

AN ASSESSMENT OF FARM LABOUR - ITS POTENTIAL AND UTILISATION

BY  
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## INTRODUCTION

Agriculture is the oldest and the largest industry. In India, it accounts for nearly half of the national income, and agricultural labourers forms the largest single sector of India's labour force. Agricultural labour constitute one of the three main pillars, the other two being land owners and tenants, upholding the fabric of agriculture. The number of agricultural labourers in rural force in the country has been steadily growing over the years. Of the 131 million agricultural workers in 1961, 31.52 million workers were agricultural labourers. In 1971 out of about 126 million agricultural workers about 47 million workers were agricultural labourers. The causes for the growth of agricultural labour are:-

1. High net growth rate of the population in the country.
2. Growth of indebtedness due to low income leading to transfer of land from the small owners to the creditor resulting in the former into becoming agricultural labourers.
3. Displacement of means of subsidiary occupation whereby existence solely on an uneconomic unit of land becomes impossible.
4. Growth of absentee landlordism and
5. The extension of money income to rural areas in replacement of payment on land.

In this connection the observation of Mukurjee worth nothing. "Every circumstances which has weakened

the position of the small holders has increased the number of agricultural labourers namely, the loss of common right in the ruraleconomy, the discise of collective enterprise, the multiplication of rent receivers, free mortgaging and transfer of land followed by a decline cottage industries."

The term "agricultural labourer" has been defined by different persons from different angles.

Desai and Shah (1951) defined agricultural labourers as those who would depend mainly on form wages their maintenance irrespective of their other source of income. They might be small holders cultivating partly holdings, village craftsmen and other ordinary labourers doing odd jobs like road repairs, bridge construction, load carrying and well digging.

According to Sonachalam landless agricultural labourer is defined and used in three different ways.

- a) A labourer without any piece of land what so ever.
  - b) A labourer-cum-owner of land whose income from labour is larger than that from land, and
  - c) A labourer whose wage income from agricultural labour is larger than from non-agricultural labour and both together is more than income from land.
- These three different concepts will give three different population.

The National Commission on Agriculture (1976) has divided agricultural workers into two main groups namely landless labourers and very small farmers. The first group of landless labourers has been divided into two main categories

- a) Permanent labourers who are attached to agriculture household and
  - b) temporary or casual workers.
- The second group of labourers is divided into three categories.
- a) Those small farmers who possess very little land and consequently have devote most of their working time on the land of others as labourers.
  - b) Share croppers who while sharing the produce of the land for their work, also work as labourers and
  - c) Tenants who besides working on lease land, also work as labourers.

Nanavati and Anjaria (1960) classified agricultural labour on the basis of conditions of employment, into two namely contract or attached labour and casual labourers.

In India three major factors have been in operation over the last century which "led to a rapid proletarianisation of the working force and thus to the emergence of unemployment as an open phenomena ..... These are the rights to individual properly recongnised by the British legal

system which facilitated the breakup of joint families; the emergence of a market for land, which led to the gradual dispossession of small peasant proprietors and technological changes which caused the displacement of labour from traditional occupations. The people uprooted in these ways have either migrated to the towns in search of employment or joined the ranks of a new class of landless agricultural labourers, also in search of work.

The problem of unemployment is now accepted as a major problem of under developed economies. Unemployment as it exists in under developed countries like India are two basically distinct phenomena. The reasons for the widespread predominance of unemployment and under employment are multifacit. They are just a function of mass poverty in the state and the country. That is there are major segments of rural society which are too poor to refuse work even when they known that they will be working below their capacity and earning a sub-marginal wage. The other reasons for the dominance of disguised unemployment and underemployment in the rural country side is the rate at which the population has been growing, which has added to the existing labour force.

Since the problem of employment is massive it may not be possible to remove the entire backlog of unemployment

and underemployment within a short period. Therefore in order to solve the problems of poverty and unemployment, provision of available employment opportunities has been a major goal of all the plans. Given the widespread poverty, growing unemployment implies acute distress for an increasing number of person who are denied the benefits of whatever economic development and growth has been achieved. The number of variables influencing and being influenced by the quantum of employment and unemployment is also very large and the whole gamut of economic planning and public policy can be taken to relate to employment and unemployment.

The effects of additional employment opportunities on rural poverty will depend to a great extent on the level of wages. The agricultural wages for unskilled labour in many parts of the country is rather low. This is the main reason why more than 45 percent of the rural population were below the poverty line. The most important step to be taken to enable the agricultural labour to move above the poverty line is to ensure a reasonable level of minimum wage along with gurranteed employment.

A study of this kind is essential to find out the level of employment, unemployment, income and standard of living of agricultural labour so as to reorient the employment policy and to serve as a guide line to the

policy makers towards the steps and measures to be undertaken in future to improve the standard of living of these agricultural labourers.

The present study on "An assessment of farm labour its potential and utilisation" is undertaken with the objectives of:-

1. To estimate the level of employed and under employed ~~ed~~ agricultural labour force.
2. To ~~ex~~amine the characteristics of employed and underemployed labour force in rural area in terms of age, percapita expenditure, household occupation, education etc.
3. To examine the relationship between poverty and underemployment.

## II REVIEW OF LITERATURE

Further in the First Enquiry, an agricultural labour family was defined as the one in which either the head of the family or majority of the earners were employed as agricultural labourers for 50 percent or more of the total number of days worked by them during the previous years. In the Second Enquiry, the criterion was changed to income and not employment. An agricultural labour household was defined as one for which the major source of income during the previous years was from agricultural wage.

According to Misra and Lalvaish (1957), the term agricultural labour includes, all those persons who are employed in the field for wage in cash or kind for carrying on agricultural operations on a temporary or permanent basis and such persons may or may not own any land to be cultivated by them on their own account. It thus includes even those petty tenants and sub tenants who possess only a fractional area of land for their maintenance and are therefore, forced to work as agricultural labourers in the field of others to supplement their petty earnings from their own-land.

According to Daniel and Thorner (1957) the agricultural labourers in India could be grouped into two categories as (a) free labour who was able to accept or reject the conditions and wages offered by the employer and

(b) unfree labour by contract whose bargaining power is virtually non-existent or surrendered.

Desai (1970) in his study on rural employment classified the agricultural labour into three categories namely family labourers, permanent or attached labour and casual labourers.

Venkatramani as well as Raveendran (1973) has clearly defined the term agricultural labour. Venkatramani defined agricultural labour as a person who holds less than one acre of land and or more than 50 percent of whose income is derived as wages from agriculture. According to Raveendran landless agricultural labour are "those persons who are employed in fields of others for wages in kind or cash and do not have lands of their own".

Again Barnala (1977) defined the landless agricultural labourers as, "one who does not have any landholdings, but has a permanent homestead and derives more than half of the income from agricultural pursuits.

The census of India 1961 defined "agricultural labour" as a person who works in another person's land only as a labourers without exercising any supervision or direction in cultivation for wages in cash, kind or share such as share of produce. The labourer should have no right or lease or contract on land on which he works

nor should he be responsible for taking decisions as to which crop to sow and when, or taking the risks of cultivation. A share of the produce goes to him only as wages".

The census of 1971 defined agricultural labourers as, "a person who works in another person's land for wage in money, kind or share. He has no risk in cultivation but he merely works in another person's land for wages. The labourer could have no right of lease or contract on land on which he works".

In short all these definitions revealed the fact that agricultural labour is a person who works in another's land for wages".

Agricultural labourers are from the most vulnerable sections of the rural community. As mentioned in the International Labour Organisation Report (1961), "they constitute the core of the employment problem in the rural sector, because they are actively seeking employment in the employment market." Some of them have cultivating right in tiny bits of land where they are employed for a part of the year, but the extent of employment and earnings secured on their farm is so limited that they are compelled to supplement it by hiring out their labour on others holdings. Landless agriculture or such other employment as they can manage to procure.

The proportion of agricultural labourers to total workers had gone up from 16.71 per cent in 1961 to 26.33 per cent in 1971. The number of landless labourers increased by 19 million during the period and their share in the unorganised labour increased from 18 per cent to 24 per cent.

The Rural Labour Enquiry 1974-75 gives the variation in the proportion of agricultural labour <sup>u</sup>household to total rural household over the 10 years period 1964-65 to 1974-75. The proportion which was 21.7 per cent in 1964-65 went upto 25.3 per cent in 1974-75. The proportion of agricultural labour household with land and without land was nearly equal (49-51) in 1974-75 as per the <sup>n</sup>enquiry. The world Bank staff working paper No.320 (1979) entitled "small Farmers and the landless in South Asia" estimated the number of landless labour households in India at 24 million and their population at 114 million in 1977.

## 2. Pattern of Employment and Unemployment of Agricultural Labourers.

Pande (1957) while studying the pattern of employment in U.P. stated that a man is considered to be fully employed if the total hours worked by him are not less than the total hours for which he was available

for work during the reference period.

Bishoni (1966) stated that employment is a state of being engaged in productive work with sufficient amount of labour put in and an adequate reward for flowing from it constitute full employment. All adult working for a minimum of one hour per day in gainful employment were taken to be employed. Those not rendering even this much of work were regarded as unemployed.

Workers are classified into highly skilled, semi-skilled and un-skilled categories in factories. Such a classification of workers on the basis of skill is not possible in Indian agriculture. On the other hand, it is based on exigencies of farm work. Two types of labourer are required for farm operations - those who are employed for rush work to cope with nature's time - schedule for completing agricultural operations well within the season and those who attend routine farm operations all the year round. The first category of workers is broadly known as "casual workers" and the second category as "attached workers" or "permanent workers". The casual labourers are engaged in peak periods of agricultural operations and the employment is seasonal. For the rest of the period they are unemployed. The permanent workers are engaged throughout the year whether there is any work or not and paid in both kind and cash. They are bound by an agreement mostly oral and the agreement period range from an year to two.

The pattern of employment varies considerably from region to region depending upon factors like agricultural prosperity, size of holding, crop raised and availability of alternative avenues of employment during slack seasons, irrigated areas and the extent to which diversified farm is followed, since progressive developments in these directions are likely to be labour - intensive.

A distinct feature of agricultural employment is the preponderance of women and children as wage earners. While such employment is often resorted to for supplementing family income, it is to an extent a contributory factor to low wage levels of adult male agricultural worker.

Closely connected with employment of agricultural labour is seasonal migration. Migration of labour is common both during peak periods of agricultural employment and during peak periods of agricultural employment and during slack periods. In peak periods agricultural labour migrate from surplus area to regions where it is relatively scarce. In slack periods migration is on an extensive scale within the rural sector and from rural area to urban areas in search of gainful employment.

The term "unemployment" was defined by a study of International conference of labour (1963) in Ceylon as: that persons aged 12 years and over whose main activity status was either a) without work but available and willing

to work. (b) without any substantive work or duties though able to work or take duties whole time, were considered to be unemployed.

The term underemployment refers to the differences between the amount of work performed by persons in employment and the amount of work which they would normally be able and willing to perform. Visible underemployment relates to the quantum of supplementary labour which could be put in by those who are with a job and who during a specified period, were working less than the normal hours in the occupation and are in search of or willing to accept additional work or full time employment.

Disguised unemployment in the agricultural sector can be defined as: a sum of farm household labourers whose marginal productivity is Zero over a wide range and the labourers who might be released by increasing productivity of the remaining labourers, consolidation of scattered strips and plots of land, correct division of labour with a little addition of capital and organisation of rural society. Invisible underemployment appear to be characteristics of persons whose jobs do not permit full use of their capacities and skills.

Raj Krishna (1972) suggested four criteria by which a person may be called employed or unemployed. The four major criterias are:-

1. TIME CRITERION: According to which a person may be called unemployed or underemployed if he is gainfully occupied during the year for a number of hours or days less than some normal hours or days defined as full employment hours or days. The time criteria is helpful in understanding the duration of unemployment or a period of work lessness when employed and severely under employed (those who worked for 28 hours or less hours during the reference week) would be looking for work.

2. INCOME CRITETION:

A person is considered to be unemployed if he earns an income per year less than some desirable minimum. This can be termed as the poverty criterion of unemployment because the person has secured some work but the income from the work is less than the acceptable minimum. Income criterion can be useful to a policy planner in deciding on the employment priorities.

3. WILLINGNESS CRITERION:

A person may be called under employed if he is willing to do more work than he is doing at present.

Such person may either be actively searching for more work, if it is offered to him on terms to which he is accustomed. This criterion may be a aspect of poverty or income criterion.

4. Productivity Criterion:

According to this criterion a person may be called unemployed or under employed if he is removable from his present employment and his removal would not reduce the total out put. This is the case of disguised unemployment.

The extent of association between poverty and unemployment in the developing countries was analysed by following different criterion by world Bank. It defined unemployed persons as, "are those without work during a specified reference period who are seeking it. It also includes all those persons who do not actively seek work but are available for it. National sample survey in its 27th round (1972-73) data on enemployment defined the terms,

a) Currently unemployed:

The activity of the reference week is called "Currently activity." Those unemployed during the

reference week are called the currently unemployed.

b. Usual Activity Criterion:

Usual activity is the normal working pattern of the respondents in the year preceeding the day of interview and likely to continue in the future. Persons reported to be unemployed in terms of their usual activities were likely to be "Chronically unemployed."

c. Personday Criterion:

Under this criterion the average number of hours worked in a day is taken and is multiplied by the reported number of days in a week. The employed persons who work for less than 28 hours per week and is available for additional work are considered to be severely under employed.

d. Major Activity approach:

Under this method a person is classified as unemployed if the unemployment days in the reference week exceed the days when he is employed.

3. Socio-economic conditions of agricultural labourers and measures to improve the conditions:

Agricultural labour is provided mostly by economically and socially backward sections. The condition of agricultural labourers in India are simply appalling. They are miserably poor and their levels of living is very low. The agricultural labourers are

characterised by unemployment and underemployment, low wage and income thus lead to low standard of living, indebtedness, lack of organisation, lack of non-agricultural jobs and low social status etc.

Economic conditions of agricultural labourers have been measured with the help of two major indicators percapita income and percapita expenditure of each labour household.

On the basis of information regarding the cash receipts and cash income and also income from other sources by any other members of the household, Mahalanobis (1937) have computed the annual income of each labour household and accordingly the percapita income of each household has been calculated.

Mahalanobis found that 256 households of casual labourers of Bribham and Sriniketan were earning percapita annual income as Rs.332.84 and incurring percapita annual expenditure Rs.354.15; 30 households of Mahindar earning percapita income of Rs.332.57 and incurring percapita expenditure of Rs.363.38 and 56 households of Krishan earning Rs.444.00 and spending Rs.494.87. From the information on household expenditure items such as expenditure on food items as

well as non - food items in terms of both quantity and value, Mahalanobis have calculated the annual consumption expenditure of each household of different categories of labour and accordingly arrived at the per capita expenditure.

Disparities in the level of living of agricultural labour households in particular and rural labour households in general have been studied by different research workers and arrived at similar conclusion that inequality has increased or at least not decreased among the different agricultural occupation groups since the country has launched, different agricultural occupation groups since the country has launched itself on the course of "planned development."

The characteristics of agricultural labour and their economic and social handicaps arise mainly from seasonal nature of agricultural production, institutional factors governing agrarian economy, prevalence of uneconomic holdings and consequent low capacity of farmers to pay, relatively low price level of agricultural commodities and the social and economic backwardness of disadvantaged community from which agricultural labourers are drawn. As a result of

all these economic and social factors, landless agricultural labourers are adversely affected as the pressure of economic disadvantages of agricultural *economy*. ~~labour and co-operative farming etc.~~

One way to upgrade the level of living of agricultural labour is to increase the size of employment opportunities in the farm and non-farm sector. The Government of India launched the "small Farmers Development Agency" to increase the level of employment, income and thereby improve the standard of living of agricultural labour.

Jobs for more people for more number of days is one of the prime factors in reducing tension and bringing prosperity to the people. A study of the crops grown in the District seed Farm, Cooh Bihar in west Bengal during the last few years and the pattern of farm labour employment during that period reveals that extending the cultivation of high yield variety of crops in larger areas shall provide a unique opportunity of higher farm labour employment.

The sixth plan proposes to implement the National Rural Employment programme (NREP) for providing employment to the landless labourers. The

plan Frame work acknowledges that a target of even 5 percent rate of over all economic growth would not be able to cope with the problem of providing full employment to the landless labourers who are, "the most unpreviledged and, malnourished sections of the Population."

Studies on agricultural labourers.

Many studies were undertaken by different persons on agricultural labour in relation to employment and unemployment, earnings, socio-economic conditions etc. some of the studies are quoted below.

Mahalanobis (1937) in his study on "Agricultural labours of Bribhum" makes an attempt to examine some aspects of employment of agricultural labour in 12 villages of Bribhum with a view to finding out whether these people could be considered as a homogeneous group with respect to their terms and conditions of employment as well as standard of living. His findings are.

a) Interm of their conditions of employment, wage rate income levels and consumption pattern, agricultural labour represent different groups with dissimilar characteristics.

b) Inter-group and intra group variations in the distribution of income and expenditure relating to

agricultural labourers were a potent fact. Therefore it was fallacious to treat every group of agricultural labour as a "poor class".

c) Among the different groups of agricultural labour the economic condition of the Krishans are relatively better than that of the casual labour and the Mahindars. The greater indebtedness of a Krishan vis-avis the other two categories was an account of his more proximate relationship with the land owner.

A study on employment, earnings and level of living of landless agricultural labour households in Annur Block, Coimbatore District was done by Raveendran (1979) with the objectives of:

- a) Estimating the level of employment and underemployment of landless agricultural labour households.
- b) Determining income levels, pattern of income and income distribution of agricultural labour household.
- c) Analysing the level of living of agricultural labour households.

The information were collected from 150 randomly selected labour household spread over six selected villages and based on annuval family income the labour household were stratified into 3 groups. In this study area, 65.12 per cent of the respondents were severely underemployed 14.39 per cent were moderately under employed and only 20.49 per cent were fully unemployed. The study revealed that on an average the agricultural labourer was able to get employment for 194 days per year.

Dandekar and vasant Rethe (1949-50) had studied "employment and unemployment of adult rural population". They deal with the pattern of employment and unemployment of the adult rural population. The paper is based on data on employment gathered in the course of a programme of comprehensive socio-economic inequiry of the region of the old Bombay Decan.

His study found out that, nearly half was engaged in farm work about a quarter in non-farm work and the remaining were either Voluntarily or involuntarily unemployed. While employment on the farm was largely self-employment, non-farm employment was predominatly wage employment.

The most distinct and quite expected feature

of the employment pattern of the adult female labour force was that nearly half of it was engaged in household work. As between the different classes of cultivating households, the same differential conditions in the employment pattern as of adult males were also observed in the case of female labour force.

World Bank paper (1980) on poverty and unemployment in India- An Analysis of recent evidence examines the extent of association between poverty and unemployment in the developing countries using the data collected by the Indian National sample survey.

The conclusions of this evidence are casual labourers should be a high priority group in any programme to alleviate poverty and reduce unemployment. Secondly, the urban industrial sector in India is unlikely to provide much opportunity for increased employment to the rural casual labourers because of increasing labour force. The level of wage rate and the work conditions would certainly be important determinants of the actual labour supply.

Finally, one of the major findings of the association between the importance of casual labourers in the labour force and the reported incidence of

unemployment seems to be relevant to the interpretation of unemployment statistics of other countries.

Gill's (1954-55) paper on "unemployment and underemployment of permanent farm workers" seeks to study the unemployment and underemployment of permanent farm workers in Punjab. For this study, the holdings were selected by the method of multistage stratified random sampling. The data related to 1954-55. For the estimation of underemployment a standard labour-input has been computed. It is computed that out of the 472-19 such workers in the sample, 133.82 may be considered to be surplus or removable to other occupations without reducing the existing agricultural populations.

Ramachandran (1980) made a study on "Agricultural labourers in the working population of Tamil Nadu" with the help of censuses of 1961 and 1971. The purpose of this note was to study the incidence of agricultural labourer in the working population of Tamil Nadu in the censuses of 1961 and 1971 and the changes in the proportion of agricultural labourers in the total working population over the decades 1961-71. It attempts to test statistical association between those trends in the proportion of agricultural labourers to the total work force on the one hand and three indices, relating to demographic trends and irrigation on the other.

These three indices are, firstly net cultivated area in hectores per member of the population (the land-man ratio), secondly, the area irrigated as a per centage of the total area of operational holdings (the irrigation index) and thirdly the division in percentage terms of irrigated area by major source of irrigation.

The study concluded that the period 1961 to 1971 was marked by a dramatic increase in the percentage of agricultural labourers to the total working population in Tamil Nadu. As regards the incidence of agricultural labourers in the working population two trends could be discerned. The first was characterised by a persistence of differences between the regions in levels of incidence agricultural labourers in the work force. The second tread, was relatively faster growth over the decade of agricultural labourers in the working population in areas where the incidence of agricultural labour was relatively low in 1961.

A study on "Agricultural labour in chirchita Village, Bulandshah U.P. - Labour availablity and peak demand by Allen and Singh (1972) was done to estimate labour input in agriculture sector with special reference to the wheat growing areas.

There is a technique of work measurements which can be used over a variety of time periods to assess many aspects of the working situation. This technique of activity sampling has been applied and the purpose of the technique is to provide data on activity by means of observations arranged at random terms. The findings of the study concerning the period of maximum demand for labour was that during the harvest period in 1972 that extended from 20th March till 25th April. The demand for labour input was by no means regular throughout. This sample study indicated that a total of 442 man days (12 hours in a day) was worked by agricultural labourers in gathering the crop on 15.5 hectares, reflecting an average of 28.2 man-days per hectare; at this rate, the 250 hectares of wheat of the village would require 7050 man days of harvesting and over a period of 15 days this points to a labour requirement of 471 labourers.

Srinivasan (1957) made a study on "pattern of employment of hired labour in agriculture in certain villages of Coimbatore Taluk of Madras. This study was undertaken among seven villages round about Coimbatore town with the specific object of finding out the area under different crops grown in the village, the number of man days required to cultivate the crops

and the supply of labour available in the village.

This study came to the conclusion that unemployment and under employment are serious problems in the country; subsidiary avenues of employment, "second strings to the bow" have to be explored to solve this problem. By syphoning of the excess labour from the agricultural sector to more remunerative employment in the secondary and tertiary fields the urgency and severity of this problem can be tempered greatly.

The study of pattern of employment of hired labour in agriculture reveals the low standard of life of the agricultural labour communities and the narrowness of the gap which exists between subsistence and bankruptcy.

Laxminarayan (1957) in his paper on "Changing conditions of agricultural labourers" attempts to throw light on the changes which have taken place over a period of time in the socio-economic conditions of agricultural labour households in three villages in punjab, Haryana and Eastern U.P. His findings are: Firstly, developments in matters of spread of literacy are rather disturbing. While literacy is spreading to the cultivating households, the progress is very

disturbing in the case of labour households. Secondly, the category called pure agricultural labourer is fast disappearing as income from agricultural labour is only a fraction of total income of agricultural labour households. Thirdly, the Green Revolution appears to have contributed to increase in wage income and income from cultivation. Fourthly, income of agricultural labour households has increased faster than prices, thereby keeping the real income of labour households intact.

The main findings of the above studies can be summarized as follows:

1. Nearly half of the rural population was engaged in farm-work on self employment basis, a quarter in non-farm work and the remaining were either voluntarily or involuntarily unemployed.
2. On an average, the agricultural labourers was able to get employment for only 196 days. The maximum demand for labour was during the harvest period. But this demand was by no means regular, throughout.
3. Thus unemployment and under employment were the serious problem facing the population in the rural areas. It has been estimated that 30 per cent of the rural population are surplus or removable

to other occupations.

4. Incidence of poverty is much high in the case of casual labourers and hence they should be given high peiority in any programmes to remove poverty and reduce unemployment.
5. Further most of the agricultural labourers have a very low standard of living which has reduced the the gap between subsistance and bankruptcy.
6. Finally, the terms of their condition of employment, wage rate, income level and consumption pattern, the agricultural labour represent different groups with disimilar characterstics.

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### III METHODOLOGY

The methodology for the present study is discussed under the following heads.

- a) Selection of the area
- b) Selection of the sample
- c) Collection of the data
- d) Meaning of the concepts used
- e) Statistical tools used

a) SELECTION OF THE AREA:

To collect the needed information, the investigator has chosen Sengalipalayama village in Coimbatore as the main area of study. In this village out of the total population of 552 nearly 80 percent are agricultural labourers.

b) SELECTION OF THE SAMPLE:

The universe of the study consisted of all agricultural labour households in the village. From the sampling frame of these agricultural labour households, a random sample of 50 households was drawn using the systematic sampling procedure.

c) COLLECTION OF THE DATA:

Since the investigator was interested in making on-the-spot study of economic condition of agricultural labour, the necessary information was collected by administering the interview schedule to the selected samples. The interview schedule first was pretested for clarity and specificity and the necessary modifications were made on the basis of the experience

gained during pretesting. The finalised schedule used in the study is given in Appendix-I.

d) MEANING OF THE CONCEPTS USED:

1. AGRICULTURAL LABOUR:

For the purpose of the study the term "agricultural labour" is defined as, "those persons who are employed in the field for wages in cash or kind for carrying on agricultural operations on a temporary or permanent basis and such persons may or may not own any land to be cultivated by them on their own account".

2. CASUAL LABOUR:

Casual labourers are those workers who are employed on daily wages for specific operations which last only for a short duration.

3. CONTRACT OR ATTACHED LABOURERS:

Contract labourers are those workers who are often employed on contract oral or written, extending over a period of quarter, half year or year as the case may be.

4. AGRICULTURAL LABOUR HOUSEHOLD:

An agricultural labour household was defined as one for whom agricultural wage earnings constituted the major source of income. The two categories of households classified on the basis of length of employment were casual labour household and attached labour household. If major part of income of a household was

derived from earnings of attached workers it was classified as attached labour household and if such income was derived from earnings of casual labourers it was considered to be a casual labour household.

5. EMPLOYED AND UNDER EMPLOYED AGRICULTURAL LABOUR:

The distinction between employed and under employed category of agricultural labour was made on the basis of prof. Rajkrishna's Income criterion. According to this criteria, a person is considered to be under employed if he earns an income less than some desirable minimum. This is also called "poverty criterion".

For the purpose of the study, "the investigator has fixed the desirable minimum income as Rs.76 (according to sixth Five Year Plan 1980-85) and those family's percapita income below Rs.76 was considered to be underemployed.

STATISTICAL TOOLS USED:

Data collected were arranged and tabulated for the purpose of giving more precise and concise information. Further the following statistical tool was used to test the tabulated data.

1. CORRELATION ANALYSIS:

Correlation analysis was used to find out the relationship between:

- a) Days of employment and percapita income
- b) Percapita income and percapita expenditure.

IV RESULTS AND DISCUSSION

The results of the study on, "An assessment of farm labour - its potential and utilisation" are presented and discussed under the following heads:

- A. Background information about the respondents.
- B. Income status of farm labour households.
- C. Expenditure pattern of farm labour households.
- D. Employment status of farm labour.

A. Background information about the respondents.

The details of the farm labour population in terms of its sex-wise and age-wise distribution and its educational attainments are discussed below.

Table-I shows the sex-composition of the population in agricultural labour household.

TABLE - I

SEX COMPOSITION OF THE POPULATION IN FARM LABOUR HOUSEHOLDS

S.NO.	PARTICULARS	FREQUENCY
1	Number of households	50
2	Total number of males	98
3	Total number of females	99
4	Total population	197
	Average household size	3.9

From the table it is clear that in the farm labour households of Sengalipalayam, there was an even distribution of the population between males and females and the average size of the household worked out to be 3.9 which is in confirmity with small family norm.

AGE - SEX COMPOSITION OF AGRICULTURAL LABOUR HOUSEHOLDS

The age wise distribution of the population under study cross classified by sex is presented in the Table-II.

Table - II

AGE-SEX COMPOSITION OF FARM LABOUR HOUSEHOLDS:

S.No	Age group	Males Frequency	Females Frequency	All Persons
1	0 - 14	30	32	62 (31)
2	15 - 59	62	66	128 (62)
3	60 - above	6	1	7 (4)
	Total	98	99	197

FOOT NOTE: Figures and parantheses in the last column indicate row per centage.

Age wise classification of population was done to estimate the number of dependents in the farm labour households. Under the assumption that those below 14 years and above 60 years were dependent on others in their families, the dependency ratio in the sample was 35 per centage. It is likely that not all the women population coming under the age-group 15-59 may be working for payment. Some of them may simply be doing their household activities. Still the fact that they are active and they contribute to the maintenance of their family entitlled them to be considered under the active working age-group.

EDUCATION:

According to India Manval 1976, the educational level of rural people specifically farm labour is less compared to urban people. That is, in 1971, more than half the people nearly 52.4 percent were literate in urban areas, where as less than one fourth of the rural population 23.7 per cent were literate. The educational level of the sample farm labour households is given in Table - III.

TABLE - III

EDUCATIONAL STATUS OF AGRICULTURAL LABOUR HOUSEHOLDS

S.No.	Educational Status	Frequency	As per centage to total
1.	Illiterate	141	71
2.	Primary School	38	19
3.	Middle School	11	6
4.	High School	7	4
	Total	197	100

About 70 per cent of the agricultural labour population is illiterate. Absence of education among this group and low levels of education where it exists constitute a handicap in raising their incomes. They would have to depend largely on unskilled occupation for their employment and this limits the incomes that they could earn on their jobs. According to patel (1978) the relative high rate of illiteracy among agricultural labourers can be attributed partly to economic factors and partly to so-ciological and psychological factors.

B. Income status of farm labour households:

According to Deoras (1980), the income of agricultural labourers is very low. For a considerable part of the year, they are out of work and earn nothing. During the time they are employed they get meagre income or wages. The income range of the sample households is shown in the Table-IV.

TABLE - IV

INCOME STATUS OF FARM LABOUR HOUSEHOLDS

S.No.	Income Groups (Rs.)	Frequency	Total family income (Rs.)	Mean House-hold income (Rs.)	Total Popul- ation	Percapita income (Rs.)
1	100 - 200	5	600	120	10	60
2	200 - 300	12	2,875	239.58	41	70.12
3	300 - 400	16	5,260	328.75	71	74.08
4	400 - 500	10	4,150	415	41	101.22
5	500 - 600	6	3,125	520.83	30	104.16
6	600 - 700	1	600	600	4	150.00
	Aggregate	50	16,610	332	197	84

An analysis of percapita income of the agricultural labour households by different income groups shows that on an average the farm labour household is around the poverty line as quantified in the Sixth Plan (1980-85), with its percapita income of Rs.84 per month, it is just able to acquire the minimum essential of life for its sustenance.

Households coming under the first three income ranges, that is, those who are getting income below Rs.400 per month, are well below the poverty line with their percapita income falling below the minimum national income of Rs.76. The households in the higher income brackets are a little well of as far as their percapita income is concerned.

The size distribution of income among the farm labourers was analysed, as shown in Table and figure-I.

TABLE - V

SIZE DISTRIBUTION OF INCOME OF FARM LABOUR HOUSEHOLDS

Decile group	Income	As per centage to the total	Cumulated income (Rs.)	Cumulated Per centage
First	600	3.61	600	4
Second	1070	6.44	1670	10
Third	1250	7.53	2920	18
Fourth	1455	8.76	4375	26
Fifth	1525	9.18	5900	36
Sixth	1725	10.39	7625	46
Seventh	1910	11.50	9535	57
Eighth	2000	12.04	11535	69
Nineth	2350	14.15	13885	84
Tenth	2725	16.40	16610	100

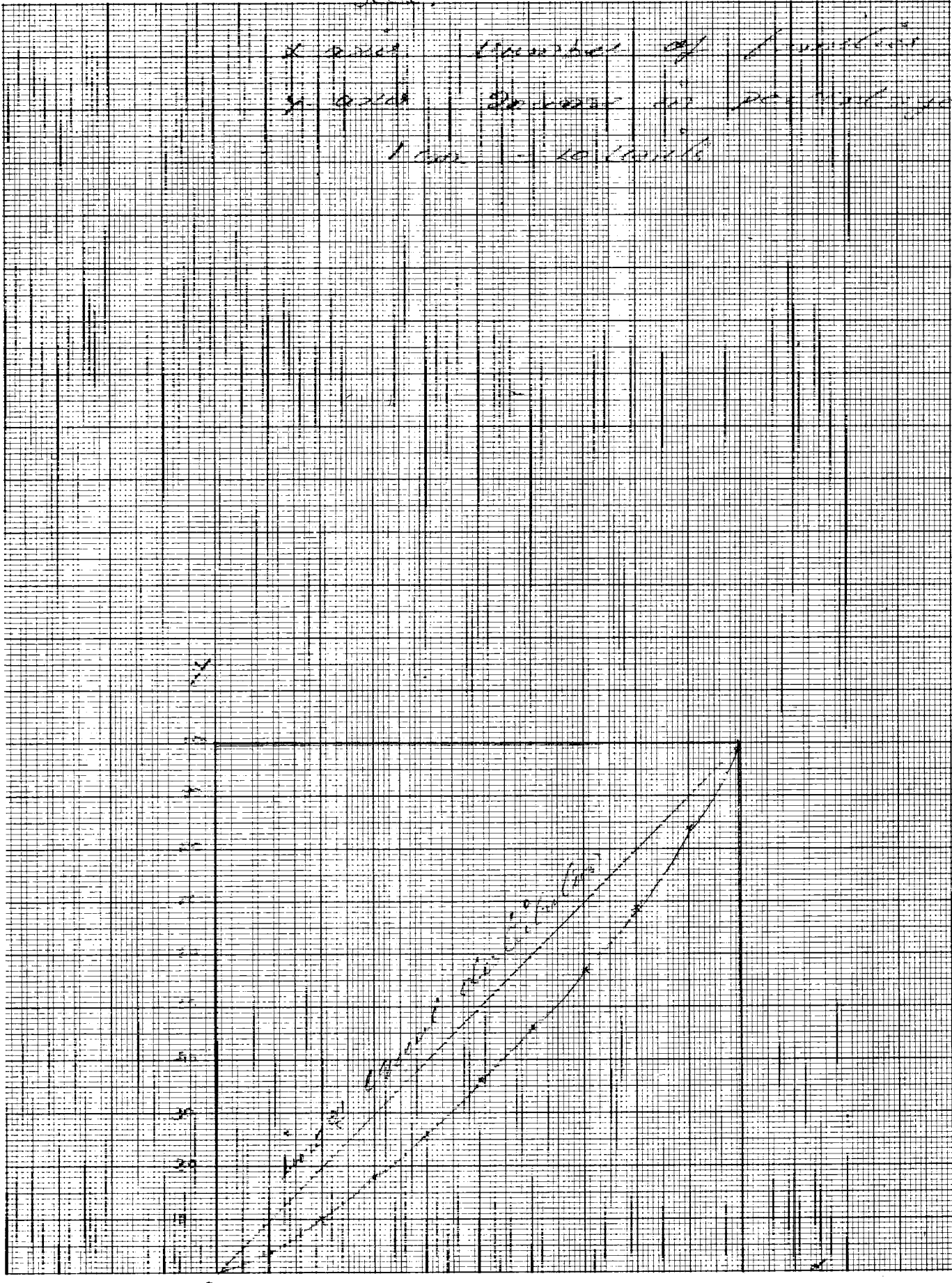
# SIZE DISTRIBUTION OF INCOME AMONG FARM LABOURERS

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FIGURE - I

Scale:

x-axis - Number of Labourers  
 y-axis - Income in percentage  
 1 cm - 10 units



This analysis showed that there were inequalities in income distribution among this apparently homogeneous group of farm labour households. The top two deciles shared 31 per cent of the total income, while the bottom two deciles shared only 10 per cent of the total income. The reasons behind the subsistence level of household in the first two deciles were probed into Table VI.

TABLE - VI

COMPOSITION OF WORK FORCE IN SELECTED FRACTILE GROUPS

Fractile Groups	Population	Work Force	Composition		Households reporting female employment
			Males	Females	
Lowerst Two deciles	25	14 (56)	5 (36)	9 (64)	8 (80%)
Top two deciles	46	33 (72)	19 (58)	14 (42)	8 (80%)

FOOT NOTE: Figures in parantheses stand for relevant per centages.

Fifty-six per cent of the population in the lowest two deciles were in the work force. Correspondingly in the top two deciles which was a little better off, with their percapita income above the subsistence level, their population in the work force was 71 per cent. The main sources of income at the disposal of the farm households is the labour power at their command. The more the number of labourers they supplied to the work force, the larger is their household and per-capita incomes.

The composition of the work force as supplied by the lower two deciles and the top two deciles of the households showed that in both, 80 per cent of the households reported female employment. However, the proportion of female workers in the former was higher (64 percent) than the proportion in the latter (42 per cent). The wage income of female farm labourers is less than that of the male labourers. This relative high incidence of female employment in the first two groups explains why their percapita income is less than the minimum required for subsistence.

In addition to the chief bread winners the other members of the households were also employed as

agricultural labourers. The employment of these additional members from the households helped to augment their household incomes. Details of how these working members were distributed among the farms are given in Table - VII.

TABLE - VII

DETAILS OF ADDITIONAL MEMBERS EMPLOYED FROM FARM LABOUR HOUSEHOLDS.

S.No.	Category	Placement		Total
		Same farms	Other farms	
		(1)	(2)	
1	Males	3 (27)	8 (73)	11 (27)
2	Females	44 (81)	10 (19)	54 (83)
	Total	47 (72)	18 (28)	65 (100)

FOOT NOTE: Figures in parantheses in column 1 and 2 are per centages of the row tables.

Figure in parantheses in column 3 are per centages of the column total.

The additional labour as supplied by these households is by and large women labour, in that 83 per cent of them were female labourers. Eighty-~~One~~ One per cent of this female labourers were working in the same farm as those of their men folk. So farm employment in a large number of cases was a joint employment for all the employed members of a particular labour households.

#### OTHER SOURCES OF INCOME

Dairying and goat rearing are only two sideline occupations observed among the farm labour households. These occupations were restricted only to six families. The income generated by these activities ranged from Rs.40 to 150 per month for a family. Two other households that reported home dairying were using the milk for self-consumption.

#### C. Expenditure pattern of farm labour households.

The low income of the agricultural labour is also reflected in their low standard of living.

It is impossible for farm labourers to make both ends meet with their low income. The inevitable result is that there is always deficit in the family budget.

Food expenditure of the farm households was analysed in terms of its size distribution and in terms of percapita food expenditure among various size groups for two reasons:

(1) Food intake and nutritional status was one of the major determinants of the level of living of these households.

(2) The food intake and nutritional status of these individuals governed as it was by the availability of funds for expenditure on food determined their availability and efficiency at work. Labour interalia would be utilised better and more fully, the higher the food intake and nutritional status of the concerned households.

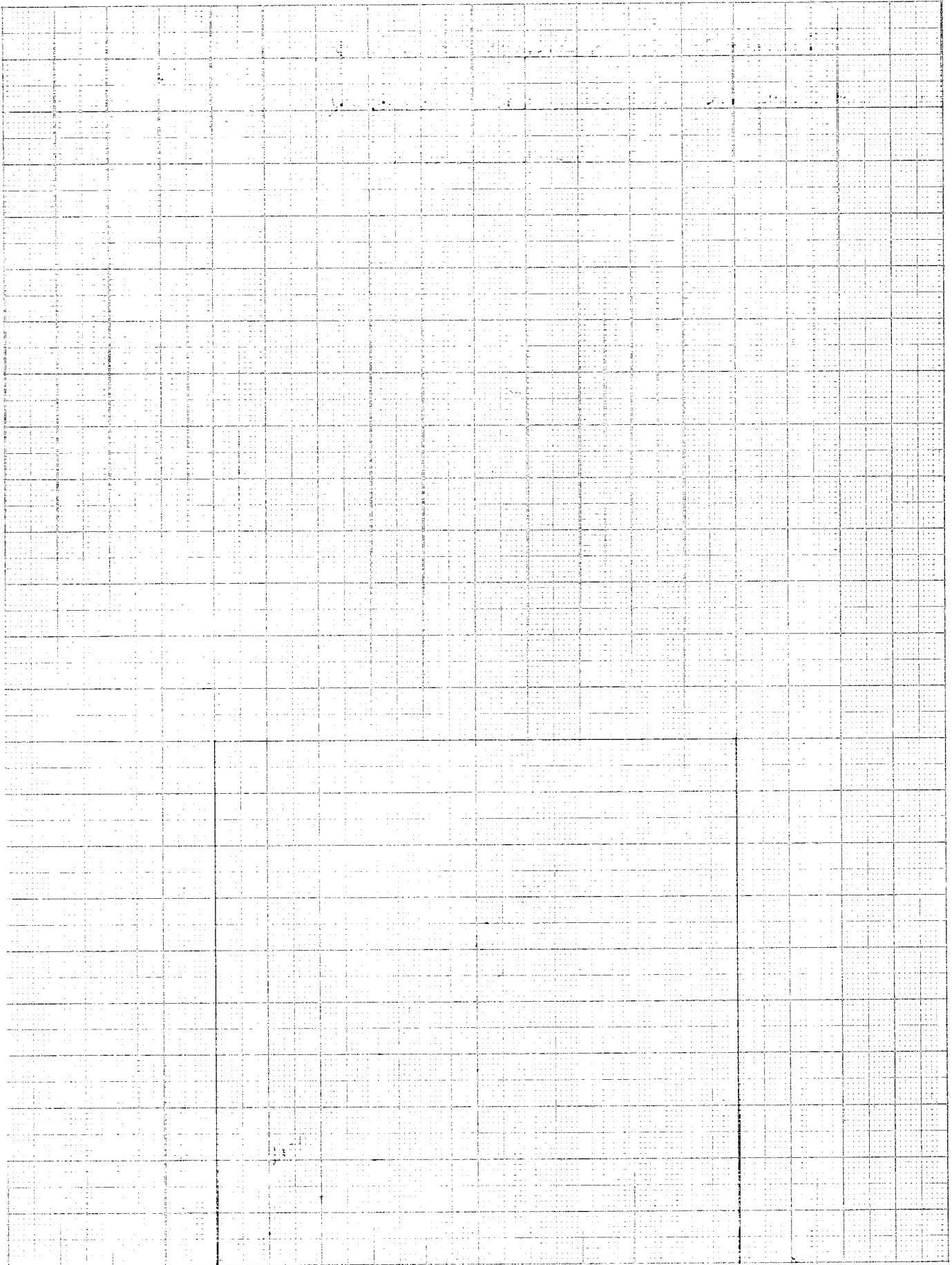
Table-VIII gives details of the size distribution of food expenditure together with percapita expenditure among the farm labour households.

SIZE DISTRIBUTION OF FOOD EXPENDITURE IN FARM LABOUR

HOUSEHOLDS:

Decile groups	Consumption units	Food Expenditure	Food Expenditure Percent- age to the total	Cumulated Food Expendit- ure	Cumulated Percentage	Percapita Food Expendit- ure
(1)	(2)	(3)	(4)	(5)	(6)	(7)
First	6.4	383.31	4.93	383.31	4.93	59.89
Second	12.3	433.32	10.52	816.63	5.58	35.22
Third	16.9	575.00	17.91	1391.63	7.40	34.02
Fourth	17.1	625.00	25.96	2016.63	8.05	36.55
Fifth	15.9	708.32	35.09	2724.95	9.19	44.55
Sixth	18.7	833.30	45.82	3558.25	10.73	44.56
Seventh	16	874.64	57.08	4432.89	11.26	54.67
Eighth	20.5	1040.99	70.48	5473.88	13.40	50.78
Ninth	24.1	1041.65	83.90	6515.59	13.42	43.22
Tenth	20.4	1250.00	100	7765.59	16.1	61.28

# SIZE DISTRIBUTION OF FOOD EXPENDITURE



The income inequalities in food expenditure approximately corresponded to the income inequalities observed in the farm labour households. In the total food expenditure of the group of the lowest two deciles had a share of 10.5 per cent as against 29.5 per cent shared among the households in the top two deciles. The exact correspondence observed between income and food expenditure inequalities implied that the major determinant of food expenditure was the purchasing power at the disposal of the households, the other factors influencing food expenditure being relegated into background. Figure-II illustrates the size distribution of food expenditure.

Following the conversion scale given by Gopalan et al (1978) the population in the households were converted into their equivalent adult units, before the percapita food expenditure was worked out for them. The consumption units in the different decile groups are shown in column (2) of the table-VIII.

#### D. Employment status of farm labour

The survey showed that there are two categories of workers in the village namely casual

labourers and permanent labourers. The casual labourers are employed on daily wages for a short duration, where as the contract labourers are employed on the basis of oral contract for an year or two. The number of workers belonging to each category is shown in Table IX.

TABLE - IX

FARM LABOUR - ITS NATURE OF EMPLOYMENT

S.No.	Nature of employment	Number of workers	per centage
1	Casual labourers	48	96
2	Contract labourers	2	4
	Total	50	100

When the nature of contract under which farm labourers were employed was analysed, it was found that except for two of them (4 per cent) who were employed on a contract basis, all the others (96 per cent) were found in the casual labour category. These casual labourers were not attached to any single farm, but were hired in large number to perform to specific agricultural occupation in a particular season.

The details relating to employment of farm labour are discussed under the heads of on-farm employment and off-farm employment.

ON-FARM EMPLOYMENT

Agriculture is a seasonal industry. Therefore the labourers do not find employment in agriculture for all the months of the year. Only 15 to 20 per cent of the agricultural labourers including permanent labourers get employment throughout the year, according to Shirdhar Misia and Prem Behari Lal Vaish (1957).

The table X shows the number of days the agricultural labourers are employed in an year.

TABLE - X

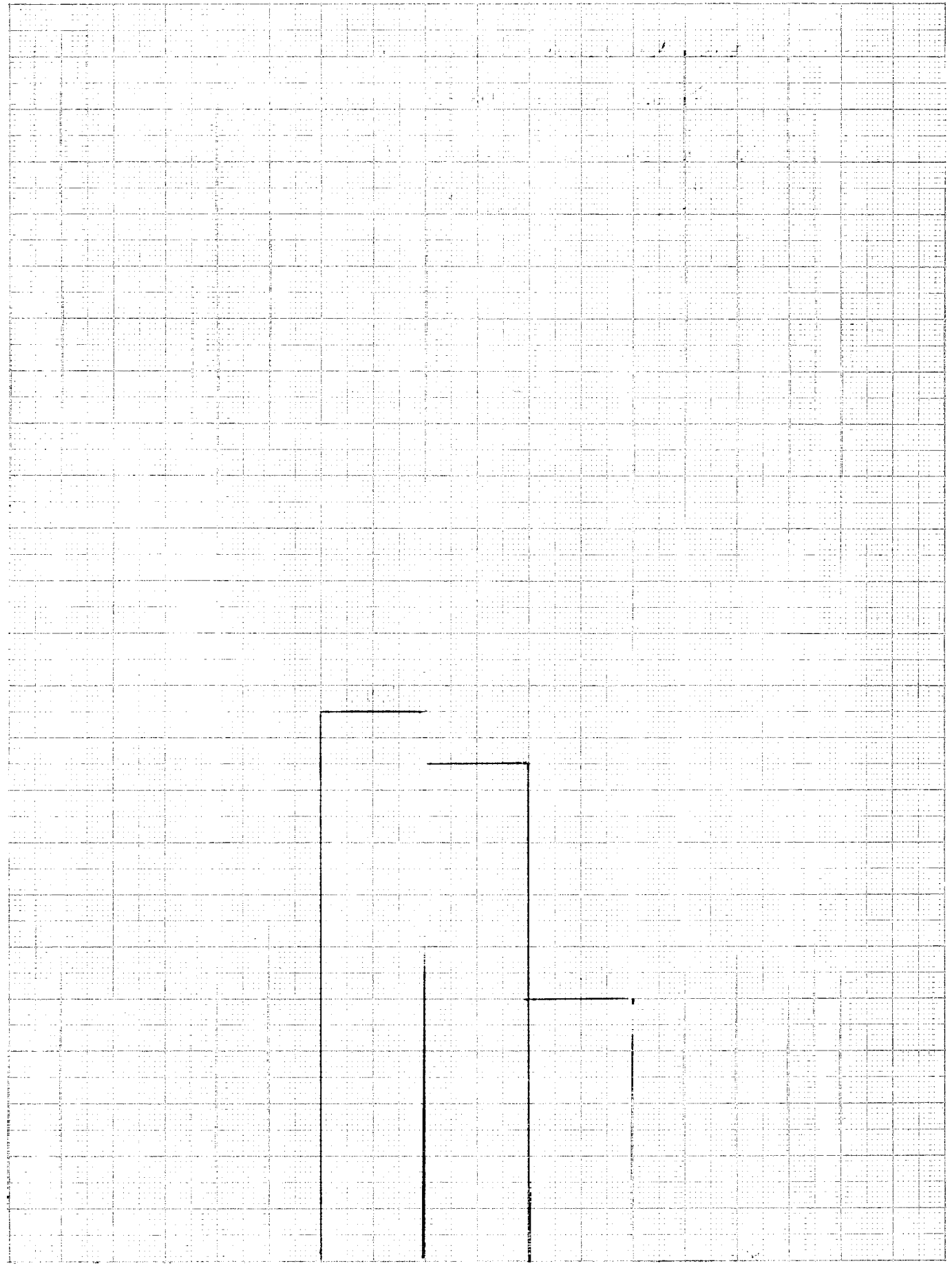
MAN DAYS OF EMPLOYMENT ON FARMS

S.No.	Days of Employment per year	Number of workers	per centage
1	150 - 200	21	42
2	200 - 250	19	38
3	250 - 300	10	20
	Total	50	100

Fourty-two per cent of the work force on farms is employed between 150-200 days in an year, while 20 percent has reported employment between 250-300 days in an year. If last category were left out 80 per cent of the work force could be deemed to suffer from varying intensities of unemployment, the extend of unemployment ranging roughly from 4 to 5 months.

Figure III illustiates the man-days of employment of farm labour in various on-farm activities.

100-DAYS OF ON-FARM EMPLOYMENT



Wages for agricultural labourers are fixed either on a time basis or on piece work basis. These wages are paid either in cash or kind or a combination of both. In the study it was found that the agricultural labourers getting wage payment only in cash. The wage structure of agricultural labourers on the basis of the sex is presented in Table-XI.

TABLE - XI

ON-FARM WAGE RATES - SEX WISE

S.No.	Daily wage rate (Rs.)	Males	Females	Total	percentage
1	4 - 6	-	4	4	8
2	6 - 8	16	-	16	32
3	8 - 10	30	-	30	60
	Total	46	4	50	100

The wage rates for male labourers is higher than that of females. Maximum wages paid to a male worker is Rs.10 while for females it is only Rs.6 per day.

OFF - SEASON EMPLOYMENT

The farm labourer cannot solely depend on agricultural operations for their employment and livelihood and therefore, they seek employment outside agriculture during the off-seasons. The investigator found that 29 (58 percent) out of 50 workers under study had been engaged in off-farm activities like wood cutting, construction work and soon. The particulars regarding its man days of employment during off-season are given in Table-XII.

TABLE - XII

MAN DAYS OF EMPLOYMENT - OFF-SEASON

S.No.	Man days of employment in an year	Number of workers	Percentage
1	10 - 20	2	7
2	20 - 30	17	59
3	30 - 40	10	34
	Total	29	100

The maximum period of employment reported during the off-season was one month. Thus during the off-season that stretched for above 4 months in an year, workers were gainfully employed only for a month or so, leaving them without any means of employment or income for the remaining period.

The details of wages received by the workers when they were employed in off-farm activities are shown in Table XIII.

TABLE - XIII  
WAGE RATES OF OFF-SEASON EMPLOYMENT

S.No.	Daily wage rates (Rs.)	Number of workers	percentage
1	0 - 5	3	10
2	5 - 10	7	24
3	10 - 15	18	62
4	15 - 20	--	--
5	20 - 25	1	4
	Total	29	100

The largest number of workers reported a wage rate ranging between Rs.10 and 15 per day in the Off-season activities in which they were engaged. As against the maximum agricultural wage rate of Rs.10 per day, the wage rates in Off-season occupation were considerably higher. ~~This higher wage engaged during off-season.~~ Seventy two percent of them were either engaged jaggry making or as construction workers. The wages in these two activities were relatively higher, the former because of excess demand and latter because of trade organisation.

#### UNDER EMPLOYMENT

The two components of the labour force are 1) the employed and 2) the unemployed, under employment can be considered an intermediate phase between employment and unemployment. In the present study, the labour force was classified into two categories unemployed and underemployed on the basis of Raj Krishna's "income criteria".

On the basis of this criteria the farm labour households were classified into employed or Underemployed categories depending on their percapita monthly income.

The workers of those families whose percapita monthly income was less than Rs.76 were grouped under underemployed category and other came under the employed category.

The results of this classification is shown in table-XIV.

TABLE - XIV  
EMPLOYED AND UNDEREMPLOYED CATEGORY OF  
FARM HOUSEHOLDS

S.No.	Income	Number of farm households
(1)	Below Rs.76	23 (46)
(2)	Above Rs.76	27 (54)

FOOD NOTE: Figures in Parenthese stand for relevant percentage

On the basis of the above criteria, it was found that, out of 50 agricultural farm households, 23 of them had income below Rs.76 and hence was considered underemployed.

Table - XV shows the extent of employment and underemployment among farm labourers - sex wise.

TABLE - XV

EMPLOYMENT AND UNDEREMPLOYMENT - SEX WISE.

Agricultural labourers	underemployed	Employed	Total
Males	24 (51) (42)	32 (47) (58)	57 (49.56)
Females	23 (49) (39)	36 (53) (61)	59 (50.44)
All persons	47	68	119

FOOT NOTE: Figures in first parantheses stand for column percentages.

Figures in Second parantheses stand for row percentages.

Out of the total employed work force, 46 percent were assessed to be under employed. The phenomenon of underemployment was more rampant among male labourers rather than female labourers, the incidence of underemployment among the former being higher than the incidence of underemployment among the latter.

Poverty and underemployment.

Poverty and underemployment are the two major social problems causing sickness, personal, family and community disorganisation. The causes of poverty and underemployment may be slightly different, but the effects of both are almost the same. Similarly, the remedies of both may be different but they are often similar.

In India, the widely used index of poverty was income and Expenditure. Poverty is that condition of inadequate income of unwise expenditure does not

maintain a scale of living high enough to provide for his physical and mental efficiency and to enable him and his natural dependants to function usefully according to the standard of the society of which he is a member.

The association between percapita income and number of days of employment of the chief bread winners was found using product movement correlation. This correlation Co-efficient was + .5 which was statistically significant at 5 percent level (Vide appendix-II) This showed that the available of assured employment was an effective factor determining the family income of farm labourers.

The association between percapita income and percapita expenditure of farm labour households was examined using the product movement correlation. This correlation Co-efficient was +.75 and it was statistically significant at 5 percent level. (Vide appendix-III). This showed that income was a determined factor of expenditure.

V    S U M M A R Y    A N D    C O N C L U S I O N

Poverty and underemployment are the two major socio-economic problems of under developed country especially so in India. Often it has been pointed out one way of removing poverty is to provide gainfull employment to our underemployed and unemployed labour force. Hence a study on the level of employment is essential to formulate a measures to improve the living condition of the poverty stricken people.

The present study " An assessment of farm labour - its potential and utilisation " was undertaken with the objectives:

1. to estimate the level of employed and under-employed agricultural labour force.
2. to **examine** the characteristics of employed and under-employed labour force in rural area in terms of age, per capita expenditure, household occupation, education etc.
3. to examine the relationship between poverty and under-employment.

To collect the necessary data a interview schedule was administered to a selected group of repondents in the village of Sengalipalayam.

The main findings of the study were:

1. There was even distribution of the population between males and females in the farm labour household

and the average size of the family was found to be 3.9 which is in confirmity with small family size.

2. The dependency ratio was 35 percent implying a low dependency ratio among the farm labour households. Majority of the people (62%)percent) belong to working force category.

3. The level of illiteracy was high (71 percent) among the farm labour households, which constitute an handicap in finding higher income generating employment.

4. An analysis of percapita income of the farm labour households indicate that out of the total 50 families 33 families have income below the national minimum income of Rs.76.

5. Inequalities in income distribution was quite rampant among this apparently homogeneous group of farm labour households. The top two deciles shared 31 percent of the total income while the bottom two deciles shares 10 percent of the total income.

6. Two major factor responsible for this inequalities in income distribution was (1) The top two deciles contributed more labourers to the total working force when compared to the lowest two deciles and (2) the predominance of female labourers (64 percentage) in the total working

force of the lowest two deciles when compared to that of top two deciles.

7. The agricultural labour household also supplied additional workers in addition to the head of the family. Eighty one percent of these additional workers were females employed in the same-farm as their menfolk.

8. The side-line occupation in the form of goat-rearing and dairing was restricted to only six families who earned income ranging between Rs. 40 to 150.

9. The pattern of food expenditure of the farm labour household exhibited inequalities with the top two deciles sharing 29.5 percent and the lowest two deciles sharing 10.5 percent.

10. Out of the total 50 farm labour households surveyed for employment status showed that 48 of them were casual labourers and 2 of them contract labourers.

11. With regard to man-days employed, 80 percent of them remained unemployed for a period extending between 4-5 months.

12. Male labourers enjoyed a higher wages of Rs.10 per day when compared to female labourers whose wage rate is Rs.6~~0~~ per day.

13. Twentynine out of 50 farm labour household practiced off-season employment like wood-cutting, construction work etc. The maximum period of employment during off-season was 4 months.

14. Sixty two percent of the workers received off-season wages ranging between Rs.10-15 which was comparatively higher than the on-farm wages. This wages was the result of excess demand and trade organisation.

15. In the present study it was found that 46 percent of the farm labour households were underemployed, based on Raj Krishan's income criteria.

16. The incidence of underemployment was high among the male labourers when compared to female labourers.

17. The study also revealed that there exist a positive correlation between man-days employed and income and also between income and expenditure. The correlation co-efficient was significant in both cases at 5 percent level indicating that the poverty of the workers is mainly due to the lack of year round employment and low wages of the agricultural workers.

Rural unemployment in the country is more in the nature of under employment of varying degrees of those who are prepared to work for their livelihood. Agricultural labour market is one of the least paid of the employment

markets, wages are generally low. As a result, a substantial section of rural labour force lives in a state of Uttar poverty. Since poverty is the direct consequences of rural under employment, there should be greater emphasis on rural development.

Rural development is necessary not only because an over whelming majority of the population lives in villages but also because the development of rural activities is essential to accelarate the pace of over all economic development of the country. Agriculture and allied activities like animal husbandry, dairying, forestry, fishery, cottage and small scale industries offer considerable scope for labour absorpction and income generation for the poverty sticken rural masses.

Some of the important problems like low productivity unemployment, underemployment and the social status of farm labour have a micro content and policies for them have to be formulated against the background of the national strategy for economic development.

The following measures can help to solve the problem of under employment and in the process lead to removal of rural poverty :

1. Improving agriculture, that is, intensive agriculture development programme.

2. Special efforts are needed to improve the lot of landless labourers and rural artisans. They should provide credit at low cost and easy terms to establish their small work shops.
3. In addition to this small and cottage industries are needed in rural area to provide better employment opportunities to landless labourers.

It is essential to chalk out an integrated approach for rural development for ameliorating poverty and reducing inequality. The implementation of the rural development programmes should be done in all seriousness. A satisfactory solution of the problem of rural un-employment and poverty can be found only when planning is attained to the aim of "utilising to the fullest extent of the manpower resources of the community".

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A P P E N D I C E S

APPENDIX I

AN ASSESSMENT OF FARM LABOUR - ITS POTENTIAL AND UTILISATION

Interview schedule to elicit information on agricultural labour.

1. General information :

Name of the interviewer: Age:  
Address : Sex:

2. Family background:

S.No.	Name of the family members	Age in years	Educational Status	Occupation
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3. Expenditure pattern:

S.No.	Items	Amount in Rs. / month
1	Food	
2	Clothing	
3	Housing	
4	Education	
5	Health	
6	Transport	
7	Recreation	

8. Festivals

9 Others

4. a) Details regarding the size of land holdings:

Nature of land	Ownership of land	
	Owned land (in acres)	Rented land (in acres)
Dry land		
Wet land		

b) Cultivation of crops:

S.No.	Crops cultivated in agricultural land (1980-81)	Gross returns (in Rs.)	Cost of cultivation (in Rs.)	Net returns (in Rs.)

5. Subsidiary occupation:

a) Whether the individual practices any subsidiary occupations?

Yes	No
-----	-----

b) If so,

S.No.	Items	Gross return (in Rs.)	Cost (in Rs.)	Net returns (in Rs.)
1	Poultry			
2	Dairy			
3	Bee Keeping			
4	Others			

c) Do you need any help in taking up subsidiary occupations?

6. Employment:

a) Self-employment in cultivation:

Total months of employment	Total days of employment
-----	-----

b) On-farm employment:

How many months in 1980-81 was the worker engaged as labour on farms?

Months	Days of employment	Wage per day
-----	-----	-----

c) Off-farm employment:

1. Whether during off seasons the individual practices any other work?

Yes	No
_____	_____

2. If yes, state

Nature of employment	Months of employment	Days of employment	Wage per day
-----	-----	-----	-----

d) Whether the individual gets work throughout the years?

Yes No  
|-----| |-----|

7. Nature of employment:

1. Are you employed on a contract basis for the whole year?

2. a) How many hours in a day do you work?

b) When does your day begin in the morning and how long does it stretch?

c) Do you get any payment in land? If so, state the amount you received per year and its monetary values.

d) Have you received any advance payment during the year from your employer?

e) Are you provided the breakfast/lunch/night meals by your employers?

f) Do you receive gifts of cloth during festivals? If so, give the approximents value in money?

g) Do you live in the homstead offered by your employer or do you made your own living arrangements.

h) Do your family members get employment in peak season in the farms in which you are working?

Yes No  
|-----| |-----|

i) If yes,

Name of the family member	Relationship	Age	Sex	Number of days employment offered	Wage
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----

ii) Do your family members take up such employment in other farms?

Yes	No
-----	-----

If yes,

Name of the family members	Relationship	Age	Sex	Number of days employment Offered	Wage
-----	-----	-----	-----	-----	-----

8. Are you finding employment as a casual labour?

9. How many hours in a day do you work?

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Vide APPENDIX II

Correlation between total days of employment per month and per capita income.

Total days of employment = x

Percapita Income = y

$$\sum x = 1135$$

$$\sum x^2 = 26075$$

$$\sum y = 8845$$

$$\sum y^2 = 1645625$$

$$\sum xy = 203525$$

$$N = 50$$

$$\text{Correlation (r)} = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$\begin{aligned} r &= \frac{50 \times 203525 - 1135 \times 8845}{\sqrt{50 \times 26075 - (1135)^2} \sqrt{50 \times 1645625 - (8845)^2}} \\ &= \frac{10176250 - 10039075}{\sqrt{1303750 - 1288225} \sqrt{82281250 - 78234025}} \\ &= \frac{137175}{\sqrt{15525} \sqrt{4047225}} \\ &= \frac{137175}{125 \times 2012} = \frac{137175}{251500} = .545 \\ &= .5 \end{aligned}$$

$$\text{Standard Error (S.E.)} \quad \frac{Y}{Y} = \frac{1 - r^2}{\sqrt{N}}$$

r - correlation Co-efficient

N - Number of pairs of observation.

$$\begin{aligned} \text{S.E.} &= \frac{1 - (.5)^2}{\sqrt{25}} \\ &= \frac{1 - .25}{5} = \frac{.75}{5} \\ &= .15 \end{aligned}$$

H<sub>0</sub> - There is no correlation between total days of employment and percapita income.

$$\begin{aligned} t_o &= \frac{r}{\sqrt{1 - r^2}} \times \sqrt{N - 2} \\ &= \frac{.5}{\sqrt{1 - (.5)^2}} \times \sqrt{23} \\ &= \frac{.5}{\sqrt{1 - (.25)}} \times \sqrt{23} \\ &= \frac{.5}{\sqrt{.75}} \times \sqrt{23} \end{aligned}$$

$$t_o = 8.756$$

$$t_{0.05} = 2.069$$

Calculated value is greater than the table value. Therefore, the hypothesis was rejected, which in turn indicate there is correlation between total days of employment and per capita income.

Vide APPENDIX III

percapita income and percapita expenditure

Percapita Income = x

Percapita Expenditure = y

$\sum x$	=	4534
$\sum y$	=	3907
$\sum x^2$	=	464398
$\sum y^2$	=	332817
$\sum xy$	=	383129
N	=	50

$$\begin{aligned}
 \text{Correlation (r)} &= \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}} \\
 r &= \frac{50 \times 383129 - 4534 \times 3907}{\sqrt{50 \times 464398 - (4534)^2} \sqrt{50 \times 332817 - (3907)^2}} \\
 &= \frac{1915645 - 17714338}{\sqrt{23219900 - 20557156} \sqrt{16640850 - 15264649}} \\
 &= \frac{1442112}{\sqrt{2662744} \sqrt{1376201}} \\
 &= \frac{1442112}{1442112 \times 1173.11} \quad \frac{1442112}{1632 \times 1173} \\
 &= \frac{1442112}{1914336} = 0.7533 \\
 &= 0.8
 \end{aligned}$$

$$\begin{aligned}
 \text{Standard Error (S.E.) } \frac{Y}{Y} &= \frac{1 - r^2}{\sqrt{N}} \\
 &= \frac{1 - (.75)^2}{\sqrt{25}} \\
 &= \frac{1 - .5625}{5} \\
 &= \frac{.4375}{5} \\
 &= .0875
 \end{aligned}$$

$H_0$  - There is no correlation between percapita income and percapita Expenditure.

$$\begin{aligned}
 t_0 &= \frac{r}{\sqrt{1 - r^2}} \times \sqrt{N - 2} \\
 &= \frac{.75}{\sqrt{1 - (.75)^2}} \times \sqrt{23} \\
 &= \frac{.75}{\sqrt{.44}} \times \sqrt{23} \\
 &= 17.16
 \end{aligned}$$

$$t_{0.05} = 2.069$$

Since the calculated value ( $t_c$ ) is greater than the table value, the hypothesis was rejected, which <sup>u</sup>intern imply there ~~xxxx~~ exists a correlation between percapita income and percapita expenditure.