines the development potential of the coconut area, especially the scope for increasing productivity and employment opportunities both in the farm as well as in the non-farm sectors;

Chapter 4 discusses the need to integrate the village and the estates. The three broad aspects of integration discussed are economic, institutional and social;

The final chapter presents the summary, conclusions, and recommendations arising from the study.

The abbreviations used in this study are:

LRC	: Land Reform Commission
MPCS	: Multi Purpose Cooperative Society
DDC	: Divisional Development Council
DLRA	: District Land Reform Authority
VC	: Village Council
PMB	: Paddy Marketing Board
APC	: Agricultural Productivity Committee
CC	: Cultivation Committee
KVS	: Krushikarma Viyapthi Sevaka

## Chapter 1

### SOCIO-ECONOMIC CONDITIONS IN THE VILLAGES

#### 1 Population and Land

The study covered 319 sample households in the six villages with a population of 1,803 or 5.6 persons per household. The younger age groups predominated in the villages to conform to the nationwide demographic pattern. Thirty four per cent of the population was below 14 years of age, while 33% was between 15-34 years. Thirteen per cent of the population was between 10-14 years and could be expected to enter the job market within half a decade.

The population density was about four persons per acre of owned land, and varied from three per acre in Mabodale, Humbutiyawa and Ullalapola to six per acre in Korasa (Table 1).

The crude rate of natural growth of the population was 1.5% per annum. At this rate of growth the presently owned land would have to sustain 5 persons instead of 4 in 15 years if no additional land was acquired or if there was no migration from the villages.

The households surveyed owned 1.53 acres on an average of which 1.34 acres were highland and 0.19 acre lowland (Table 1). The lowland which constituted 13% of all land in the villages was owned by 30% of the households.

Absolute landlessness was not high. Only 5% of the households did not own any land. Ullalapola recorded the highest percentage of landlessness (12%). However, almost 70% of households did not own paddy land while almost 47% of the households claimed ownership of highland extents below half acre - or holding inadequate even for subsistence without other sources of family income<sup>1</sup>. In all the villages the distribution of new land under Village Expansion Schemes, or the ownership of land under joint systems enabled most of the households to claim ownership of some land. This has to an extent, disguised a situation of absolute landlessness.

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<sup>1</sup>All families however, do not depend only on the land they own.

Table 1      Ownership of Land

Village	No. of house- holds survey -ed	Land- less house- holds %	House- holds not owning low- land %	Average extent of land per household surveyed			Popula- tion density per acre of owned land
				High- land Acres	Low- land Acres	Total Acres	
Mabodale	72	6.9	62.5	1.48	0.20	1.68	3.2
Humbutiyawa	50	-	64.0	1.73	0.29	2.02	2.9
Ullalapola	50	12.0	62.0	1.87	0.30	2.17	2.6
Tennagama	47	-	76.6	1.03	0.09	1.12	4.9
Ambana	50	-	86.0	0.96	0.14	1.10	5.4
Korasa	50	2.0	76.0	0.88	0.13	1.02	5.9
All Villages	319	5.0	69.5	1.34	0.19	1.53	3.7

The average extent of land per household was about 2 acres (1.57 acres of highland and 0.25 acre of lowland) in Mabodale, Humbutiyawa, Ullalapola and 1 acre in the other two villages (the proportion of paddy land being less than 1%).

### 1.1.1 Highland

Highland holdings less than half an acre in extent were as high as 70% in Tennagama and Ambana respectively (See Appendix I) and 47% of holdings in all villages were less than half acre. These households (a majority of which were non-agricultural) owned only 7% of the total highland extent. This maldistribution of land was observed in all villages, including Ambana and Tennagama where land was scarce. In Ambana there were four households owning 46% of the land and in Tennagama two households owned 57% of the land. Seventy eight per cent of the highland was singly owned<sup>1</sup>. Incidence of joint ownership was high (22%) indicating excessive fragmentation. In Mabodale, Ambana and<sup>2</sup> Korasa, around one third of the highland was under joint ownership. Almost all the land was operated by the owners themselves. This distribution approximated to the overall pattern of ownership indicating that highlands do not change hands in any significant manner for purposes of operation.

<sup>1</sup>Two per cent of lands allotted under the Land Development Ordinance.

<sup>2</sup>This proportion by any standard was very high. Even a part of the reported singly owned highland may, in fact, be owned jointly.

Table 2 Highland Ownership and Operation  
(Percentage Distribution of Extents of (1) owned highland and (2) operational highlands by type of tenure)

Villages	Owned Highlands			Operated Highlands				
	Solely owned	Jointly owned	LDO lands	Solely owned and operated	Jointly owned and operated	LDO	With-out payment	Leased in
Mabodale	68	32	-	69	30	-	..	-
Humbutiyawa	85	15	-	84	16	-	-	..
Ullalapola	85	14	1	80	13	-	7	-
Tennagama	74	14	12	74	14	12	-	-
Ambana	70	28	2	60	36	2	2	-
Korasa	65	35	-	63	33	-	2	-
All Villages	76	22	2	74	22	2	2	..

.. negligible

The predominance of micro-holdings (63% of the holdings were less than 1 acre in extent) and the high degree of joint ownership acted as disincentives to development of the lands.

### 1.1.2 Lowland

The situation in the paddy sector was far more complicated due mostly to the heavy dependence for a living on the limited paddy land available. Only 30% of the households owned any paddy land at all. "Landlessness" was most critical in Ambana where 86% did not own any paddy land (Table 1).

A high proportion of lowland was owned by the same households which also had the larger highland holdings. "Landlessness"<sup>1</sup> was due not only to the limited paddy land in the villages, but also to its concentration in the hands of a few who owned large highland holdings as well. Thirty per cent of all paddy land was owned by 6% of the households in holdings of 2 acres and above. (Appendix II).

Forty nine per cent of lowland holdings were less than half acre, while 31% were less than 1 acre. The average size of owned lowland holdings was 0.65 acre (Appendix II).

<sup>1</sup>"Landlessness" here refers to lack of "owned" paddy land.

Operational holdings (39%) were mostly in sizes of half acre to less than 1 acre. Thirty four per cent of holdings were less than half acre. However, in Korasa, holdings below half acre were predominant with 60% of the holdings falling within this size class. The average size of the operated holding was 0.72 acre (Appendix III).

In Ullalapola, Humbutiyawa and Ambana a high proportion (more than 85%) of the lowland was owned singly. However, joint ownership, which accounted for 19% of the total paddy extent was less pronounced than in the highland.

All villages reported operating more lowland than they owned (Table 2). In villages like Ambana and Tennagama where the owned extents were very low the operated extent was almost thrice as much which indicated that part of the village land was controlled by outsiders<sup>1</sup> some of whom were from neighbouring villages.

Table 3 Percentage Distribution of Lowland Operators by Tenorial Category

Village	Sole owner %	Joint owner %	Tenant %	Owner tenant %
Mabodale	43	31	7	14
Humbutiyawa	64*	14	18	65
Ullalapola	39	11	39	11
Tennagama	16	16	42**	26
Ambana	10	17	80	3
Korasa	47	13	33	7
All Villages	36	15	38	10

\*Includes an operator who also operated jointly owned land.

\*\*Includes an operator of encroached land.

Thirty eight per cent of the operators were tenants, another 10% owner tenants, 36% owners and 15% joint owners.

<sup>1</sup> Much of the Ambana yaya for instance belonged to residents of adjoining villages like Halpe, Nelligama and Indiparape and the operated land was leased in or rented in from outsiders who had bought over the village land in the 1930s. For instance, 28 Ambana tenants worked in paddy parcels belonging to five non-Ambana landlords.



Table 4 Percentage Distribution of Operated Lowland by Tenurial Condition

Village	Solely owned	Jointly owned	Leased/ rented in	Encroached
	%	%	%	%
Mabodale	53	20	27	-
Humbutiyawa	67	10	23	-
Ullalapola	51	4	45	-
Tennagama	17	12	66	5
Ambana	8	2	90	-
Korasa	61	17	23	-
All Villages	42	9	48	1

In all the villages 48% of the paddy lands were operated by tenants. Tenancy was the most predominant form of land operation in Tennagama and Ambana where 66% and 90% of the paddy lands respectively were operated under this system (See Table 4). In Ullalapola, 45% of the extent was tenant operated and even in Humbutiyawa and Mabodale tenancy accounted for over 20%. Tenants generally paid half share of the produce to landlords. Fifty one per cent of the total paddy extent was operated under adverse tenurial conditions like ande and joint ownership.

## 1.2 Employment, Unemployment and Under-Employment

The population of the sampled households in the villages were placed in one of the following categories on the basis of activity during the week immediately preceding the survey.

	Percentage of total population (All Villages)
a. Employed	33.1
b. Unemployed	4.5
c. Students	20.6
d. Mainly engaged in household work	20.0
e. Others (young, old and disabled)	21.7

The labour force both employed and unemployed varied between 34-43% of the population in the sampled villages. The other categories were roughly equal in proportion.

### 1.2.1 Employed Population

The employed were classified according to the following status categories:

	Percentage of total (All Villages)
a. Employer	3.1
b. Employee	60.5
c. Self-employed	27.8
d. Unpaid family worker	8.5

Consistent with trends in the rural sector the self-employed workers and unpaid family workers formed a noteworthy proportion of the employed population.

### 1.2.2 Occupational Distribution

The employed were grouped according to their occupations. The following types were consistently predominant in the surveyed villages (Appendix IV).

- a. Salaried and white collar workers
- b. Skilled workers including weavers
- c. Labourers (agricultural and non-agricultural)
- d. Cultivators

On the basis of the vocations that comprised the employment structure, two groups of villages were distinguished. The first consists of Mabodale, Humbutiyawa and Ullalapola where the first two categories predominate. In the rest, labourers constituted the largest group; Ambana being at one extreme with over 65% of its work force being labourers. Cultivators form less than 30% of total employed in all villages, thereby pointing to the importance of other occupations.

The above classification was on the basis of the main occupation. There was an appreciable number with subsidiary occupations as well. Main employment could be defined either in terms of income received or time spent on the job. The latter criterion was used in the present context due to the general unreliability of income data. In the bulk of the cases, the secondary occupation was farming. For instance, 31% of salaried/white collar groups in Humbutiyawa were part-time farmers. In other areas, part-time farmers were drawn from all types of occupations, except in Ambana where most cultivators (43%) were part-time labourers.

### 1.2.3 Unemployment

#### 1.2.3.1 Rate of Unemployment

The unemployed were defined to be those who did not find work even on one day though available for work during the reference week. The unemployed as a proportion of the labour force varied between 9-18% in the villages, the overall rate being 12% - a high level of unemployment. However, the national rates of unemployment are higher even allowing for differences in definition.

#### Unemployment Rates in Sri Lanka

	Unemployed as a percentage of labour force	
	All Island	Rural Sector
a. Socio-economic Survey 1969/70	14.1	14.0
b. Consumer Finances Survey 1973	24.0	24.5
c. Labour Force Participation Rates Survey, 1973	18.3	

National rates are generally inflated by the 'educated unemployed group', the incidence of which is less in the present sample. Data on migration do not indicate a high rate of out-migration due to lack of job opportunities.

#### 1.2.3.2 Characteristics of the Unemployed

About 75% of the unemployed belonged to the age group 15-24 years. Moreover, unemployment was most acute in the secondary education category, i.e. those who had studied up to Grade 10 but had no O-Level qualification. These findings are in broad conformity with those of national surveys. For employment planning, skill attainments of the of the labour force are relevant. In the present study skills ascertained related to technical, vocational and professional skills acquired through either informal or formal training. The study reveals that the skills structure was dominated by textile weaving which requires only a short training and which is mostly done by females. The bulk of the population with skills were found to be employed though not necessarily utilising those skills. Most of the unemployed did not possess any special skills. The unemployed were requested to state their job preferences. Those who expressed their preference for so called white collar jobs ranged from about 10-45%. Those desiring jobs in the labour category (31% for all villages) can be roughly identified as those available for farm work. About 20% (almost all females) expressed their desire to work in textile weaving. Many females find this an attractive job in terms of their family obligations and other

considerations, though not necessarily in terms of remuneration. Information on female employment preferences collected for the Family Planning Communication Strategy Project in Ambana village revealed that textile weaving, needlework, teaching and farming were the preferred occupations. It is also to be noted that nobody explicitly mentioned working on LRC lands in any capacity. The preferences mentioned are not hard and fast as some were explicit that they would be content with 'any job'. As far as mobility is concerned, practically all were prepared to accept jobs outside their villages. In fact, in the study of Ambana village referred to earlier about 67% of the females were prepared to work outside the village.

#### 1.2.4 Under-Employment

In the rural areas the major problem may not be un-employment *per se* but under-employment reflected either in low incomes or insufficient work hours. In the survey, an attempt was made to obtain some information on this aspect. The group with regular hours of work were excluded from the survey on daily records of labour-time disposition during the reference week. The villages of Amabana and Tennagama showed the highest degree of under-employment as 39% and 26% of the total work force respectively had less than 24 hours of work during the week although available for extra hours of work. In other villages this proportion varied between 7% and 10%.

#### 1.3 Income Levels

Information on incomes (both in money and kind) supplement employment data in gauging the 'productivity' of employment. Subject to the usual limitations of income data gathered from an interview-type survey, the broad trends are indicated below.

<sup>1</sup> The following methods were used to get more reliable data on incomes -

- (a) Income from different sources were enumerated at different points in the survey schedule;
- (b) Wherever possible, operator income was estimated indirectly through production, price and cost data;
- (c) Investigators were to query marked discrepancies between income and expenditure from the respondents. This usually brought forth information on undisclosed sources of income.

Average household income in the villages varied from Rs.1,575 to Rs.6,262 per annum, but for an extreme case in Ambana. The non-agricultural type of household enjoyed the highest level of income. This is in contrast to the situation found in the mid-country areas of Kandupalatha and Beminiwatte where agricultural-cum-non-agricultural households reported the highest incomes<sup>1</sup>. The greater degree of urbanisation of the villages in Colombo district provided more opportunities for full time white collar/salaried jobs as well as trade and business activities with higher productivity. There is a wide variation in the share of agriculture in the household incomes between villages (Table 5).

Table 5 Average Household Annual Incomes

Villages	All house- holds	Agric. house- holds	Non-agric. households	Agric.cum Non-agric. households	Share of agricul- ture %
Mabodale	4,235	2,915	5,317	3,342	32.6
Humbutiyawa	6,262	1,476	9,375	3,828	24.4
Ullalapola	4,879	4,412	6,393	2,258	55.0
Ambana	2,905	1,425	3,696	2,143	44.6
Tennagama	2,762	2,680	4,093	1,717	39.5
Korasa	3,609	1,894	5,202	3,165	18.9
Average	4,122	2,628	5,727	2,849	

Considering an income of Rs.3,600 per annum as a rough poverty line it was found that only one third of the households were above this level. A high degree of inequality of distribution was also observed, those below the poverty line receiving only 28% of the total income. In Ambana<sup>2</sup> and Tennagama more than 85% of the households had incomes below Rs.300<sup>2</sup>. It was also found that 85% of exclusively agricultural households were below the poverty line<sup>3</sup>. Of all households below the poverty line 22% were purely agricultural, 39% agricultural-cum-non-agricultural, and 37% non-agricultural. Consequently the improvement of living standards calls for equal attention to farm as well as non-farm households with low incomes.

<sup>1</sup> ARTI, Socio-Economic Survey of the Beminiwatte APC Area, 1976.

<sup>2</sup> Income is not necessarily a perfect indicator of the standard of living. However, it was not possible to collect other data that would supplement this information because of the time constraint.

<sup>3</sup> At village level, however, the number of observations was too small for any meaningful discussion of this aspect.

## 1.4 Land Use

### 1.4.1 Highlands

Coconut is the principal crop on the highlands. One hundred and thirty four respondents operated coconut lands over half an acre in extent; among them 50% had holdings between 1-3 acres. Coconut was cultivated as a mono-crop in about half of these medium size holdings. The smaller holdings of less than 1 acre operated by 24% of respondents were mixed gardens. Cultural practices adopted reveal the general state of neglect of this crop. Poor standards of management, old palms and vacancies were some of the important features observed. Sixty six per cent of the operators had palms of over forty years. As the economic life of a coconut palm is around sixty years, systematic replanting is a primary requirement to ensure continuity of production. Of the eighty nine operators with old plantations only 47% had done any replanting and 14% had filled vacancies.

Table 6 Percentage Distribution of Farmers According to Reasons for Not Replanting

	No.	%
No. of farmers who had not replanted	35	100
Did not think replanting necessary	26	74
Joint ownership	6	18
Lack of capital	3	9
Lack of time	2	6
Others	3	9

Lack of appreciation of the need for replanting was the most important reason for non-adoption of this practice, underlining the need for more intensive farmer education. The type of planting material used too, is not the most productive as 85% had used unselected nuts from their own gardens. Though seedlings could be obtained free of charge from Coconut Research Board nurseries, only 9% of the growers had made use of this facility.

In the study area fertiliser usage for this crop is very low in spite of the facilities available under the subsidy scheme for purchase of coconut fertiliser. Eighty three per cent of the growers had not fertilised their crops during 1974 and 63% reported as having never applied this essential input. The main reasons for its non-use were the lack of finance to buy fertilizer as well as the difficulty of getting it (Table 7).

**Table 7**      **Percentage Distribution of Farmers According to Reasons for Not Applying Fertilizer**

	No.	%
Number of farmers who did not apply fertilizer	111	100
Fertilizer not available	29	26
No capital	65	59
Did not think it was necessary	17	15
Others	13	12

The indication is that the facilities available under the fertilizer subsidy scheme are not being adequately utilised. Making the growers aware of the concessions available under the Coconut Rehabilitation Scheme and also effecting improvements in the distribution network should receive the attention of the Coconut Cultivation Board.

A high proportion of the coconut holdings in village gardens had no pure stand of this crop and the density of palms too varied considerably making it difficult to make a proper assessment of the yield/acre. Reported acre yields ranged from 1,000-2,200 nuts per annum and the overall average for the area covered was 1,766 nuts. The relatively low yields reported are to be expected under the poor levels of management.

Intercropping of coconut lands would provide growers with a supplementary source of income. Small holdings are not systematically cultivated with such crops though 69% reported some form of intercropping. In the very small holdings overcrowding of permanent trees and the resulting excessive shade inhibits the cultivation of other field crops. In general the most popular crops grown were manioc, banana, sweet potato, ginger, turmeric and betel. The lower yields are attributed primarily to non-application of fertilizer and excessive shade. The general attitude of growers to this practice was favourable as 72% were of the opinion that intercropping does not have an effect on coconut yields. Ninety per cent of the growers reported that favourable market prices motivated them to grow these crops on their own initiative. The organisation of supporting services like extension, credit and marketing would encourage intercropping of coconut lands. A planned extension programme particularly in the choice of crops, after care, and marketing, is necessary to sustain a continued interest in intercropping.

#### **1.4.2 Animal Husbandry**

Despite the existence of Milk Collecting Centres at Minuwangoda and Nittambuwa, livestock rearing is not an important enterprise in the villages studied. There were no improved pastures under coconut. Twenty nine per cent of the households kept milk cattle - an average of

two animals per household, but only 9% of them had any surplus milk for sale. Goat rearing was almost non-existent. Fifty seven households (18%) kept poultry mainly to produce eggs for home consumption, and only 26% of these households had any surpluses. During the last five years cattle rearing and poultry keeping had been discontinued by thirteen and twenty four households respectively. Inadequate space for grazing is a major problem faced by dairy men who operate on small extents of highlands. High cost of feeding material and thefts had discouraged rearing of poultry.

#### 1.4.3 Paddy

The lowlands were exclusively used for paddy and cultivation was dependent entirely on rainfall. Unstable water supply did not appear to have hampered the adoption of new varieties as 85% of the operators have used such varieties. Broadcast sowing is the standard method of cultivation and around 50% have used some kind of fertilizer. Productivity remains low due to low management levels in some cases and also the uncertainty of water. The reported acre yields averaged 30 bushels in Yala 1974 and 32 bushels in Maha 1973/74.

#### 1.5 Marketing

Banana and manioc were the most commonly cultivated crops (35% and 32% of the households respectively) being grown for consumption as well as for sale. Around half the total produce was disposed of in local markets. Spice crops such as turmeric, ginger and betel which have been grown traditionally in this area, and coffee to a lesser extent, are at present raised primarily for urban markets. Yams were grown mainly for consumption. Though pineapple and passion fruit have become important commercial crops in the area during the last decade or so, only a few in the villages were involved in cultivating them (five and one households respectively). There seems to have been a ready market for all the products as only seven sellers reported problems of disposal though generally all producers expressed dissatisfaction with the prices received. The institutional marketing organisations are not in a position to provide an adequate service to many of the growers in villages mainly because the production units are small and scattered over a wide area which makes collection difficult and uneconomical. Most respondents were unaware of the existence of the collecting centres of the Marketing Department at Attanagala and Minuwangoda. Even had they known of them, growers may not have found it economical to transport small quantities of their produce to these centres. The private traders dominate the marketing activities and the growers feel that the prices offered are very low.

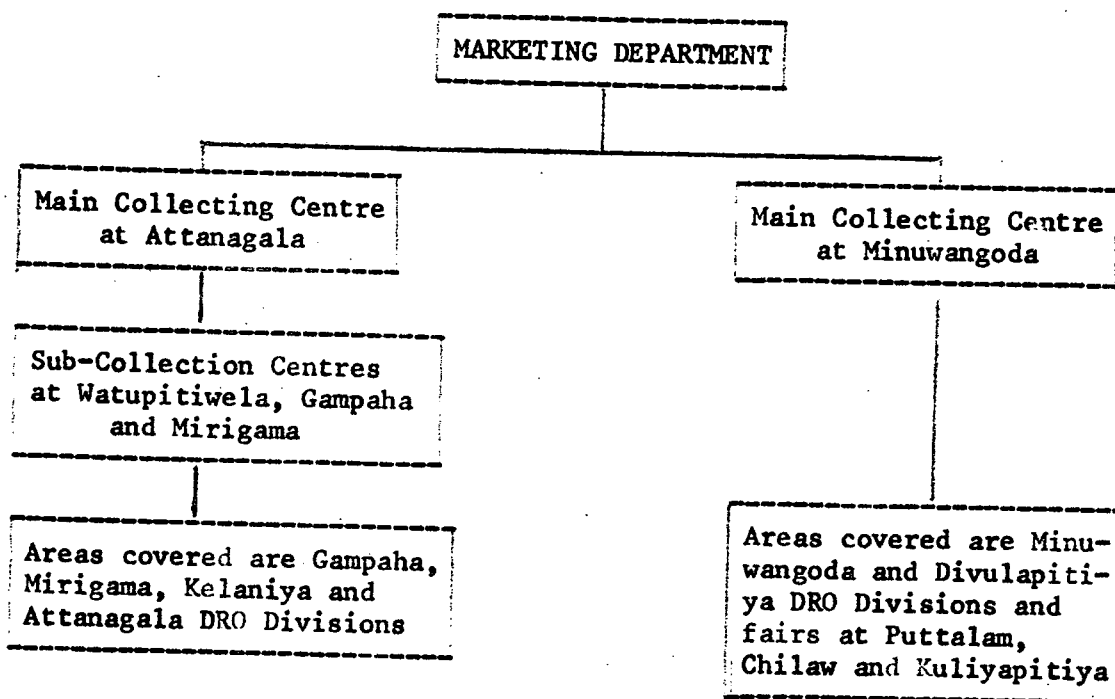


### 1.5.1 Existing Marketing Channels in the Class II Coconut Area

#### 1.5.1.1 Marketing Department

Some of the shortcomings of this channel in providing a competitive and efficient service are:

- (a) Inadequacy of the number of collecting centres and personnel to meet the marketing needs of the small producers.
- (b) Infrequent collection. Buying is done on two days a week and farmers who are unable to keep their produce, particularly perishables like fruits and vegetables for long periods sell them to private traders.
- (c) Delays in payment to the farmers. Procedural delays in effecting payment for produce also discourages the grower from offering his produce to collecting centres, by contrast private traders make 'on the spot' payments.



The maximum quantities of each item to be purchased by a centre on the different collecting days and the prices to be paid for them are indicated from Colombo, except in the case of passion fruit of given specifications. Purchases have to conform to a grade or set standard in order to reduce wastage. The storage and transport facilities available at

the centre impose a limit on purchases from growers as produce has to be transported to the main selling point in Colombo within a day or two to minimise losses.

Purchases are also made on a commission basis by the Department, payment being made to the producer after effecting sales in Colombo. Such payments are generally received after about three days.

#### 1.5.1.2 Private Trader

The private trader was the most important channel of marketing agricultural produce for reasons already mentioned in the preceding section. The produce is usually bought at the village fairs or at the farm gate itself.

#### 1.6 Institutions

##### Agricultural Productivity Committees and Cultivation Committees

The APCc and the newly reorganised CCc have been in existence for a relatively short time. The earliest committees were formed three years ago while a few have been established more recently. The working of a Cultivation Committee and an Agricultural Productivity Committee were examined by the Sociology Unit in their indepth study of a village in the coconut area. In the village studied only a minority - less than 25% - were farmers while a great proportion of the people consisted of those who commuted to urban areas for work or who were under-employed settlers in the village expansion schemes. Certain observations flowing from the case study are noteworthy although they may not necessarily apply to all institutions in the area.

(a) The CC was not keen on the intensive development of the highland as this would require engaging the local unemployed who had been discriminated against for socio-cultural reasons.

(b) The highland register had been haphazardly prepared apparently to avoid the possible payment of taxes. The comparison of the data with the latest agricultural census shows that about 10-15% of the land was under-reported.

(c) The CC and the APC appeared to be acting in collusion in their attempts to keep the newly available Land Reform Commission lands away from the landless agricultural workers and unemployed persons whose interests were not adequately represented in the APC.

- (d) In the use of vested lands the APC appeared to be more interested in the type of agricultural ventures that would bring it profits rather than in the intensive utilisation of the highlands which would generate employment, the most pressing need in the area.

It will obviously be some time before these newly constituted bodies understand their legitimate role in agricultural development and effectively serve the needs of the rural people.

#### 1.6.1 Cooperatives

Multi-Purpose Cooperative Societies and Coconut Producers Cooperative Societies functioned in the area. Less than half the number of households were members of these institutions.

Of the one hundred and thirty four coconut operators only 11% were members of the Coconut Producers' Cooperative Societies. The low membership could be attributed to the ineffectiveness of the cooperatives in stimulating small growers to avail themselves of the services provided by Government. This is seen particularly in the meagre use of subsidies for the rehabilitation of coconut.

Ninety per cent of the households patronised the cooperatives for consumer items and for the purchase of fertilizers and agro-chemicals for paddy.

#### 1.6.2 Credit

Of the 319 households, 122 obtained loans during 1974, 88% of the loans comprising 61% of the total borrowings were from private lenders. The balance obtained from institutions included a few large loans from Banks for non-agricultural purposes (investments in industry and trade). Little information is available to farmers on credit sources and even less information on how best to make use of it once obtained.

#### 1.6.3 Agricultural Extension

There is very little coordination between agricultural instructors and the Coconut Development Officers. Thirty two per cent of the KVSs reported that requests are often received from farmers for advice on matters connected with coconut production but they were not in a position to be of assistance to them. This may be due to two reasons. Either the KVSs were not competent enough to advise farmers on coconut cultivation or they were reluctant to involve themselves in activities

outside their specified duties which are primarily concerned with seasonal crops. The majority of the farmers (60%) relied on other farmers for information about their agricultural problems. It was also reported that the farmers were not very familiar with the extension officers.

## Chapter 2

### ESTATES VESTED WITH THE LAND REFORM COMMISSION

Several estates vested with the Land Reform Commission and located in the neighbourhood of the six villages, were visited at three points of time, in 1974, in 1975 and in 1977 in order to study the progress of settlement and development of LRC lands. A number of Janawasas in the study area were also investigated for comparing the management and production organisation of the different types of settlements on LRC lands. Basic data of the estates studied are given in Appendix V.

#### 2.1 The Old Estate System

Many owners of the estates studied were urban based absentee landlords who had little contact with the villagers around their estates. These landlords controlled the bulk of the land resources in the villages<sup>1</sup> and were least interested in the development of the surrounding area<sup>1</sup> or in the well-being of the villagers. Management and productivity standards in the majority of the estates studied were low, especially in the period immediately preceding Land Reform<sup>2</sup>. Management practices like regular application of fertilizer, ploughing for soil and moisture conservation, burying of husks, pest control and so on were either not done, or at best were carried out haphazardly. Some of the coconut palms were old and a few even senile. There was little under-planting or replanting. Absence of intercropping and livestock rearing on the estates indicated an indifference on the part of the owners rather than a lack of appreciation of the potential of the land. Many estates were not regarded as production units. Often they provided a supplementary source of income and a place of recreation for city dwellers.

The estate and the village were separate and distinct entities, the former with its unique economic and social background operated independently of the latter. The estate, which in fact is a part of the village environment, failed to contribute to the development of the rural areas.

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<sup>1</sup>The estates were within easy reach of their urban based owners and could have been frequently visited by them.

<sup>2</sup>Naiwalawatte is a good example of a neglected estate. The entire estate with an extent of about 80 acres on the average, yielded about 2,000-3,000 nuts per pick. The watcher could not remember when fertilizer was last applied. In a majority of estates fertilizer was not applied for 5-10 years.

See also - The Report on the Agency Houses Commission, Government Press, Colombo, 1974.

The contribution of the estates to the economic well-being of the surrounding villages was limited as they offered the villagers little permanent employment. A few, however, obtained seasonal work during the peak harvesting and weeding periods. Poor management standards and under-utilisation of the land also resulted in little or no employment generation. The fringe benefits which the villagers enjoyed (grazing of cattle, picking of fronds and a few nuts and even access to shorter routes to the surrounding villages through the estates) were continued in order to avoid conflicts.

## 2.2 Position of Estates at the End of 1974

The estates under study were visited only a few months after the land was divested from private ownership, a somewhat uncertain period. The Land Reform Commission's main concern at this time was to take possession of all excess lands as speedily as possible. Plans for settlement and development of the individual estates had not been worked out as problems differed from area to area. In addition there were also many financial, administrative and managerial limitations. Much of the lands had therefore to be managed on an interim basis until definite proposals were formulated. Such a situation would in any case have been unavoidable in a land reform of this magnitude undertaken at short notice. However, some comments on the situation in the estates during this interim period may be useful in order to appreciate and understand later developments.

By this time, most of the estates had been placed in the hands of the District Land Reform Authority.

At the time of the visit, in some estates deemed to be under statutory lease, the land had not been demarcated due to problems of surveying and were still being looked after by the former managers.

In other estates the land had been placed in the hands of institutions such as Village Councils, MPCs, DDCs, Teachers Cooperatives, etc., and Grama Sevakas. Some of the problems associated with the LRC estates were:

- i. the MPCs due to the very nature of their orientation<sup>2</sup> were less bent towards production and the record of farms managed by them had not been satisfactory;

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<sup>1</sup> Naiwalawatte referred to earlier had only one permanent employee - the watcher.

<sup>2</sup> The cooperatives were more involved in the distribution of consumer items. Their only association with agriculture had been channelling of agricultural credit, subsidised fertilizer and purchase of paddy for the Paddy Marketing Board. They were rarely involved in planning and development of agriculture.

- ii. the DDC cooperative farms and the Teachers Cooperatives appeared to lack a proper appreciation of the principles of cooperative farming. The staff of such organisations had no knowledge of the principles of cooperative farming as they had not received any training on the subject. The workers were mere wage labourers in many of these farms;
- iii. the estates placed under the Grama Sevaka<sup>1</sup> were generally neglected. The watchers who looked after these estates complained of poor salaries and were uncertain of their future. Hence, many of them did not attend to their functions properly;
- iv. some larger estates had been sub-divided into several smaller units. This often broke up the physical unity of the land and created uneconomic units of production (in Naiwalawatte 80 acres were divided into 3 units). Such divisions had been made mainly in order to satisfy the claims of different agencies and organisations and were not based on any sound economic criteria.

At Narangashena (10 acres) where half acre plots had been given to villagers for food production, a few crops like manioc were planted. But the coconut crop was badly neglected. The allottees who received half acre holdings from a portion of the Weniwelwatte had up to the time of the visit not settled down on the land. Two estates adjacent to the Tennagama village had been developed as Janawasas providing employment to youths from that village and other neighbouring villages. These estates demonstrated increasing developmental activity in comparison with other LRC estates.

As mentioned earlier, the redistribution and settlement programmes had not yet been worked out systematically for the LRC estates. However, the villagers around the LRC estates, the landless as well as those who had land were eager to benefit from the new situation. Those who genuinely required land - the landless - (individuals and even entire villages as Ambana, for instance) however, had developed a hostile attitude towards the LRC estates. This had taken place due to several reasons such as loss of employment and the temporary interruption of development work in the estates and the recruitment, in some cases, of workers from other areas while sufficient attention was not paid to the pressing needs of adjacent villages with depressed economic conditions (Naiwala, Ambana). In many cases, the prospects of immediate employment opportunities too, seemed weak. The villagers had also lost the fringe benefits enjoyed by them earlier.

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<sup>1</sup>The Grama Sevaka (village headman) with his multifarious functions had neither the time nor the know-how to manage estates.

The above situation may perhaps have been unavoidable at this stage of the land reform. Some of the problems could possibly have been overcome if the village-level organisations (CC and APC for instance) were also directly involved in planning for the development of LRC lands.

### 2.3 Position of LRC Estates at the End of 1975

The estates studied in December 1974 were revisited one year later (at the end of 1975) to examine the changes that had taken place and to observe the position at that time. They are discussed under two broad headings - management organisation and production organisation.

#### 2.3.1 Management Organisation

The LRC estates require a sound management system in order to fully realise the objectives of the land reform programme. By the end of 1975 Electoral Land Reform Cooperatives had been set up in each electorate to take over the management and development of estates which were under an interim form of management<sup>1</sup>. These cooperatives were responsible for the overall management of the estates under the direction of their respective Board of Directors. A General Manager was directly responsible for the management and development of the estates. The composition, duties and functions of this organisation are given in Appendix VI.

Of the thirteen estates which did not have a permanent form of management in 1974, seven were vested with these cooperatives in 1975. Two estates had since been converted into Janawasas. The management organisation of the remaining estates continued to be as in 1974. The Electoral Cooperatives had appointed trained conductors on reasonable salary scales for three of the estates. Salaries of watchers were improved and job uncertainty too, was removed. This was a marked improvement from the previous situation. The other estates vested with the cooperative had not yet made arrangements for the recruitment of trained conductors, watchers, etc., on a more stable basis. Former watchers continued to look after large extents of land and also work under some degree of uncertainty. Salaries paid were reported to be not adequate.

The management of estates under the Electoral Cooperatives, however, had much room for improvement. Even where the management system had been formalised under trained conductors, the attitude towards the workers and the organisation of agricultural activities had changed

<sup>1</sup> Circular 2 issued by the Minister of Agriculture and Lands in October 1974. The following Electoral Cooperatives were established - Divulapitiya - September 1974; Attanagala - April 1975; Mirigama - May 1975; Minuwangoda Electoral Cooperative was amalgamated with the Katana Electoral Cooperative as only a few estates were available in the former. Subsequently, however, a separate Cooperative was formed for Katana.



little from the old estate system. The same manager/conductor/labourer relationship continued. The members of the Electoral Cooperatives and the managerial staff of estates required a proper orientation on the aims of the land reform, the need for estate-village integration, effective worker participation in management and so on.

The management organisation of the estates brought under the Village Council, the Teachers' Cooperative and the MPCs had changed very little. The first two continued to be more or less landlords employing wage labour. In the VC managed estate despite the fact that land had been fully developed and planted with intercrops, the workers did not benefit much from the profits. The Teachers' Cooperative had seven permanent employees who were recruited mostly from outside the village.

In the MPCs managed DDCs, the management system left much to be desired. The MPCs management was found to be ineffective due to lack of experience and interest in production activities<sup>2</sup>. The farms were in a virtual state of neglect.

In the LRC vested lands outside the Janawasas priority had therefore to be given to effecting improvements in the management organisation before embarking on development programmes. Effective management systems are essential for the successful implementation of development programmes.

### 2.3.2 Production Organisation

Certain improvements in the sphere of production organisation were being effected in estates managed by the Electoral Cooperatives. However, these cooperatives had not been able to make much progress in developing the land due to the following reasons:

- i. Lack of sufficient capital for investment especially on long-term programmes;
- ii. Lack of tools, equipment and transport facilities;
- iii. Lack of proper training: some general managers and their staff lacked experience in settlement planning organisation.

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<sup>1</sup> At the cooperative at Attanagala, the workers had been enrolled as members as a first step in worker participation.

<sup>2</sup> See for instance, A. Ramanadar, DDC Agricultural Projects - Seminar Paper, National Seminar on Cooperation: Farming in Sri Lanka organised by the National Cooperative Council of Sri Lanka, June 1976, Colombo.

Development work had commenced at Kehelwatte and Kurunduwatte in Ambana. In the other estates no significant improvements were observed. Basic maintenance work on these lands had to be undertaken before initiating development programmes. Some estates faced other problems like thefts, etc. There had been no improvements even in the rubber estate (Ambana) still managed by the former Superintendent. In this estate soil conservation had been neglected even before land reform.

The production programmes in the MPCs managed DDC too could have been more systematically organised. In two of the DDCs the land had been fully planted with intercrops but the coconut crop had been neglected. There was a need for greater emphasis on forward planning especially with regard to crops, employment and investment. Financial difficulties could have been avoided if such forward planning was undertaken on the basis of sound economic criteria.

In the two farms managed by the Teachers' Cooperative and the VC the cultivation of intercrops was undertaken systematically but the coconut crop had not been properly cared for. In both cases care had been taken to phase out investment and to provide employment accordingly. These two estates demonstrated increasing developmental activity in comparison with others.

## 2.4 Position of LRC Estates in Mid 1977

The estates studied during the two previous visits were revisited in June 1977 with a view to ascertaining the changes that had taken place in management and production. The findings are given below in summary form.

### 2.4.1 Estates Managed by Land Reform Electoral Cooperatives

Six estates continued to be managed by this organisation<sup>1</sup>. The management of the estates had witnessed some improvements. All the estates were supervised by resident or visiting conductors. Minimum maintenance work like weeding were carried out in all estates.

However, the Electoral Cooperatives did not have any concrete plans for the development of the estates. Since their take over, no investments had been made on any of the estates. There was also very little

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<sup>1</sup>In one of the estates (Nanduna) survey requisitions had been made for the redistribution of land in individual holdings. However, these surveys had not been completed and the land was being temporarily managed by a newly created Rural Development Society.

dialogue and discussion between the conductors and the officers of the Land Reform Cooperative. Many of the conductors still had not undergone any training on management, production planning, book keeping etc.

It was noted that none of the estates had any long-term development plans. Land and crop improvement involving fertilizer application, cutting of drains, etc., had not been undertaken in any of the estates up to date. The coconut crop had deteriorated considerably and in most estates it was reported that coconut production witnessed a 30-50% drop. Thefts continued to pose problems in some estates. None of these estates had undertaken the cultivation of intercrops or live-stock rearing although there is considerable potential for such enterprises.

It was reported that only about half the number of persons employed prior to the advent of land reform were employed either on permanent or seasonal basis in most estates. In Kehelwatte for instance, only 7 full-time workers were employed in an extent of 106 acres. The potential available for additional employment creation is yet to be tapped - this could be achieved only when Electoral Cooperatives have short and long-term development plans for the estates.

#### 2.4.2 Estates Given to MPCSS

At the end of 1975 it was clear that the three DDC farms were facing serious organisational, management and financial difficulties. In mid 1976 they were handed over to the newly created Minuwangoda DDC cooperative. The three farms therefore came directly under the supervision of the Assistant Government Agent. The two DDCs at Naiwalawatte were now being supervised by one conductor assisted by one watcher for each farm. Wembly estate had been placed under the care of the conductor of the adjoining private estate. He was being paid by the Minuwangoda Cooperative.

In all three estates work had been completely stopped and the land and the crops as a result were neglected. Crops like pineapple, banana, etc., planted in 1974/75 had been abandoned, except in one unit of the Naiwalawatte where a 3 acre block of pineapple was still being harvested by the Minuwangoda Cooperative.

All these DDCs had invested large sums of money at the early stages. However, due to unplanned investment and expenditure and lack of forward planning based on sound technical and economic criteria, they were

<sup>1</sup> At the end of 1976 this estate was surveyed and blocked out in 1/4 acre units for redistribution, but due to a dispute the land was not redistributed.

unable to continue with the programme. In the farm managed by the Udugampola Cooperative, a sum of Rs.90,000 had been invested on planting pineapple, banana, etc., of which less than Rs.40,000 could be recovered.

The coconut crop had suffered serious neglect in all three estates due to lack of fertilizer application and proper management. The average production of nuts was reported to be in the region of 10-20% of the former level. During the last five months no coconuts were plucked. As the land was overgrown with weeds, people from adjacent villages had been asked to tie their cattle for grazing to control weeds.

#### 2.4.3 Estates Given to Other Organisations<sup>1</sup>

A portion of the Naiwalawatte managed by the Teachers' Cooperative continues with the production programme initiated at the beginning. The land is fully developed with pineapple, passion fruit, bananas and other crops like saffron. A 4 acre extent had been planted with coffee. The farm provides employment to 7 full-time workers in addition to employment provided on a casual or contract basis to people from surrounding villages. A well has been constructed to irrigate the coffee plants. The investment made on the farm had been considerable and it was reported that the income received was very satisfactory. So far no dividend had been declared. With the intensive production programme undertaken by the farm, the villagers themselves benefited. They obtained employment and were allowed to take a few coconuts, jak fruits, etc., for domestic consumption. This has brought about good relations between the farms and the village. The fertilizer application made on pineapple and other crops had considerably benefited the coconut crop as well, although no fertilizer was applied separately on coconut.

This farm is virtually a private enterprise managed by a group of teachers. They belong to a cooperative but the members themselves do not work on the farm. But it serves as a clear example of the potential available for developing the coconut lands vested with the Land Reform Commission. However, the fact that benefits from land reform lands reach only those already in economically favourable positions, as in this case, cannot be ignored considering the land and employment problems in the area.

The block of land managed by the Village Council too continued with its production programme initiated in 1974. The VC being a peoples' organisation, the proceeds from the estate if necessary, could be used for other development work.

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<sup>1</sup> On the block of land given to the priest, some improvements have been made using village labour. An orphanage had been established in 1975. The land given over to the Tourist Board had not seen any development.

#### 2.4.5 Estates Redistributed in Individual Holdings

The 14 acre block of Weniwalwatte and the 10 acre block of Naragashena which were distributed among the landless in individual holdings of half an acre provide a clear picture of the nature of problems associated with such land distribution programmes. In both cases the selected allottees did not hail from the immediate neighbourhood. They lived 5-10 miles away. Similarly the landless in the adjacent villages had been given land elsewhere about 8-10 miles away. As a result, only about 25% of the recipients had settled down on the land. About 25% of the blocks had been encroached by the residents of the surrounding villages. The recipients are reluctant to settle down on the land owing to intimidatory actions of the villagers in the neighbourhood. Furthermore, it is almost impossible for a family to make a living on half an acre of land. In fact, much of this land is rocky and is of little agricultural value. The landless labourers who receive these lands were reluctant to go into occupation in the absence of alternate avenues of livelihood. Most of those who had moved in are, in fact, compelled to seek work in their original villages. Other than the allotment no assistance whatsoever had been offered to the recipients for land development or for erecting a shelter. This too proved to be a further disincentive.

#### 2.5 The Janawasas<sup>1</sup>

Several Janawasas adjacent to the villages studied were revisited at the end of 1975 by which time the Janawasa programme had been further expanded and several new settlements had been established in the study area. Certain comments on the working of Janawasas were made in the Preliminary Report on the basis of the 1974 findings. Since then, the Janawasas had shown some improvement. By the end of 1975 they had moved from a phase of experimentation to one of consolidation and expansion. The Janawasas in comparative terms appeared to have performed better than many of the LRC estates. However, there was much room for further improvement.

Most members of the Janawasas being young and inexperienced were not competent in the organisation and management of a collective enterprise. Often they were ill-equipped to undertake long-term planning incorporating all agro-technical and socio-economic aspects. Sufficient technical advice was not available to many Janawasas. This situation could be remedied by providing adequate guidance and advice by technically qualified persons in the planning, organisation and management aspects. Financial and accounting systems in some Janawasas also differed considerably. For instance, the proceeds from the sale of coconuts of the Janawasas have been remitted to different offices like LRC, the DLRA or to the Bank. Many did not maintain proper accounting books and often had their own system of accounting. None had comprehensive accounts of income and expenditure. Disparities and even contradictions were

<sup>1</sup>The progress of Janawasas could not be examined in 1977.

observed in the maintenance of records on incomes, sales and expenditure at the three levels, i.e. the Janawasa, DLRA and the LRC. Thus, in many Janawasas the internal management and the accounting systems needed reorganisation.

All the Janawasas visited had no long-term development plans. They also lacked accurate market information on crops. Further, Janawasas lacked funds not only for long-term development plans but even for immediate purchases like fertiliser, essential equipment and tools. The procedure followed in obtaining equipment and other facilities was complex and tedious.

In several cases it was noted that some of the members were not fully committed to the Janawasa concept. This was due to several reasons. They lacked a feeling of belonging to the enterprise and regarded themselves more as hired labourers without long-term security. In many settlements, wages were not related to individual output. This resulted in members not working towards the goal of maximising output. In a few Janawasas, however, incentive schemes had been introduced with this end in view.

Many Janawasas failed to meet the social, cultural and welfare needs of the settlers. Consequently, the youth found life in these settlements dull and unrewarding. In addition the anticipated integration with the surrounding villages did not materialise though significant steps had been taken in this direction.

For efficient management of settlements, the members need continuing, scientific training on work organisation, accounting, crop and live-stock planning etc. In addition, better working conditions, clearly defined systems of profit sharing etc., have to be offered to the members.

## 2.6 Impact of Vested Lands on the Villages

The impact of the estates vested under the land reform programme on the economy of the neighbouring villages appeared to have fallen short of expectations. Some disappointment was seen in the socially and economically depressed villages which had been sometimes overlooked in recruiting workers to certain land reform lands. The two DDC at Naiwalawatte gave employment to youths mostly from other villages.

With the setting up of the Janawasa Commission under the new Janawasa Law, the settlements enjoy a definite legal status. The new law lays down in clear terms the rules and regulations relating to the organisation and management of Janawasas, rights and obligations of members, systems of payment, profit sharing, etc. The Janawasa Commission in addition to undertaking the management of settlements, setting up of new Janawasas and cooperative farms will also encourage and foster the formation of production cooperatives in the villages.

Some of the older workers in estates who were temporarily displaced during the interim period constituted a disgruntled section in the villages. Occasionally, even when work was offered there was no assurance of continued employment. The DDCC which had originally employed some youths had subsequently discontinued them due to lack of forward planning. Such frustrating experiences inhibit the mobilisation of popular support for future development programmes. Even in employment generation there were no significant improvements except in the Janawasas and the two farms managed by the Teachers' Cooperative and the Village Council.

Workers in the estates now managed by the Electoral Cooperatives and even by other organisations seemed to be concerned as they were not certain of their future prospects. Although there is provision for the workers to become share-holders of the Electoral Cooperatives so far they have not been able to avail themselves of this facility.

The number of villagers provided with seasonal work in weeding, fertilizer application, cutting of drains, etc., too had not increased as most estates have not undertaken major development programmes. Further, the loss of fringe benefits still continues to act as a source of grievance especially where the villagers had not been offered reasonable benefits since the take over of estates. This situation has changed where the estates have carried out development activities, thus providing the villagers with employment opportunities and other additional benefits (Teachers' Cooperatives).

It should be noted here that the deterioration of estate-village relationship occurred only in estates which had no proper management and planned production programmes that would have helped to provide employment to the villagers themselves. The key to the improvement of the estate-village relations is therefore to embark on well planned production programmes.

In attempting to bridge this traditional gap between the estate and the village and give the benefits of the land reform programme to the most deserving i.e. the landless and the unemployed, it may become necessary to go even beyond the immediate neighbourhood. In some areas large extents of land are available for redistribution while in others the extents vested are very small. For instance in Korasa, a depressed village with a high degree of landlessness and unemployment there are no LRC estates close by. Certain electorates (Divulapitiya) have large extents of LRC lands but landlessness is relatively less acute. While developing the LRC lands in relation to the present needs

<sup>1</sup> See Appendix II

<sup>2</sup> See Appendix for a discussion on the estate-village integration.

of the villages adjacent to them, it is also important to consider ways and means of moving the landless and the unemployed to areas where sufficient land is available. This may necessitate movement across boundaries of electoral divisions in some instances. Resettlement and development could now be best coordinated by the Land Reform Electoral Cooperatives<sup>1</sup> once they are strengthened and stabilised. Another important consideration is the need to include the remaining private estates in the agricultural and other development programmes of these areas, especially in view of the fact that the vast majority of the Class II coconut acreage still remains in private hands. The programmes should aim at full economic and social integration of LRC settlements, private estates and the villages.

Redistribution of land in small holdings to the landless has brought to surface certain crucial issues likely to affect the redistribution programme and the expected productivity increases. In the study area, only two estates had been distributed. Two others are earmarked for redistribution. Generalisations applicable to the entire coconut area may not therefore be possible. However, the following aspects seem to be relevant to the redistribution exercise:

- (a) People should get land from locations as close as possible to their present villages;
- (b) If holdings are given in far away or unknown locations, care must be taken to settle the recipients in groups through local organisations and thereby integrate them with the surrounding villages. Such local organisations could help the new settlers to find employment opportunities, etc., in the new environment. It is by such an approach that the feeling of "derootedness" could be removed from the minds of the settlers planted in a new environment;
- (c) Half an acre is too small for any productive agriculture. Still if half acre plots are given, the recipients need to be organised systematically to undertake intensive use of the land. If not, the land will fall into neglect;
- (d) The landless recipients need some assistance to move in and settle down.

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<sup>1</sup> The newly set up Janawasama - Janatha Estates Development Board - is entrusted with the management and development of the estates earlier run by the Agency Houses. Such estates are rare in the coconut growing areas in the Colombo district.



POTENTIAL FOR DEVELOPMENT

3.1 Agriculture

In the foregoing discussion on the villages, attention was drawn to the maldistribution of land, uneconomic holding sizes, low levels of crop management, under-utilisation of land and a high rate of unemployment. The coconut lands vested with the Land Reform Commission as well as most of the private owned estates offer a distinct opportunity for improving the living conditions of the rural people through a programme of intensified agricultural production.

3.1.1 General Conditions

Land with only a pure stand of coconut is an extravagant use of a resource base in terms of biological production as well as of employment opportunity<sup>1</sup>. Under the estate management system 8-10 acres of pure stand of coconut generally provided employment to a single person. Agronomists point out that concentration of coconut roots is generally confined to a radius of 6½ feet around each palm and on an estimate about 75% of the total soil mass of coconut lands is free of these roots. Except when the palms are between 8-20 years old, the space between palms get filtered sunlight in quantities sufficient to grow crops tolerant and adaptable to these conditions<sup>2</sup>. Further, studies done at the Coconut Research Institute, Lunuwila, for over a decade have established that with adequate manuring coconut lands could be interplanted successfully with the types of crops and pasture that suit the various soil and rainfall conditions. Forty per cent of the palms in the study area are between 30-60 years old providing scope for intercropping<sup>3</sup>.

- 3.1.2 The pure stand of coconut in Colombo is entirely in the wet zone and gets sufficient rainfall in both monsoons (Appendix VII). Even during the relatively dry periods from January to March and July to September there had been on an average seven to thirteen days of rain per month respectively. At the height of both monsoons, however, there had been as many as sixteen to twenty rainy days per month. This pattern of rainfall favours the cultivation of a range of crops as well as raising of livestock, especially cattle. Intercropping is feasible with the available labour as the permanent crop, coconut, requires little labour for maintenance and does not have peak season demands.

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<sup>1</sup>Interim Report of the Panel Appointed to Examine and Report on the Development of Land Reform Commission lands in the Coconut Triangle. (5th December 1974).

<sup>2</sup>Indian Farming, July 1974, p.11

<sup>3</sup>Sample Survey of Coconut Cultivation, 1973

The transition from a monocrop estate system to diversified farming could increase employment in the villages and make way for greater productivity of coconut land. A comprehensive development plan must necessarily include animal husbandry as an integral part of the mixed farming system. Livestock development also deserves priority consideration as the demand for milk and other animal products far exceeds the current levels of production. Funds for animal husbandry development in the coconut area are available under the Sri Lanka-World Bank Dairy Development Project.

In essence, the Class II coconut lands of the Colombo district are suitable for the introduction of a number of profitable farm enterprises. The supporting conditions being:

- a. The availability of large extents of developed but under-utilised coconut lands which lend themselves to crop diversification with a minimal capital outlay.
- b. The favourable distribution of rainfall in this region making possible the growing of a range of crops during the greater part of the year (Appendix VIII). Ground water for supplementary irrigation is also available at a depth of 20 to 30 feet.
- c. The proximity to transportation outlets, rail heads, road networks, and above all, to urban markets most of which are within a distance of thirty miles.
- d. The presence of a large milk processing factory at Narahenpita capable of using the excess milk produced in the coconut area. Milk collected could reach this factory within two hours either by road or rail.
- e. Location of a distillery that could provide facilities for distilling sugar cane juice within the coconut area of Seeduwa.

### 3.1.3 Increasing Land Productivity

The productivity of the land could be increased by boosting coconut yields, introducing intercropping, and by encouraging animal husbandry.

### 3.1.3.1 Coconut

The estimated yield potential of Class II coconut lands is 3,000 to 3,500 nuts per acre, which is had only over a very limited acreage<sup>1</sup>. The reported acre yields from the study area range from 1,000-2,200 nuts per annum. The low yield is primarily due to the age of the palms, vacancies and poor standards of management<sup>2</sup>. Yields in Class II coconut lands had been seriously affected in the last few years by drought, the coconut pest which affected some areas, a decrease in fertiliser usage and a general neglect of the estates by the estate owners in anticipation of land reform<sup>3</sup>. In this situation a speeding up of the replanting programmes, increased fertiliser use and adopting of soil and moisture conservation measures are of utmost importance. Small holders have also to be made aware of the facilities available to them under the Coconut Rehabilitation Scheme.

### 3.1.3.2 Intercrops

A range of selected crops could be successfully introduced on coconut lands. Investigations made in twelve private farms in Mirigama, Minuwangoda, Divulapitiya and Kesbewa demonstrated the possibilities and the potential for intercropping coconut land with both short term food crops and perennial fruit crops. Shade tolerant crops like turmeric, ginger, yams as well as betel are among the traditional village crops grown under coconut. Pineapple and passionfruit had received an impetus during the last decade or so and except for these two crops there is hardly any data available on the economics of production of the other intercrops.

<sup>1</sup> Interim Report of the Panel Appointed to Examine and Report on the Development of Land Reform Commission Lands in the Coconut Triangle (5th December 1974).

<sup>2</sup> Sample Survey of Coconut Cultivation - 1970 - Department of Census and Statistics.

#### Colombo District

Palms over 45 years old	Vacancies per 100 palms	No. of standing palms per acre	Fertiliser use Percentage of total area	Yield per acre
%				
21	6.0	62	68	1,851

<sup>3</sup> Fertilizer issues under the coconut subsidy scheme have decreased from 49,350 tons in 1973 to 39,311 tons in 1974 and 24,463 tons in 1975 - Annual Report of the Central Bank, 1975.

In Appendix VIII both rainfall patterns and planting schedules for a few selected intercrops suitable for the area are shown. Root crops other than manioc are best planted in April with the onset of the South-West monsoon.

The labour requirements of individual crops show considerable variation. Short term annuals often have two labour peaks at planting and harvesting. Perennials like banana and pineapple need labour mostly during planting, while sugar cane makes an excessive demand on labour at harvest time. For betel and 'off season' vegetable production there is a heavy demand on labour throughout the growing season for watering, spraying and harvesting, etc. This makes it necessary to schedule crops systematically particularly in cooperative settlements in order to deploy labour resources more efficiently and to spread the cash inflow throughout as great a part of the year as possible. Banana, betel and sugar cane, not very exacting as to the time of planting, have accordingly been accommodated towards the middle of the year.

Approximately 30-40% of the Class II coconut acreage is considered suitable for intercropping. However, the occurrence of micro variations of soils and the shade tolerance of suitable intercrops call for the preparation of land use maps based on soil characteristics, topography, and the density and age of coconut palms, as 'an aid' to a choice of intercrops on a commercial scale.

### 3.1.3.3 Livestock

Cattle raising has been a traditional practice in some of these areas as coconut lands provide natural grazing for animals throughout the year. These lands are considered eminently suitable for livestock enterprises<sup>1</sup>.

- a) Agro-climatic conditions favour the establishment of improved pastures at much lower cost than the hill country or dry zone.
- b) The area is infrastructurally well developed and facilities are available to service an animal husbandry programme with considerably less investment.
- c) Apart from pasture under coconut other feed for cattle and buffalo are more readily available in the area at a lower cost.
- d) The western province with one-third of the country's population has the highest demand for animal products, i.e. milk, beef, etc.

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<sup>1</sup> Draft Agriculture Development Plan 1971-1977, Animal Husbandry, Section 34

Supplementary enterprises like goat rearing do not require a heavy capital outlay or large extents of land. Goat rearing is a relatively inexpensive enterprise that does not call for much skill and is more suitable particularly for the semi-wet areas in the Class II coconut area. As goats feed on twigs and shrubs that are not generally relished by cattle, a venture of this nature could be successfully undertaken in portions of estates that are not suitable for inter-cropping, for the production of fodder or improved pastures. Such areas could be fenced off and planted with quick growing bush or tree fodder crops for supply of cut foliage. *Gliricidia* planted along boundary fences is one such economical source of feed.

Rearing of bees in the Class II coconut area though considered marginal for honey production, deserves to be encouraged as a supplementary source of income and as a possible way of increasing the setting of nuts<sup>1</sup>. The initial capital required is mainly for the bee boxes and the only skill needed is in the art of handling bees. This enterprise is particularly useful in co-operative projects.

#### 3.1.3.4 Economics of Supplementary Enterprises

Summaries of Activity Budgets<sup>2</sup> for few of the technically feasible crops are shown in Table 8. The quantum of cash and labour needed for production of individual crops differs considerably.

Perennial crops such as pineapple, banana, papaw, betel and sugar cane with promise of higher gross margins require substantial cash outlays particularly for purchased inputs. Traditional yams and spice crops with smaller gross margins, make relatively lower demands on cash for inputs. Fruit crops have generally better prospects because of the demand in the local market. Processing facilities<sup>3</sup> and the increasing demand from overseas for canned local fruits and juices make fruit growing a good proposition.

Prospects for large scale expansion of yam cultivation under coconuts are somewhat limited due to the ready availability and consumer preference for substitute food items such as bread and wheat flour. Manioc, however, is used for the production of starch and also as animal feed. Of the two spice crops only turmeric has scope for expansion. The local market for ginger is almost saturated.

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<sup>1</sup>Coconuts by R. Child, p.44

<sup>2</sup>Activity Budgets were prepared based on field observations, discussions with successful farmers and extension officers working in the area.

<sup>3</sup>A new fruit processing plant has been installed in the coconut area.

Table 8

## SUMMARY OF THE ACTIVITY BUDGETS

Crops (grown as the only intercrop under coconut)	No. of man days	I. Estimated Costs per Acre			II. Estimated Returns			III. Estimated Gross Margins			
		Labour	Materials and machinery	Total variable Cost	Yield per acre	Price per unit	Gross income per acre	Gross margin per acre	Gross margin per rupee spent	Gross margin per man day	Duration of crop
		1 Rs.	2 Rs.	3 Rs.	4	5 Rs.	6 Rs.	7 Rs.	8 Rs.		
1. Annuals											
a) Manioc	140	840	770	1,610	8 tons	440	3,520	1,910	1.19	13.64	5 months
b) Yams	65	390	451	841	3 tons	700	2,100	1,259	1.50	19.37	3-4 months
c) Turmeric	120	720	1,133	1,853	10 cwts	500	5,000	3,147	1.70	26.23	12 months
					(cured)						
d) Ginger	110	660	858	1,518	10 cwts "	336	3,360	1,842	1.21	16.75	12 months
e) Ground nut	75	450	715	1,165	700 lbs	3.0	2,100	935	0.80	12.47	3 months
f) Off season vegetables											
i. Luffa, snake gourd and bitter gourd	226	1,596	1,840	3,466	15,000 lbs.	0.50	7,500	4,034	1.16	15.17	4 months
ii. Bandakka	200	1,200	1,540	2,740	10,000 lbs.	0.50	5,000	2,260	0.82	11.30	4 months
iii. Brinjal	200	1,200	1,540	2,740	12,000 lbs.	0.50	6,000	3,260	1.19	16.30	4 months
iv. Raddish	135	810	880	1,690	7,000 lbs.	0.35	2,450	760	0.45	5.63	2 months
2. Perennials											
Banana	125	750	2,074	2,824	27,000 lbs.	0.30	9,100	6,276	2.22	50.21	4 years
Pineapple	415	2,490	8,448	10,938	115,000 lbs.	0.20	23,000	12,062	1.10	29.07	5 years
Papaw	200	1,200	1,650	2,850	30,000 lbs.	0.25	7,500	4,650	1.63	23.25	2 years
Sugar cane	362	2,172	4,411	6,583	400 gls. syrup	40.00	16,000	9,417	1.43	26.01	2 years

## NOTE

1. Rates & Charges that prevailed in the area in 1975

Labour rate - Rs.6 p.d.  
Tractor charge -Rs.150 to Rs.200 per acre

2. Value of planting materials, fertilizer and chemicals and tractor charges.

3. Includes 10% interest on total variable cost.

4. Yields estimated are based on figures collected from farmers engaged in intercropping on a commercial scale in the area.

5. Prices prevailing in the area in 1975.

6. Gross margin = Gross income - Variable costs.

Prices of vegetables are generally high during the month of June, July and August, the so-called 'off-season' reflecting a general shortage<sup>1</sup>. There are also two periods when gluts occur - in February and March, particularly in the dry zone and again in September and October when there is surplus production in the up-country and mid-country regions. The main vegetable growing season in the Colombo district commences towards the tail-end of Maha when floods recede. The principal vegetable growing areas in the district are along the banks of the Kelani river and around Piliyandala from which the produce reaches the market mostly during February to April. Vegetable production in the coconut area during the off-season is a profitable enterprise and could be expanded provided input supplies, marketing and technical services are organised, especially as ground water is available to supplement rainfall.

Shortage of capital, milking animals, lack of necessary skills, lack of knowledge of high yielding fodder crops and high cost of purchased cattle feed has discouraged dairying in the coconut area. The Sri Lanka International Development Association Dairy Development Project provides technical assistance and credit on easy terms for dairy farming. Persons owning at least one acre of land suitable for growing grass are eligible for loans under this scheme. Small operators in the villages as well as cooperative ventures in vested LRC lands can benefit from this project<sup>2</sup>. These development programmes are likely to offer some measure of relief to prospective dairy farmers if adequate training on the rearing of livestock is provided and veterinary services and milk marketing organised by the agencies concerned. In fact, the revised programme under the Five Year Plan, 1972-76 gives the following targets for the Coconut Triangle<sup>3</sup>.

	1976	1977
Number of farms	200	200
Acreage	6,000	6,000
Number of cows	1,800	1,800
Anticipated milk production - pints/day	9,600	12,000

<sup>1</sup> Agricultural Department Proposals 1966-1970, p.247

<sup>2</sup> Twenty five per cent of the funds available under this project have been earmarked for development of dairying in cooperative projects - Source: Department of Agriculture.

<sup>3</sup> Report of the Sub-Sectoral Committee appointed to Review the Animal Husbandry Programme and Recommend Modifications - November 1974, p.17

Class II coconut lands in the Colombo district could receive substantial benefits from the implementation of this scheme in the course of time. Subsidies from other sources are also available for pasture development both in estates as well as in the villages.

### 3.1.4 Intensification of Production in Respect of Lands under Three Systems of Management

In the long run intensification of agriculture in Class II coconut lands has to be considered for three categories of land viz. (a) LRC lands (b) private estates (c) small holdings in the villages.

#### 3.1.4.1 Land Reform Commission Lands

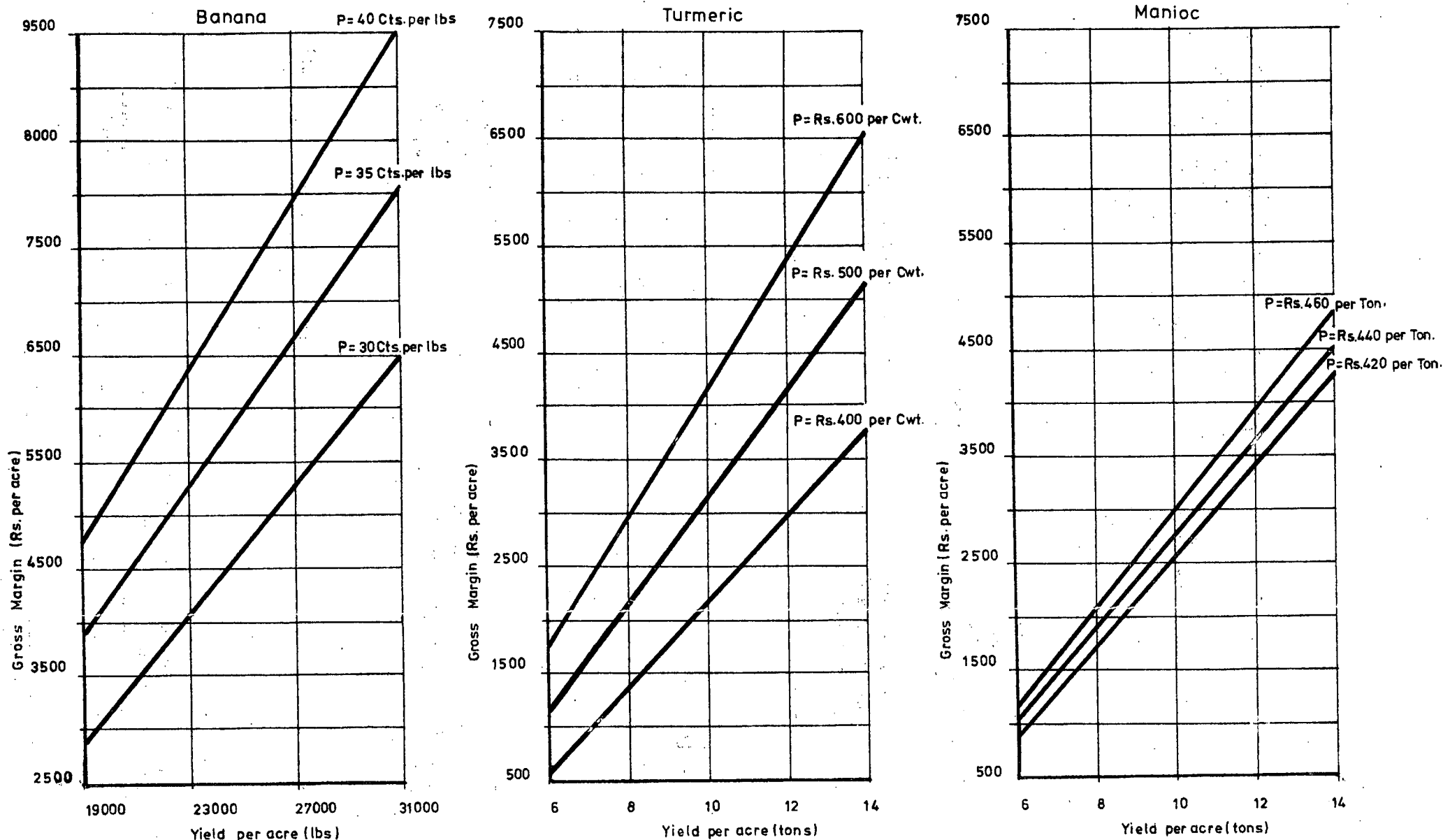
Farm enterprises suggested are based on the following assumptions:

- a) Vested lands in blocks of over 50 acres and above would be managed cooperatively for production purposes;
- b) Around 30-40% of such lands would be suitable for intercropping and pasture development;
- c) A farmer would provide a minimum of 240 working days a year;
- d) Infrastructural facilities in cooperative settlements would be provided by the Land Reform Commission in the initial stages;
- e) The Land Reform Commission would organise machinery services for initial land preparation at reasonable rates.

Details of an enterprise combination that could be accommodated in a 50 acre block of coconut in which at least 20 acres are available for intercropping and pasture development given in Appendix IX are summarised.



Fig. II A parametric graph illustrating the variation in gross margin per acre in relation to prices and acre yields



Gross Margin (G) can be represented most simply by the following equation  $G = PY - V$

Where P is the net farm price /Unit of crop, Y is yield per acre, and V is variable cost per acre. This analysis based on the simple assumption that variable cost of the crop remain constant for farmers on the same soil type in a particular locality, while price and yield /acre can vary widely

Programme	Physical extent of land required for the programme (Acres)	Total No. of man-days required	Estimates of		
			Total costs excluding labour	Returns during the first 18 months to land and labour	Returns per settler per month
			Rs.	Rs.	Rs.
1 root crop					
2 fruit crops					
1 crop sugar cane					
1 crop vegetables					
5 acres of pasture for milk cows	18	5,876 <sup>1</sup>	54,806 <sup>2</sup>	109,694	406

1. 1,230 man days required for sugar cane harvesting in September and October have to be hired from outside the settlements.

2. Excludes a capital investment of Rs.15,000 necessary for purchase of livestock etc.

The Gross margin estimate of a crop as shown in Table 8 (Summary of Activity Budget) is based on a unique combination of a price and a yield level. Hence such estimates have restricted use as comparisons are valid only when such levels prevail. A series of gross margin estimates for varying prices and yields per acre could be computed and presented graphically. Such parametric graphs provide a wider range of comparisons. As an illustration, graphs for banana, turmeric and manioc are given in Figure II.

An estimate of returns per settler is approximately Rs.406 during the first phase (eighteen months) and is expected to increase in the second phase (next eighteen months) when perennial crops such as pineapple and banana come into full bearing. Such a programme offers possibilities of providing employment to about 15 persons at an income level of Rs.400 per month.

It is not implied that the cropping combination suggested is optimal for production, but it serves to illustrate a feasible mix of crops with an emphasis on perennial crops which enjoy good market prospects and high returns.

Nearly all the crops mentioned with the exception of sugar cane are familiar to the growers as most of them have been grown in home gardens for decades, and even pineapple is now a commercial crop in this area. The transfer of garden crops to a commercial dimension as envisaged in

enterprise combination plans had not yet been attempted on an appreciable scale in this area and requires a considerable degree of technical expertise.

### 3.1.4.2 Private Estates

Coconut lands vested with the Land Reform Commission amounted to 13,615 acres constituting 25% of the estates over 50 acres in extent. Intensification programmes confined to such lands could result in only marginal benefits to the unemployed in the neighbouring villages. In this context, the private estates too have to be brought into the main stream of development plans for the coconut area. Lands in these estates are as much underutilised as the vested lands, except in a few isolated instances where cultivation of fruits and dairying on a commercial scale had been attempted with some success. The intercropping programmes suggested for the LRC lands are equally suitable for private estates. Estate owners have an advantage over the small-holders in obtaining working capital for intensification of land use as they have better access to credit. Often the owners of private estates are not resident on the estates and care-takers manage the lands. Short-term seasonal crops require continuous attention and call for frequent decision making in respect of production and marketing. Thus enterprises like the cultivation of fruit crops and animal husbandry where the products have a strong market demand can be better organised on such lands. Though perennial fruit crops and animal husbandry are not very labour intensive enterprises, their expansion in private estates would, however, provide employment to those villages which do not directly benefit from land reform.

Under Sections 2 and 3 of the Agricultural Productivity Law No.2 of 1972, the legal provision available appears to be far too general to evoke a satisfactory response from estate proprietors in the matter of making fuller use of their coconut land. In the absence of explicit legal sanctions it is unlikely that estate proprietors would make any serious attempts to intensify land use particularly after land reform. In order to enlist their total participation, it is suggested that some of the important provisions of the Food Production (Estates) Act No.40 of 1954<sup>1</sup> be re-introduced under the Agricultural Productivity Law. In this event the relevant State Agencies have to be entrusted with the specific responsibility of making recommendations with regard to feasible enterprises, extension support, planting material, livestock, etc.

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<sup>1</sup>According to the provisions of this Act, proprietors of all estates under permanent cultivation of tea, coconut, cocoa, cinnamon, cardamom, etc., and of not less than 35 acres in extent were required to cultivate foodstuffs in an area equivalent to a specified percentage of the total cultivated area of the estate or pay to the credit of the Food Production Fund. Provisions were also available under this Act to allow estate owners to fulfil their obligations under it by taking to animal husbandry and milk production.

### 3.1.4.3 Small-Holdings In the Villages

Holdings under 50 acres comprise 76% of the coconut acreage in this district, the bulk of which have low productivity. The facilities provided by the government for a regeneration of this crop are not being sufficiently made use of in the village holdings (vide Section 1.4.1). The central problem of developing these lands stems from the fact that the official agencies have to deal with a very large number of disorganised small-holders, a sizeable proportion of whom are also engaged in occupations outside agriculture.

Cultivation of crops other than coconut is done more or less on an *ad hoc* basis and there is hardly any planned link between production and marketing. The presence of a multiplicity of tree crops in village gardens impedes intercropping on a commercial scale particularly in small-holdings. However, even under the existing conditions the prospect of improving the productivity of the land is not bleak provided supplying services mesh in with production plans. Vegetable production in particular in the off season, betel cultivation, floriculture and rearing of stall fed milk cattle, pig breeding and poultry rearing are feasible enterprises in village holdings in addition to traditional yam crops. Such small-scale milk, pig and poultry production units could be organised to be supported largely by home grown feed and by direct sales outlets in Colombo.

Anthurium growing for cut flowers could supplement incomes particularly of those small-holders whose lands are mainly in permanent tree crops. The ready availability of coconut husk and coir dust is a further asset and would require institutional and organisational support both in respect of inputs as well as marketing. However, the investment involved in acquiring suitable planting material poses a problem for small growers. The expanding tourist industry strung along the Western sea board is adding to the demand for cut flowers. Growing of anthuriums could be lucrative, particularly for small holders as the centres of demand are close at hand.

In general the provision of agricultural credit, planting materials, technical advice and marketing facilities are vital for intensified land use in villages. At present credit for highland cropping in the coconut area is primarily restricted to two perennial crops - pineapple and passion fruit. The availability of production credit and marketing facilities has contributed to the expansion of the acreage under these two crops during the last decade. Production credit in respect of seasonal crops has so far been provided mainly for paddy and subsidiary food crops in the dry zone. Small-holders in the coconut area too, deserve some consideration in this respect as many of the feasible cropping enterprises need considerable cash

outlay<sup>1</sup>. In fact, what is suggested is not a haphazard expansion of the acreage under various types of crops with liberal credit facilities but the expansion of the acreage under selected crops that are eminently suited for this region. It is necessary to introduce a measure of planning for production of such crops and to organise collection and marketing. The participation of farmers in such programmes can be activated considerably by effective functioning of the APCc and CCc.

The reasons that discouraged livestock development in general (vide Section 1.4.2) applied with greater force to the small-holder. With the recent decision to extend loan facilities to operators who owned even one acre of land, it is likely that dairy farming will receive an impetus in the villages.

### 3.2 Industries

In terms of employment and income, non-farm activity plays a major role in the economy of the Class II coconut area. The advantages of location and ready access to urban markets, favour such non-farm activities.

The industries in the area broadly fall into two groups: (a) Agro-based industries; (b) Other industries.

The village survey points to the importance of the following activities mostly carried on the basis of cottage industries: textile weaving quarrying, pottery and coconut based industries such as coir and rope making.

#### 3.2.1 Agro-Based Industries

##### 3.2.1.1 Coconut Products

Although coconut is the major crop in the area, industries based on coconut have provided employment only to a limited number of sample

<sup>1</sup> Crop	Planting material Rupees	Fertiliser and Agro-chemicals Rupees	Total acre Rupees	
Turmeric	500	200	700	
Vegetables	100	600	700	
Banana	400	400	800	
Pulse crops	200	100	300	
Betel	400	800	1,200*	
Anthuriums	3,000(100 plants)		3,000*	*Quarter acre.

Based on prices of 1975

households<sup>1</sup>. The possibilities for increased employment in this sector need careful investigation. Cadjan weaving was reported to be the main activity. The survey recorded that most households use coconut husk as fuel. Small quantities of husks are also used for burying in plantations for manuring purposes. This implies that an appreciable amount of husks is available. The supply of husks for coir based cottage industries could be augmented by exercising economies in present uses. The number engaged in this activity is currently small.

Most of the coconut shells available within the area from nuts used both for industrial purposes (copra making, oil and dessicated coconut manufacture) and direct consumption, in the absence of an organised system of collecting, are used as fuel for cooking purposes. Charcoal for which the export prospects<sup>2</sup> seem to be good could be profitably produced from unused or wastefully used coconut shells.

Recent trends in sugar prices have made the manufacture of treacle and jaggery from coconut toddy and sugar cane economically attractive. In order to encourage these cottage industries some measures should be taken to provide sugar cane crushing facilities which are at present not within the reach of a majority of small growers. Some assistance could be given to such producers by inducing industries concerned with rural development to organise provision of such facilities or by organising producer groups to obtain equipment on a co-operative basis.

### 3.2.1.2 Other Agricultural Products

Manioc, gram and turmeric are some of the agricultural products which could be further processed and thereby promote employment. At current prices it has become more economical to sell a processed product, i.e. starch of manioc. Raw material supply is not a problem as sufficient acreages could be grown in the area, but other aspects such as technical know-how, credit arrangements and marketing facilities need organisation. A DDC project at Attanagala has successfully started manufacturing manioc starch using simple production processes.

It is observed that the processing of ginger and turmeric on a small scale is another activity with employment potential. Organisation of collecting centres at the village level to market the processed products are necessary to ensure fair prices. Market research is needed on the amounts that could be absorbed by various outlets.

<sup>1</sup>Industrial establishments were not separately enumerated.

<sup>2</sup>In 1974, 581,000 cwts. of charcoal valued at Rs.31.4 million had been exported.

### 3.2.2 Textile Weaving

In Ullalapola and Mabodale textile weaving is popular, but the incomes from the trade are low<sup>1</sup>. The constraints to the expansion of this industry are limited demand<sup>2</sup> for the products and problems in obtaining adequate quantities of yarn<sup>2</sup>. As this is a very popular activity in the area, the problem of raising labour productivity should be explored. Due recognition should be taken of these facts in framing policies relating to the power loom sector.

### 3.3 Infra-Structure for Employment Creation

In advocating an employment promotion strategy the conditions necessary for its successful functioning should be mentioned.

#### 3.3.1 Vocational Training Facilities

At present the Department of Rural Development operates several training centres, mainly for textile weaving, sewing and needlework. The Small Industries Department runs a number of carpentry schools. Such facilities enable people to be self-employed without swelling the ranks of those desiring government jobs. In the village survey, it was noted that almost everybody with specific skills was employed, but the number of self employed among them was low.

#### 3.3.2 Mechanisms for Project Identification and Implementation

A resource survey which takes into account both physical and human resources is a prerequisite to an area development programme. Project identification requires a decentralised approach and the Divisional Development Councils Programme of the Ministry of Planning is the major institutional device which conducts this in a pragmatic way at present. The role of the DDC programme is discussed separately. A pilot project on agro-based industrial development could be tried out in a limited area drawing upon the resources of several agencies - the Small Industries Department, the Industrial Development Board and the Department of Rural Development. Advisors who are competent in assessing local resources and can give technical-economic advice on starting, equipping and developing projects are needed.

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<sup>1</sup>The low incomes may in some cases reflect the part time nature of the activity.

<sup>2</sup>Out of the seventeen employees enumerated in the village survey, six belonged to this sector. They cited problems connected with input supplies as the main restriction to their expansion.

The actual number of employers would have been higher as some may have been reluctant to provide this information due to fear of labour legislation.

### 3.3.2.1 Divisional Development Councils

It was not possible to review the scheme operating in the four AGA areas in detail as it formed one aspect of the study. Only a few projects could be visited and the information presented below is based on these observations and the discussions held with various officials at the local level.

The number of DDCc and the persons in employment in the area are as follows:

	Early 1976 <sup>1</sup>	
	DDCc - Projects	Persons
	No. of projects	Number employed
Minuwangoda	7	40
Divulapitiya	17	300
Mirigama	5	75
Nittambuwa	13	300

It is observed that the DDCc have become a major employment generating agency in the Divulapitiya and Nittambuwa areas. The relevant question however, is not the number of projects but their productivity. As the DDCc have been operating only for 1-3 years it was not appropriate to examine this aspect in depth. The fact that the unsuccessful ones have been few in relation to the number of projects in the area, and that the drop-out rate of members is not high indicates a satisfactory position. The following specific observations on the scheme are made.

a) There is a wide scope for the DDCc to organise various non-agricultural activities in the area. Certain cottage industries have already been put on a sound footing by the DDCc (the Urukallana pottery industry, manufacture of curios, etc.).

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<sup>1</sup>Provisional figures - there is some discrepancy between figures collected by us at the local offices and the Planning Ministry records. This is partly due to the fact that the latter pertain to the situation at the end of 1975. Another factor is that the figures reported locally exaggerate the net employment created. Some projects may give full time employment only to a limited number and the rest may join the scheme just to supplement their incomes. The Milk Collection Project at Divulapitiya and the Manioc Starch Project at Attanagala are cases in point. Although there are 211 members in the Milk Producers Cooperative (Divulapitiya) it is not realistic to include the entire membership among the newly created employment figures.



b) The experience of Agricultural DDCc is not very encouraging. As shown in Chapter 2 on Estates, two farm projects have incurred heavy expenditure with no guarantee of commensurate returns. Apart from dairy projects (which only looked after the milk collection aspect) others have not been highly successful. Several reasons have been advanced for the lack of success.

- i. The time-lag between investment and production;
- ii. The indifference of the agency, especially the MPCs in the management of its projects;
- iii. Little involvement by members in projects;
- iv. Lack of interest due to absence of individual ownership in farm projects.

c) There is a tendency now for DDCc to undertake ambitious projects which require high capital outlays per job created<sup>1</sup>. The need for more intensive feasibility studies is obvious. The establishment of tractor units in two divisions is an example of a costly project which had been approved recently. The experience of tractor pools operated by the government shows that very careful supervision is required if such ventures are to be successful.

#### d) Training Facilities

As the DDC projects have generally capitalised on local skills, the problem of requisite training facilities has not been a major constraint. Some DDCc have undertaken a training function also as a part of their programme. For instance, the Urukana pottery project trains those who evince an interest in pottery making. In this context a greater degree of coordination between the training programmes of the Departments of Rural Development and Small Industries is desirable. People trained by these agencies can be organised into DDC projects for production and marketing.

#### e) Organisational and Management Problems

i. The unsatisfactory standards of management of certain DDCc by the MPCs was commented on in the Preliminary Report. These societies did not fully appreciate the objectives of the programme as they were more oriented towards consumer service functions. Special mention may be made of the fact that certain DDCc have challenged the position of local middlemen who have been exploiting local artisans.

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<sup>1</sup> DDC projects entrusted to the MPCs have not been successful because the main function of the MPCs is the distribution of consumer items.

<sup>2</sup> e.g. Tile Factory at Divulapitiya.

ii. Some DDCc have experienced difficulty in obtaining inputs and this has acted as a constraint to their further expansion. Being small projects, their access to inputs is limited (i.e. paints and dyes for the mask making and batik manufacture).

iii. The impact of DDCc on the overall development of the areas concerned is difficult to assess from this study and would depend on the following factors, among other things: the number and scale, spatial dispersion and economic performance of projects, the number of jobs created by them and their integration with the villages. In these respects the projects in Divulapitiya and Attanagala seem to play a more effective role than those in the other two areas.

iv. The Divisional Development Cooperative Union which brings all DDC projects in an electoral area under a unified management is a step in the right direction. The new Union is in the process of taking over the projects, which will facilitate the coordination of supporting services such as input supplies, marketing and transport in each area. A greater degree of coordination between the Divisional Development Cooperative Unions in adjacent AGA divisions is necessary to avoid duplication of activities and an overstocking of the market.

## Chapter 4

### INTEGRATION OF ESTATES AND VILLAGES

In addition to the two main declared objectives of the land reform in increasing productivity and employment, the programme also aimed at bringing about greater social justice by removing extreme inequalities in the land distribution pattern in the country, especially through transferring large extents of land owned by private individuals or by companies to the landless and the unemployed. Implicit also in the whole exercise was the need for integrating the estates and the villages which have been operating to a large extent independently of each other for generations.

*Integration as defined here refers to the process of bringing together the resources of the estates (both LRC vested and private) and the villages around them for total development of the rural economy on a stronger economic and social foundation. In the study area the extents of LRC vested lands are limited compared to the land problem in the villages. However, in certain other areas of the coconut triangle more land is available. Extents are also considerable in the main tea growing areas and in some rubber growing areas. What is presented here is a generalised framework of integration for areas where considerable extents of LRC and private owned estates are available for development. It is assumed that the privately owned estates come directly under the purview of the Agricultural Productivity Law.*

#### 4.1 Need for Integration

Integration of the estates and the villages is necessary both to fully realise the objectives of the land reform and also to provide an opportunity to the hitherto neglected rural economy to become more dynamic and self-reliant. Several specific reasons also call for a closer integration of the estates and the villages.

1. *To ease the population pressure in villages in the neighbourhood of the estates by providing land for the landless and for those with insufficient holdings, and to provide more employment opportunities on the lands for the rural unemployed and the under employed. It is by a closer integration of the resources of the estates with that of the villages that additional employment opportunities could be provided.*
2. *To bring about a stronger base for a greater diversification of agricultural production, processing and marketing. Bringing together of estates and villages would cement the economic base of the particular area and expand the scope for selective diversification programmes. It could also expand*

the base for agro-industrial development and help organise marketing and supply facilities on a larger scale.

3. *To promote the development and improvement of infra-structural facilities like roads, water supply systems, electricity, etc., in such a way that the benefits are shared by both the estates and the villages.* The services and facilities are most economically supplied on an area basis and with many estates passing into State ownership the preferential treatment received in the past by private estates could be eliminated.
4. *To serve as effective centres of demonstration and training on improved farming methods and specialised agricultural enterprises including processing.* It is likely that many LRC estates will be run in larger units as State farms, cooperative farms, etc. This gives an opportunity for management systems to be better organised with greater access to certain production oriented facilities. The Janawasa members and workers on State farms could play an important role in this connection.
5. *To contribute towards effective functioning of existing village institutions (cooperatives, cultivation committees, rural development societies, etc.) and also to help expand their activities -*
  - (a) the business of the institutions could be expanded by serving both estates and villages;
  - (b) their functioning could be made more effective through a broad-based representation from different segments of the village economy, including estates and thus benefiting from the talents and resources of all sectors.
6. *To prevent the estates developing once again into pockets isolated from the surrounding villages.* Rivalries and jealousies between the villages and the estate should be avoided. Conflicts could arise if a closer integration on a firm productive base is not achieved, and if the long established "dependence" outlook on the part of the villagers towards the estate is perpetuated.

## 4.2 Forms of Integration

As little integration existed under the old estate set up the development of a closer relationship would take time.

A major constraint to integration is the attitude of the villagers and the estate management towards each other - attitudes conditioned by a position of assumed superiority of the estate management and a feeling of subordination among the villagers<sup>1</sup>. Any programmes of integration could only be achieved if attempts are made to change such anachronistic attitudes.

Integration could be effected in several ways. The form and the degree of integration would largely depend on the particular circumstances prevailing in the area. Already in certain areas conscious efforts are being gradually made on several lines of integration. Such efforts are most noticeable in the Janawasas.

Specific forms of integration are discussed under three broad headings:

- (a) Economic integration
- (b) Institutional integration
- (c) Social integration

### 4.2.1 Economic Integration

A lasting and permanent relationship between the estate and the village could be brought about only through a well handled process of meaningful economic integration. If this can be achieved, it would pave the way for integration in other spheres of activity. Several ways in which economic integration could be attempted are discussed below:

1. Provision of employment opportunities to the unemployed villagers on the estates. Preference may be given to those in the villages located adjacent to or in the immediate neighbourhood of the estates. This has already commenced in the formation of Janawasas, and also on certain DDCC, etc., on LRC lands. However, in the study area several instances were noted where the neighbouring villagers were overlooked in providing employment - e.g. Punchi Naiwela and Ambana villages.

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<sup>1</sup>This is especially so in the coconut area where resident labour gangs were absent in the estates. The villagers found mostly casual work during peak periods. The smaller coconut estates were, however, managed by paid conductors or caretakers who were themselves villagers. In some cases the owner himself managed the estate. In such cases the gap was not so pronounced. Yet even such owners belonged to the power -ful elitist group in the village.

2. Development of the estate economy in such a way as to bring about a greater degree of complementarity and interdependence with the village economy. This could take the following forms:

- (a) complementarity in the use of farm machinery and equipment. Villagers could hire the services of equipment such as tractors, water pumps, lorries, etc., from the estate settlements.
- (b) specialisation in the production of certain agricultural commodities by the estate settlements and *vice versa*. Activities which require special skills could be best undertaken by the estate settlements which can for instance supply the villagers with improved planting material, animals, birds, etc. Such specialisation is already taking place in certain Janawasas;
- (c) labour use patterns can be adapted to suit the needs of the estate-village complex in several ways. Estate settlements' accounting staff could assist village cooperatives, etc., in keeping their accounts; estate technical staff (mechanics, etc.) could service village machinery and equipment or *vice versa* (e.g. village blacksmith). A two way flow of labour between estate and village could cater to peak period demands of each other. Janawasas in the coconut area, for instance, make use of the village labour during plucking periods.
- (d) in the planning of agricultural extension, demonstration and training programmes, the estates and the villages should be treated on an equal footing to ensure that the villages do not lag behind the estates in terms of future development. For instance, the small holders in the village could be associated in training and extension programmes organised for estate settlements. It may, however, be necessary in some instances to accord priority to the estate settlements given the differences in potential for development. In such cases the

settlement may later assume the role of trainer and extension agent for the surrounding villages.

- (e) organisation of the supply of inputs, marketing facilities, etc., for the entire estate-village complex. While villagers may be handicapped in this respect due to the large number of individual small operators involved, the estate is better placed as a focal point for channelling such services, because of its size. At present, some Janawasas have managed to establish their own facilities for marketing, etc., while the villagers have limited access to these<sup>1</sup>. Wherever supply and marketing facilities are envisaged for the use of estate settlements, they should be organised in such a way as to satisfy the needs of the villages as well.
- (f) identification of development projects taking into account the total physical and human resource base of the estate-village complex. For instance, agro-based industries could be planned in such a way as to draw on the total estate-village resource base and to effectively deploy the available village skills.
- (g) planning, establishment and improvement of infra-structural facilities such as roads, water supply and rural electrification schemes, etc. In planning such facilities due cognisance should be given to the future needs of larger areas where estate-village duality would be absent.

#### 4.2.2 Institutional Integration

At present there are a number of institutions like the Agricultural Productivity Committees, Cultivation Committees, Rural Development Societies, Cooperatives, etc., serving the rural sector. These are mainly geared to village needs. The LRC settlement sector appears to make its own institutional arrangements to serve its needs such as marketing, input supplies, etc. This often leads to various types of

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<sup>1</sup>See Section on Marketing.

conflicts, rivalries and jealousies between the two sectors due to overlapping of functions. Although the Agricultural Productivity Committees and Cultivation Committees are expected to be fully responsible for all agricultural lands in their respective areas, they have so far not included the estate sector in their spheres of activity. Thus, the estate settlement sector is hardly represented in these institutions. A policy of broadbased representation on these institutions may be suggested to overcome this problem. On the other hand, it is also imperative that the members of rural institutions be accorded representation in estate settlement organisations such as Electoral Cooperatives, Janawasa Committees, etc.<sup>1</sup> The establishment of special institutions to service the estate sector in the same spheres should be avoided as far as possible.

A single institutional set up affecting both sectors has a number of advantages -

- a) it helps to build up a form of leadership acceptable to both sectors;
- b) skills available with existing village institutions and the estate sector could be effectively pooled, e.g. accounting skills in estate settlements to help cooperatives;
- c) it will help to expand the range of activities and the size of the business of different institutions;
- d) it will help to create a better understanding among both sectors about problems confronting each other.

### .3 Social Integration

Estates in certain areas have developed not only as separate economic entities but have also remained socially and culturally aloof from the surrounding villages. This type of 'enclave' development which is a major feature in the tea growing areas<sup>2</sup> is less pronounced in the coconut area. The land reform movement has now given the opportunity to remove any remaining barriers to closer socio-cultural integration. Establishment of economic and institutional integration may go only some way towards achieving this objective. The promotion of specific

<sup>1</sup> Some Janawasas have already made attempts to incorporate members of village institutions into their committees. There are also instances where APC members have been included in Electoral Cooperatives, e.g. Attanagala.

<sup>2</sup> The peasants in the adjacent villages had no contact with the estate labourers or vice versa.



socio-cultural activities and activities like shramadana work<sup>1</sup> between the village and the estate may therefore become necessary in order to fully integrate the two.

One approach would be through the establishment of community centres, recreational and educational facilities common to both the village and the land reform settlements. Another would be to promote closer ties between the two in the organisation of traditional cultural activities (religious ceremonies, village festivals, etc.) Certain Janawasas have already established this type of relationship with the surrounding villages. Such activities will no doubt help to promote better understanding between the two sectors and thereby strengthen the collaboration in other spheres of activities. More intimate social links could be established by strengthening institutions serving both sectors.

#### 4.3 Problems of Integration

Several possible forms of integration were outlined above. While some of these have already been recognised, and to some extent even attempted achievements have fallen short of expectations due to a number of problems arising from sociological, political or other considerations. The following summarises some of the observations made during several field visits to the area. As definite programmes of development are yet to be evolved for many estates, the observations made refer also to problems likely to arise in the future.

Some problems may be specific to the village environment itself. Differences in caste and socio-economic status within the village community may prevent the realisation of programmes of action which attempt to help those who need help most, i.e. the landless, the unemployed, etc. The study on Nigaruppe has demonstrated the operation of these factors within a specific environment. In addition, vested interests in the village set up, i.e. traders and businessmen, dispossessed landlords and traditional leaders, may organise themselves in order to prevent a greater integration of the village and the estate as such a development may result in loss of benefits to them. They are in a strong position to do so as they also represent in most cases the politically vocal group in the area. One way of counteracting such pressure groups is by actively organising the land reform beneficiaries backed by the local peasant population. In addition the interests of land reform beneficiaries could be safeguarded by ensuring adequate representation in village level institutions like Agricultural Productivity Committees, Cultivation Committees, etc.

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<sup>1</sup> Many Janawasas have often successfully organised shramadana activity enlisting the active support of the villagers to prepare the land for cultivation, to erect fences and other constructions.

At the management level of LRC estates which have not developed into cooperative or other permanent settlements up to now, the operation of certain other constraints could be expected. The need for integration of the type advocated above is not fully appreciated by the present management of many estates as most of the managers are themselves drawn from the landowning class or are ex-planters. Such managers should be given proper training to orient them towards this goal. Further, a sympathetic attitude towards the needs of the villages may not be forthcoming when the decision-making body at the electoral level (Board of Directors of the electoral cooperative) consists mostly of those with landed and other related business interests<sup>1</sup>. It must also be noted that there is hardly any representation of the group of beneficiaries in these bodies. The capacity of land reform to bring relief to the needy sections and to place the village economy on a stronger footing may be overlooked under such conditions as the situation in Naiwela and Arbana have shown. Due cognisance of these problems should be taken in order to achieve a satisfactory degree of integration.

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<sup>1</sup>Ibid.

## Chapter 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The socio-economic conditions, land use and productivity in the study area have been discussed in the preceding chapters. Based on the findings of the survey, in-depth studies, and information obtained from discussions with successful farmers and public officials, an attempt is made to focus attention on certain aspects of the present situation and suggest some guidelines for the development of the area.

#### 5.1 Summary

##### 5.1.1 Small Holdings Sector - Villages

About 50% of the households owned very small extents of land and the area available for cultivation was very limited. In fifteen years the land owned will have to sustain five persons instead of four as at present if no additional land is acquired or there is no migration from the villages. A high degree of tenancy in paddy cultivation indicates landlessness and the control of paddy land by outsiders.

The highland is greatly under-utilised even in the larger holdings of 3 acres and above, despite the fact that climate and soil factors favour intensive farming throughout the year. Most small holdings are in the form of home gardens where mixed crops like manioc, yams, bananas and betel are grown. The annual yield of coconut ranges from 1,000-2,200 nuts per acre and the low yield is due to the age of the palms, lack of replanting and poor standards of management. Eighty three per cent of the growers in the villages had not fertilised their crops in 1974 and 63% had never applied any fertiliser at all. Cattle raising which has been a traditional practice now plays an insignificant role in the village economy. An appreciable number of households had discontinued rearing of dairy animals in the last five years because of inadequate grazing space and/or the high cost of livestock feed.

The employment position in the study area reflects, more or less, the national situation in the rural sector. The unemployment situation is acute though below the national average. About 75% of the unemployed are young persons, a high proportion of whom had received secondary school education though not possessing any special skills.

Low incomes is another striking feature with 66% of the households earning less than Rs.3,600 per annum. Of the solely agricultural households, 85% reported incomes below Rs.3,600 a year, the poverty line. A high degree of inequality of income was also observed.

The cooperatives did not fulfil any other functions except as the retail point for consumer goods, of which it was the sole distributor. Only 11% of the coconut growers were members of Coconut Producers Cooperative Societies. The Cooperative Societies did not appear to meet the needs of farmers.

The main source of channelling the village garden produce was the private trader and the growers felt that the prices offered were inadequate.

The village level extension workers (KVSs) had often received requests from farmers for advice on coconut cultivation but had not responded either because of their limited knowledge on this crop or from a reluctance to involve themselves in activities outside their normal duties assigned by the Department of Agriculture. Most farmers were unaware of the facilities available under the Coconut Rehabilitation Schemes.

#### 5.1.2 Private Estates

Private estates constitute an important segment of the coconut area in the Colombo district, as only 25% of the estates over 50 acres in extent have been vested with the Land Reform Commission. Lands in these estates are as much under-utilised as the vested lands except in a few isolated instances.

#### 5.1.3 Lands Vested with the Land Reform Commission

With the setting up of the Electoral Land Reform Cooperatives the system of management of LRC estates has now been formalised. This has resulted in many of the neglected estates now showing signs of improvement both in management and production. Management of the estates entrusted to the MPCSSs, Teachers' Cooperatives and Village Councils is far from satisfactory. These institutions and organisations are not primarily interested in agriculture and are not discharging their responsibility in accordance with the basic aims of land reform.

The Janawasa programme has been considerably expanded in the study area. However, in many of the Janawasas there was need for (i) a more systematic use of land, water and labour resources; (ii) organised training for office bearers, committee members, settlers and local level officers on technical and management aspects; and (iii) integration with the neighbouring villages were evident.

#### 5.2 Conclusions and Recommendations

In general the prospects for increasing employment and income levels in the Class II coconut area are promising. Better land management

in the currently under-utilised coconut areas and the introduction and expansion of agro-based as well as cottage industries are the two main approaches proposed for the development of this region.

## 5.2.1 Agricultural Development

### 5.2.1.1 Increasing Productivity of Coconuts

Replanting programmes, fertiliser application and adoption of soil and moisture conservation measures need intensification both in the small holder sector and estates. Particularly, the small holders have to be made aware of the facilities available under the Coconut Rehabilitation Scheme.

### 5.2.1.2 Intensification of Land Use

As regards farm enterprises Class II coconut lands in Colombo district have a comparative advantage due to their location: (a) the presence of large extents of land provided with infra-structural facilities, a network of roads, rail roads and urban markets (b) receive adequate rainfall during a greater part of the year, lending themselves to intensive land use with minimal capital outlay (c) proximity to processing centres for milk and fruits.

#### Intercrops

Intercropping coconut with both short term food crops and perennial fruit crops offers good prospects. Shade tolerant yams and spice crops as well as a number of perennial fruit crops will do well. The finance and labour needed for the production of the different crops vary considerably. Perennial crops like pineapple, banana, betel, sugar cane and papaw which show promise of higher gross margins also require substantial cash outlay. The traditional yams meet competition from bread and wheat flour which are readily available and widely preferred. Manioc, however, could be preserved for the production of starch and animal feed. There are prospects for expansion of cultivation of turmeric as the current supply does not meet the demand. Fruit crops offer much promise especially with the processing facilities that are being provided and the overseas demand for canned fruit products. The price of vegetables in June and July shows a steep rise due to a general shortage of supplies to Colombo from the main producing areas. The growing of low country vegetables under coconut which is feasible because of the presence of ground water at a depth of 20-30 feet could be profitable during the 'off-season', especially as this area is close to the main market.

## Livestock

Favourable agro-climatic conditions in this area facilitate the establishment of improved pastures under coconut at much lower cost than in the hill country or dry zone. This area is infra-structurally well developed and an animal husbandry programme could be carried out with considerably less investment. Shortage of capital, milk animals, lack of required skills and high cost of cattle feed had been observed as constraints to dairy development in this region. With the launching of the Sri Lanka International Development Association Dairy Development Project some measure of relief is likely to accrue to prospective dairy farmers. Adequate training and skills on livestock rearing, veterinary services and milk marketing should be organised by the relevant agencies. Supplementary enterprises like goat rearing are relatively inexpensive, do not call for as much skill and are suitable particularly for the drier areas in this region. They could be successfully undertaken in parts of estates that are not suitable either for intercropping or for improved pasture.

### 5.2.1.3 Categories of Land

In the long run intensification of agriculture in Class II coconut lands has to be conceived of in respect of three categories of land, viz. (a) Land Reform Commission lands; (b) private estates; and (c) small holdings in the villages.

#### a) Land Reform Commission Lands

Around 30-40% of the Class II coconut acreage is considered suitable for intercropping. With a judicious combination of carefully selected enterprises, a 50 acre block of coconut of which 20 acres are devoted to intercrops could provide employment to nearly twenty persons with a monthly income of around Rs.400. The enterprise selection has to be governed by the agro-climatic factors as well as the market demand for the produce.

Occurrence of micro variations of soil and the degree of shade tolerance of the various crops call for preparation of land use maps based on soil characteristics, topography and the density and age of coconut palms as a guide to intercropping.

Growing of intercrops as well as raising of livestock on a commercial scale requires a considerable degree of technical expertise. Since the vested lands are often managed by persons with inadequate technical know-how it is most important that adequate technical support be provided to the LRC by the Agricultural Extension, Research and Animal Production Divisions of the Department of Agriculture. Input supplies, planting material, spraying equipment and machinery services have to be organised by the LRC to service a network of cooperative settlements throughout the region.

#### b) Private Estates

Enterprises suggested earlier for LRC lands are equally applicable to private estates. However, in these estates, as most owners live in urban centres away from the land difficulties arise in introducing complex combinations of short term seasonal crops which require continuous attention and decision making. Cultivation of fruit crops as well as animal husbandry are preferable under such situations. With land reform it is unlikely that proprietors of estates would make serious attempts to intensify the use of their land. Estate owners may be assisted in intensifying their land use by providing advisory services related to potential production and income from supplementary enterprises. However, for fuller participation of private estates in such programmes it is suggested that some of the important provisions of the Food Production Estates Act No.40 of 1954 which required the cultivation of food crops and/or rearing of animals on a specified percentage of the total cultivable area of the estates or payment in lieu of non-compliance be reintroduced under the Agricultural Productivity Law.

#### c) Small Holdings in the Villages

The problem of the development of small holdings stems from the fact that the official agencies have to deal with a very large number of small holders. It is necessary to make growers better aware of the concessions that are available to them under the Coconut Rehabilitation Scheme. There appears to be a lack of dialogue between coconut small holders and the relevant official agencies. Effecting improvements in the distribution network of subsidised fertiliser and seedlings for replanting have also to be examined. With the abolition of the permit system for subsidised fertiliser and the introduction of a uniform subsidy scheme, the distribution of fertiliser for coconut could be transferred to the village cooperatives.

The presence of a multiplicity of tree crops impedes intercropping on a commercial scale. However, all considered, the feasible enterprises are betel cultivation, floriculture, vegetable production in the off-season, rearing of stall fed milk cattle and pig keeping. With the expanding tourist industry along the western sea board growing of anthuriums could be lucrative for small holders as the centres of demand are close at hand and the cultivation does not require much specialised skills.

Provision of agricultural credit and marketing facilities is vital for intensified land use particularly in small holdings. Many of the feasible enterprises need considerable cash outlay for purchase of planting material and fertilisers. Production credit in respect of seasonal crops had so far been provided for paddy and subsidiary food crops which are mainly grown in the dry zone. Small holders in the coconut area too deserve some consideration. At present the credit schemes that operate in the wet zone are mainly restricted to pineapples and passion fruit cultivation.

The facilities available to the small holders for marketing are inadequate. The number of purchasing centres of the Marketing Department as well as frequency of collection at these centres need to be increased. At least two collecting centres per DRO Division are desirable. It is necessary for rural institutions like APCc and Cooperatives to act as agents to purchase produce from village gardens, Janawasas, cooperative farms, etc., on a commission basis. Prompt payment for produce is likely to act as an incentive for planned production. The APCc and CCc have to establish their role in highland development as small farmers can act more effectively in cooperation.

### 5.2.2 Agro-Based Industries

There is considerable scope for agro-based industries in the Class II coconut area. There is a need for expert identification of potential activities based on local resources which include coconut by-products, other crops and livestock products. Three important industries that could be developed using the products and by-products of coconut are the manufacture of jaggery and treacle, coir based articles and charcoal. Charcoal in particular has a good export potential<sup>1</sup>. Food crops like manioc, sugar cane, turmeric and ginger can be further processed on the basis of small scale units. Manioc is a case in point from which a number of other products such as starch for industry, chips for animal feed, sago and flour for blending with wheat flour could be manufactured. Due to the poor quality of locally manufactured starch a considerable amount is imported for use in the textile industry<sup>2</sup>. There is a need to undertake research to improve the quality of locally manufactured starch. A DDC Project at Attanagala has successfully embarked on starch manufacture from manioc using simple processes. Identification and planning apart, the main constraints to expansion of these industries at present are the problems of technical know-how and skills and a marketing system oriented towards the small producer. There is need for greater coordination between various departments providing vocational training facilities. Markets for new products have to be explored in order to stimulate production.

### 5.2.3 Other Industries

Textile weaving is an important cottage industry in the area and in framing policies relating to the power loom sector it would be best to avoid a situation where those engaged in handlooms are displaced. Adequate supply of yarn could help producers considerably.

<sup>1</sup>During 1974, 581,000 cwts. of charcoal valued at Rs.31.4 million had been exported.

<sup>2</sup>Imports for 1975 amounted to 430 tons and the average c.i.f. price was Rs.3 per lb. The cost of locally manufactured material amounts to Rs.2.37 per lb.



#### 5.2.4 Divisional Development Councils

The Divisional Development Councils have been active in all the areas surveyed. In Divulapitiya and Nittambuwa the projects initiated have provided employment to a relatively large number of persons. The experience of agricultural projects organised by the DDC has not been encouraging.

Intensive feasibility studies should be undertaken especially in instances where high capital outlay is required and plans fully prepared at the outset. Technical advice is available and should be sought.

There is a need for greater degree of coordination of DDC activities at the divisional level in order to avoid establishment of more units than necessary to meet levels of demand. The Divisional Development Cooperative Union which brings all DDC in an electoral area under a unified management facilitates coordination as well as the provision of inputs and marketing facilities. The Development Cooperative Unions should also endeavour to bring about closer coordination among them so that activities are not duplicated and production is geared to actual demand.

#### 5.2.5 Development of Estates Vested with the Land Reform Commission

The development of vested estates is a long term programme aimed at generating more employment for the neighbouring villages. The needs of proximate villages have to be considered in developing LRC estates. Where LRC lands are not available in the vicinity of a village, a need for some degree of transfer and resettlement of landless or unemployed people under a larger area could arise. The Land Reform Electoral Cooperatives in association with the Agricultural Productivity Committees could be in a position to work out such plans. As APCc and CCc have to carry increased responsibility in the development of the LRC lands in future, proper attention to the needs of all sectors involved could be given only if the intended beneficiaries (landless agricultural workers and unemployed) are represented on these institutions. Otherwise it may be difficult for these bodies to appreciate the national policies which are aimed at removing extreme inequalities in the land distribution pattern and to create employment through land reform measures. The Electoral Cooperatives should be funded adequately to maintain high levels of management and undertake development programmes in the vested estates. Lands entrusted to institutions and organisations which have little interest in agriculture such as MPCSSs, Teachers' Cooperatives, Village Councils, etc., could now be entrusted to electoral cooperatives in order to achieve the basic aims of the land reforms and provide relief to underprivileged categories in the villages. Judging from the performance of the vested estates under different forms of management, the Janawasas emerged as the most promising form of management to further the main

objectives of the land reform programme. Many of the problems encountered in the fragmented estates as well as in lands under other forms of cooperative management had not arisen in the Janawasas. However, these settlements need a greater degree of support in the way of funds and other facilities like technical assistance, an organisation for supply of inputs and marketing in order to achieve a lasting impact on the development of these areas. The viability of these settlements in the long run, would be determined more by economic considerations rather than the political commitment to this programme. Hence the economic aspects need more priority consideration than at present.

#### 5.2.6 Integration of Estates and Villages

For the proper development of the area a permanent and lasting relationship should be brought about between the estate and village by a process of meaningful social and economic integration. The development of the estate economy should be in such a manner as to cause a great degree of complementarity and interdependence with the village economy. Complementarity and interdependence could be effected in the use of farm machinery and equipment, specialisation and production of agricultural commodities, labour use patterns, planning of agricultural extension and training programmes, organisation of the supply of inputs, marketing facilities, identification of development projects and establishment and improvement of infrastructural facilities. Plans should be worked out for the entire estate-village complex and not in isolation for each sector. The institutions that serve the rural sector at present could be made to serve the entire complex by a broad based representation. Creation of special institutions to serve only the estate sector should be avoided as far as possible. Social facilities like community centres, recreation and education facilities should be provided for the common benefit of both the village and the estate.

## APPENDIX I

Table 1      Owned Highland Holdings  
(Distribution of Holdings and Extents  
by Size - Percentages)

Village		Size of Holding							Total house- holds/ extents No/Ac.
		Less than $\frac{1}{2}$ %	$\frac{1}{2}$ to less than 1 %	1 to less than 2 %	2 to less than 4 %	4 to less than 6 %	6 to less than 8 %	8 and above %	
Mabodale	Hold- ing	24	18	24	25	7	-	1	67
	Extent	3	6	20	41	22	-	7	106.74
Humbutiyawa	Hold- ing	42	16	20	12	2	4	4	50
	Extent	5	6	15	20	5	15	35	86.60
Ullalapola	Hold- ing	32	25	18	9	5	5	7	44
	Extent	4	7	11	10	11	13	44	93.47
Tennagama	Hold- ing	70	15	11	2	-	-	2	47
	Extent	17	10	11	5	-	-	57	48.44
Ambana	Hold- ing	78	6	4	4	4	-	4	49
	Extent	16	4	4	8	21	-	46	47.76
Korasa	Hold- ing	46	17	17	15	4	-	-	46
	Extent	10	10	23	36	21	-	-	44.24
All villages	Hold- ing	47	16	16	12	4	1	3	303
	Extent	7	7	14	22	13	6	30	427.25

## APPENDIX II

Table 2      Owned Lowland Holdings  
 (Distribution of Holdings and Extents  
 by Size - Percentages)

Village		Size of Holding					All hold- ings	Average size of holding
		Less than $\frac{1}{2}$ %	$\frac{1}{2}$ to less than 1 %	1 to less than 2 %	2 to less than 4 %	4 and above %		
Mabodale	Hold- ing	52	33	15	-	-	27	0.52
	Extent	28	35	37	-	-	14.14	
Humbutiyawa	Hold- ing	33	39	11	17	-	18	0.80
	Extent	11	27	14	49	-	14.43	
Ullalapola	Hold- ing	37	37	16	11	-	19	0.79
	Extent	6	32	22	40	-	14.94	
Tennagama	Hold- ing	55	36	9	-	-	11	0.38
	Extent	22	54	24	-	-	4.15	
Ambana	Hold- ing	71	14	-	-	14	7	1.01
	Extent	11	11	-	-	78	7.05	
Korasa	Hold- ing	67	8	25	-	-	12	0.55
	Extent	29	8	63	-	-	6.59	
All Villages	Hold- ing	49	31	14	5	1	94	0.65
	Extent	16	28	25	21	9	61.3	

## APPENDIX III

**Table 3**      **Lowland Operational Holdings**  
**(Distribution of Holdings and Extents**  
**by Size - Percentages)**

Village		Size of Holding					All hold-ings	Average size of holding
		Less than $\frac{1}{2}$	$\frac{1}{2}$ to less than 1	1 to 2	2 to 4	4 and above		
		%	%	%	%	%		
Mabodale	Hold- ing	38	41	17	3	-	29	0.64
	Extent	17	36	34	12	-	18.47	
Humbutiyawa	Hold- ing	27	41	18	14	-	22	0.85
	Extent	8	26	28	38	-	18.60	
Ullalapola	Hold- ing	25	39	29	7	-	28	0.83
	Extent	5	29	42	24	-	23.16	
Tennagama	Hold- ing	32	37	32	-	-	19	0.77
	Extent	11	34	55	-	-	14.57	
Ambana	Hold- ing	33	47	17	3	-	30	0.67
	Extent	10	48	31	11	-	19.96	
Korasa	Hold- ing	60	20	20	-	-	15	0.50
	Extent	25	20	55	-	-	7.57	
All villages	Hold- ing	34	39	12	5	-	143	0.72
	Extent	11	34	39	17	-	102.33	

## APPENDIX IV,

Table 4 Occupational Distribution of the Employed  
(Excluding Unpaid Family Workers)

	Mabodale	Humbuti- yaya	Ullala- pola	Tenna- gama	Ambana	Korasa
Salaried or white collar	27 (24.3)	39 (44.3)	12 (12)	7 (10)	2 (2.7)	11 (13.9)
Non-salaried	1 (0.1)	-	-	-	-	- ( 1.3)
Trade and Commerce	11 (9.9)	4 ( 4.5)	6 ( 6)	1 (1.4)	1 (1.3)	4 ( 5.1)
Skilled jobs except weavers	11 (9.9)	13 (14.8)	18 (18)	9 (12.9)	2 (2.7)	13 (16.5)
Weavers	11 (9.9)	-	18 (18)	-	-	-
Agricultural labour	7 (6.3)	2 ( 2.3)	7 ( 7)	12 (17.1)	13 (17.3)	4 ( 5.1)
Non-agricultural labour	15 (13.5)	18 (20.5)	12 (12)	15 (21.4)	17 (22.7)	19 (24.1)
Agricultural + Non-agricultural labour	-	-	1 ( 1)	-	9 (12.0)	1 ( 1.3)
Labour not specified	1 ( 0.1)	2 ( 2.3)	7 ( 7)	10 (14.3)	10 (18.3)	10 (12.7)
Cultivators	26 (23.4)	10 (11.4)	17 (17)	15 (21.4)	21 (28.0)	15 (19.0)
Not mentioned	1 ( 0.1)	-	2 ( 2)	1 ( 1.4)	2 ( 2.7)	2 ( 1.3)
	111	88	100	70	75	79

Figures in parenthesis denote percentage to village totals

## BASIC DATA ON ESTATES STUDIED

<u>Estate</u>	<u>Location</u>	<u>Extent Vested (Acres)</u>	<u>Land Use and Condition at Take Over</u>	<u>Management 1974</u>	<u>Management end of 1975</u>	<u>Management mid 1977</u>
<u>Ambana Village</u>						
Kurunduwatte	Adjacent	35	Cinnamon (poor, neglected)	GS	ELRC	ELRC
Rubber Estate	1/4 mile	103 out of 203 to be vested	Rubber (above average)	GS	Not demarcated and handed over. Looked after by Superintendent	-----
Halgahapitiya- watte	1/4 mile	146	Coconut (average - no improvement since 1972)	GS	ELRC	ELRC
<u>Mabodale Village</u>						
Wembly	Adjacent	12	Coconuts (poor, neglected)	DDC farm run by MPCS (Mabodale)	Same	DDC farm disman- tled Minuwangoda Co-op.
Punchinaiwala	3 miles	81	Coconuts (neglected at take over)	a. 25 ac. Mabodale MPCS) DDC b. 25 ac. Udugampola " ) farms c. 25 ac. Teachers' Co-op. d. 6 ac. Given to school	Same	DDC dismantled & given to Minu- wangoda Co-op. Others same
<u>Ullalapola Village</u>						
Puwakgasagara	Adjacent	23	Coconut (average)	Not separated - under former management	Given to Janawasa	Janawasa
<u>Humbutiyawa Village</u>						
Nanduna	Adjacent	14	Coconut (young plantations)	GS	ELRC	ELRC ear-marked for redistribu- tion by a Rural Development Society
Pokumewela	1 1/2 miles	226	Coconut (average)	GS	ELRC	Janawasa
Medalandawatte	1 1/2 miles	22	Coconut (average)	GS	Given to Tourist Board	Same
<u>Tennagama Village</u>						
Weniwelwatte	3/4 mile	231	Coconut partly neglected, part jungle and rocky land	..... ..... .....	..... ..... .....	
Narangashena	1/2 mile	10	Coconut - neglected	20 villages given 1/2 acre each for food production.	Distributed among land less from a village 8 miles away in 1/2 acre holdings.	Only 25% have settled down. Some blocks encroached by villagers.
Kehelwatte	1/2 mile	106	Coconut (90); Rubber (10); Paddy (6); average	Run by LRC using same staff	ELRC	ELRC
Belilapitiya	1 1/2 miles	30	Coconut and rubber	Run by LRC using same staff	ELRC	ELRC

## APPENDIX VI

COMPOSITION AND FUNCTIONS OF  
THE LAND REFORM ELECTORAL COOPERATIVES

Circular No.2 issued by the Minister of Agriculture and Lands on October 31, 1974 proposes a three-tier organisational structure which will integrate, manage and supervise the activities of the lands vested in the Land Reform Commission except those lands which have been given over to cooperative settlements, Statutory bodies and corporations. This organisational structure consists of:

1. a cooperative society at the electoral level;
2. a Land Reform Supervisory Division at the political authority level (district level); and
3. a central advisory committee of the LRC and the Ministry at the national level.

The Land Reform Electoral Cooperative will now be responsible for the management and development of the lands vested in it. The cooperative consists of an eleven member board of directors. The chairman of the board is the MP for the area and seven members would be nominated by the Commissioner of Cooperative Development on the recommendations of the Land Reform Supervisory Division of the political authority, with the concurrence of the Minister of Agriculture. These seven should also include representatives from (a) AGA - DRO; (b) District Land Reform Authority; (c) DAEO - AD, RI and PL Division: ACDD; Tea and Rubber Controller; Coconut Cultivation Board and the Department of Minor Export Crops.

All persons who will be working on the land will be entitled to become members of the Society.

The Society will work through a main office and where necessary through several branches, the areas of each branch being determined by the Board of Directors of the Society. The functions of the Cooperative Society are:

- (a) development of land in concurrence with the programmes approved by the Minister;
- (b) maintenance of high standards of productivity and employment;
- (c) drawing up of annual programmes of work for each block of land;
- (d) drawing up of annual budgets.

The draft programmes of work and the draft budgets have to be approved by the Land Reform Supervisory Division of the Political Authority.

The finances of the Society will be derived from shares, income from the land, borrowings from the banks, advances from brokers, etc.

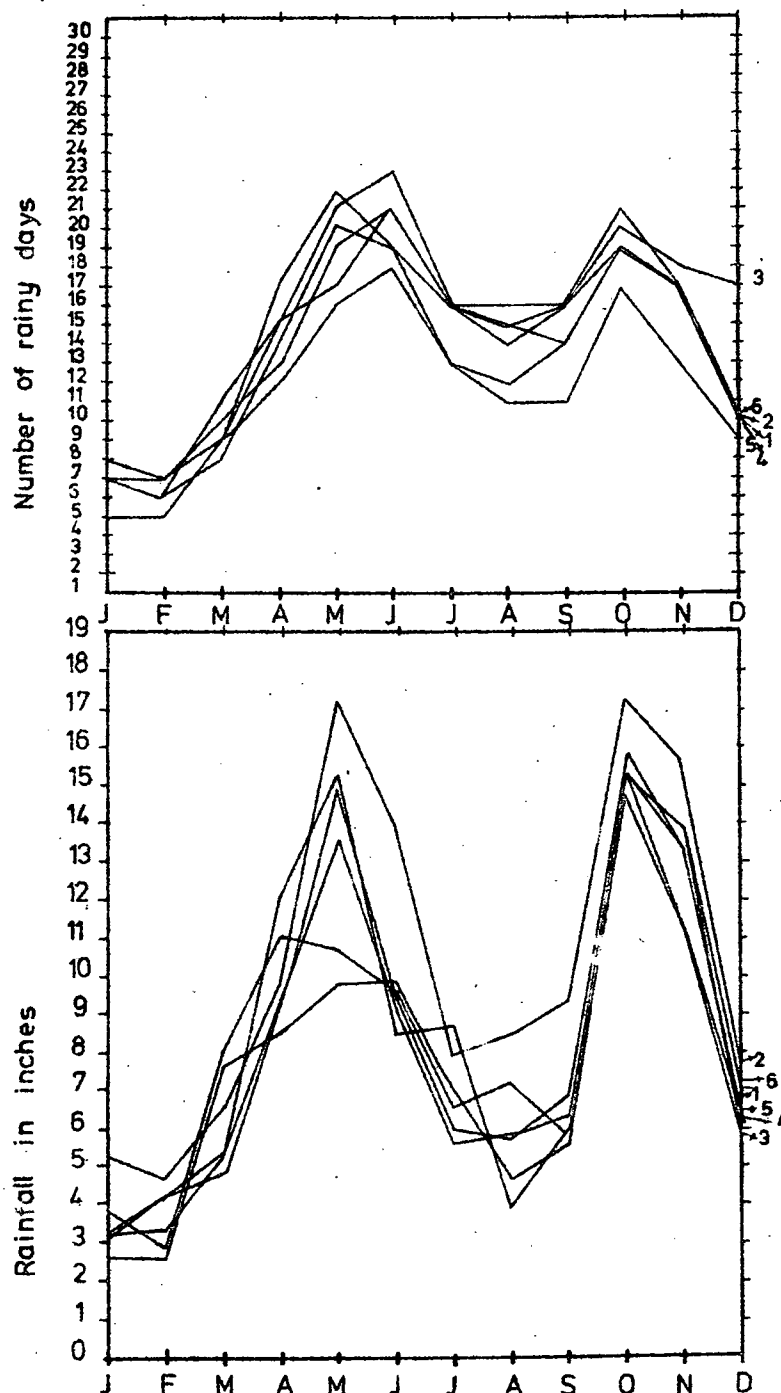


The profits of the Society will be disposed of in accordance with the Cooperative Society Law.

The Land Reforma Commission will lease the land to each Society on terms and conditions stipulated by the Commission. One such condition will be that the lease will normally run for a period of ten years in the first instance subject to adjustments and revisions in keeping with national policy.

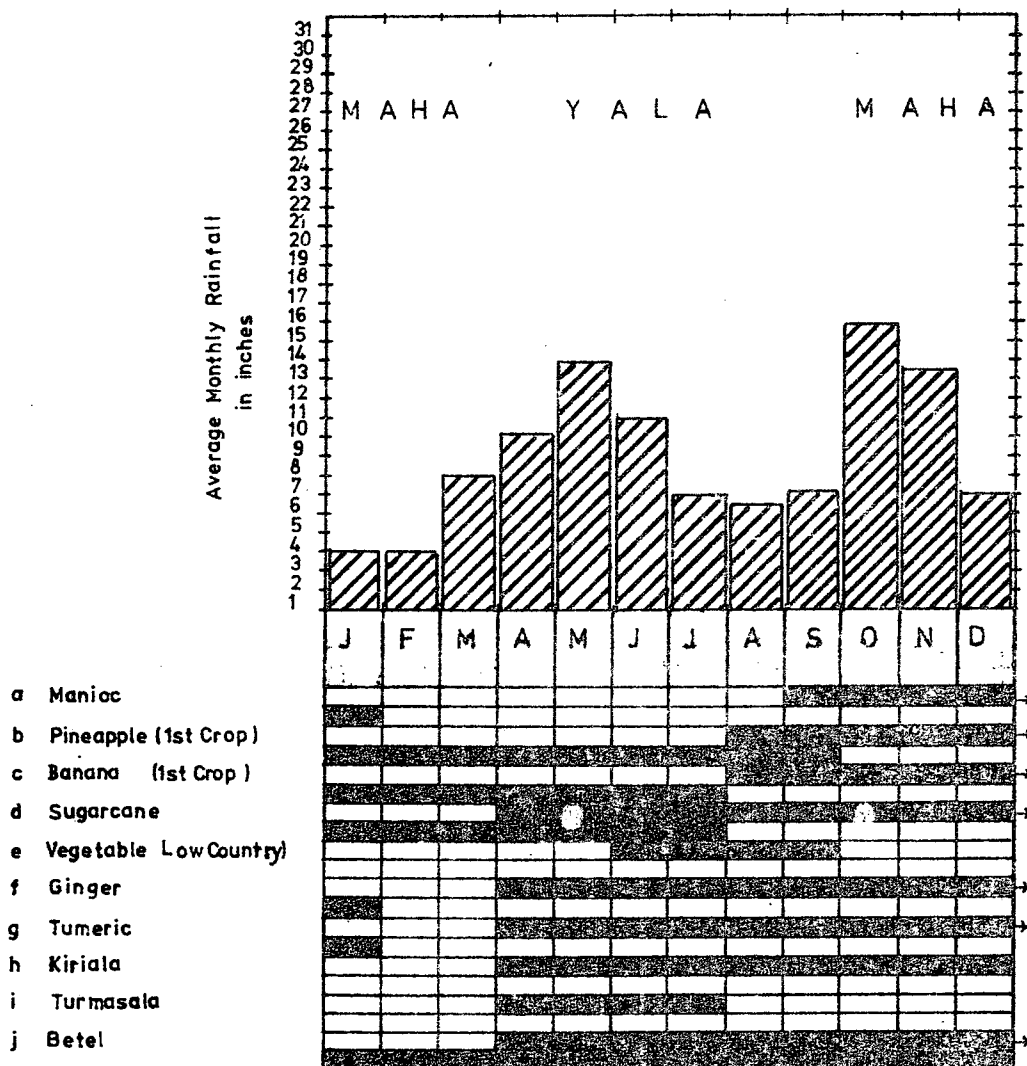
# THE MONTHLY RAINFALL AND RAINY DAYS FOR SELECTED WEATHER STATIONS IN THE COCONUT AREA

( B1-Polygraph Technique)



1. Angoda (1931- 60)
2. Dompe (1931- 60)
3. Henarathgoda B G (1931-60)
4. Ambepussa (1931-60)
5. Walpita (1942- 60)
6. Ranmuthugala (1953- 60)

# THE RAINFALL PATTERNS AND SUGGESTED TIME SCHEDULE FOR SELECTED INTERCROPS IN THE CLASS II COCONUT LANDS



( Based on Six Selected Rainfall Stations )

## APPENDIX IX

Table 6 Returns to Land and Labour from Suggested Cropping Programme III for 50 Acres of Coconut During the First Cropping Year - 18 Months

C r o p	Acre- age	Total man- days	Gross value of output	Total variable cost exclud- ing labour	Total Returns to land and labour	Returns to land and labour per man-day
Sugar cane	5.00	1,810	80,000	22,055	57,945	32.01
Banana	3.00	255	8,100	3,000	5,100	20.00
Pineapple	2.00	400	10,000	7,106	2,894	7.24
Yams	3.00	195	6,300	1,353	4,947	25.37
Vegetables	1.00	266	7,500	1,870	5,630	21.16
Pasture (milk cattle)	5.00	450	12,600	2,910	9,690	21.53
Total for intercrop	19.00	3,376	124,500	38,294	86,206	
Coconut	50.00	2,500	40,000	16,512	23,488	
Total		5,876	164,500	54,806	109,694	

Notes: Estimated income per settler on the assumption that one person could provide 360 man-days during a cropping season of 18 months:

$$\text{No. of settlers required} = \frac{5,152}{360} = 15$$

$$\text{Total returns for 18 months} = \text{Rs. } 109,694$$

$$\text{Returns per month} = \text{Rs. } 6,094$$

$$\text{Returns per settler per month} = \text{Rs. } \frac{6,094}{15} = \text{Rs. } 406$$