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**FARMER-LABOURER RELATIONSHIP  
IN RICE PRODUCTION SYSTEMS  
-A CASE STUDY**

BY

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**THESIS**

submitted in partial fulfilment of the requirement  
for the degree

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DEPARTMENT OF AGRICULTURAL EXTENSION  
COLLEGE OF AGRICULTURE  
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1995

TO

MY BELOVED SON

LATE MASTER

R. ARUN

D E C L A R A T I O N

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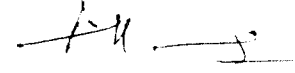
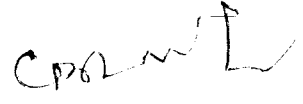
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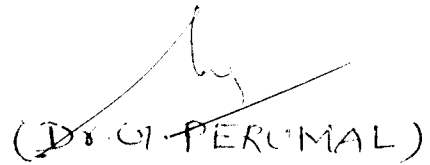
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# INTRODUCTION

## INTRODUCTION

The development of agrarian society like India greatly relies on the progress made in the agricultural sector achieved primarily through increased production. Land and labour are the two major components of the process of production. In every process of production, relations of production develop inevitably. Relationship in agriculture—generally termed as agrarian relations—is characterised by the agrarian structure, composed of those who control the land and those who labour or use the land. The two prominent agrarian classes in India were the cultivators and the agricultural labourers (Singh and Kumar, 1977). Rudra (1978) noted that there were only two classes in Indian agriculture, one of which was termed 'the class of big land owners' and the other 'the class of agricultural labourers'.

Ownership of land coupled with statutory rights and customary privileges enables the land owners to do whatever they wish to do with the land like to cultivate/to lease out/to share the produce/to cultivate by self or not to do so. Similarly, landlessness makes the labourers submissive to land lords as they heavily depend on them for work. Thus, cultivable land is the centre of all social formations and of the web of agrarian relations in a rural setting. As a result, the three prominent agrarian classes, the land owners or farmers, the tillers or tenants and the landless or

agricultural labourers occupy definite positions in relation to the process of agricultural production.

The agrarian relation was basically a class relation, but in course of time, it got structured within the framework of the paramount evaluative principle of the society namely the principle of caste system. Consequently, the agrarian relation system, became an essential part of the caste stratification with higher castes owing the land, the middle castes cultivating them either as tenants or sub-tenants and the lower castes supplying most of the wage labour for cultivation. Srinivas (1955) noted that by the beginning of twentieth century the relations between the land lord and the tenant were more exploitative, though they were called patron-client.

With the commercialisation of agriculture, the patron-client relations involving reciprocal exchanges were bound to be replaced gradually and partially by contractual relations dictated by the market forces (Mukherjee, 1957). The establishment of adult franchise and associated freedom for class struggle to improve one's lot has given for those who were deprived for decades together to organise themselves to struggle for the enhancement of their status. Page (1975) opined that the conflicting interests of the farmers and the labourers were responsible for the wide scale unrest witnessed in rural areas whether it was in Kerala, Tamil Nadu, Andhra Pradesh or else where. Concurrent to this, the



advancements in agricultural production technologies, large scale mechanisation in the farm front and the governmental endeavor to create an egalitarian agrarian relations systems mainly through tenancy and land ceiling legislations have all accelerated the process of change in the traditional agrarian relations, however in varying degrees in different regions of India. .

Be it in any sphere, efficient production does not depend merely on technical factors. To put production at its best the good will and cooperation of the workers have to be enlisted. Labour is not to be looked upon merely as a commodity; they are living human factor (Anakalihar, 1945). Hence, it is imperative on the part of the managers to depend heavily on their success in establishing and maintaining harmonious personal relationship with their hired workers to use labour profitably.

Likert and Willis (1940), Bose (1955) and Ganguli (1957) observed that the employee-centered supervision was more effective than production-centered supervision. In a study conducted by Weed et al. (1976) it was found that leaders high in human relations orientations were liked by workers irrespective of their personality. Pestonjee and Singh (1977) observed that employee oriented supervisors lead groups with high morale and fairness of employee policies and behaviour, adequacy of immediate leadership, sense of participation and sense of worth of organization, regard and

identification were found to be higher under this kind of supervision.

Eventhough our managers do not consider workers as a factor or as a means of production to be utilised to the fullest, they are yet to understand and appreciate the modern social or human concept of labour. The social concept of labour is an attitude recognising that labour is human and is a significant part of the organization. It also recognises that proper treatment of labour can be highly profitable for the firm. (Fillippo, 1966). All the above bring forth the significance of establishing and maintaining a harmonious employer-employee relationship for maximising the effectiveness of an organization/enterprise. The farmer-labourer relationship in the field of agriculture, especially in the cultivation of a labour intensive crop like paddy is no exception to this phenomenon.

Paddy is the most important food crop of Kerala presently being cultivated in an area of 5.83 lakh ha. with an annual production of 11.41 lakh tonnes. (Government of Kerala, 1990). Despite substantial improvement in productivity from a meagre 1164kg/ha. during 1955-56 to a record level of 1956kg/ha. during 1989-90, rice production in the state has been stagnating around 10 to 11 lakh tonnes during the first half of eighties. This was mainly because of the fact that the improvement in productivity had been more than offset by the decline in area under the crop during

the period. The surging pressure exerted by more rewarding crops resulted in a continuous shift in area from rice cultivation to other crops. The state had lost more than three lakh ha. under rice cultivation during the last 15 years.

Reduction in area is attributed largely due to high cost of labour component in paddy cultivation. For instance, estimates indicated that more than 60 per cent of the cost of production of paddy in Kerala was accounted by labour, (Government of Kerala, 1988). Moreover, 90.56 per cent of labour force required for paddy cultivation is drawn from hired labour, as against 81.33 per cent for coconut, 70.88 per cent for tapioca and 59 per cent for banana (Govt. of Kerala, 1988). An arrest of the declining trend in area was noted in 1989-90, when the innovative Group Farming approach in paddy was introduced by the Kerala government in 1989. Under this approach, emphasis is to be put on group management for improving the economics of paddy cultivation through better management based on low cost technology, improvement in productivity, selective mechanisation and cost reduction. The programme has received all-round cooperation and as a consequence the farmer-labourer relation has become more tolerant and accommodative (Government of Kerala, 1990).

There is a potential to enhance the area and production of rice which is necessary for a state like Kerala. This is possible only when the paddy enterprise is looked upon

satisfactorily both by the farmers and agricultural labourers. Equally satisfactory situation, if materialised, will be a desirable trend for paddy cultivation in Kerala, avoiding ecologically disastrous trends in the cropping systems of the state.

Studies on farmer-labourer relationship in the past focused mostly on the macrolevel relationship treating the farmers and the labourers as separate entities. (Sen, 1962; Muthiah, 1970; Bergman, 1984 and Karanth, 1984). There is hardly any study dealing with the present day farmer-agricultural labourer relationship particularly at interpersonal level. Moreover, use of a well constructed measuring tool to analyse the farmer-labourer relationship was also not observed in these studies. Hence, in the light of the necessity for a comprehensive understanding of the farmer-labourer relationship and the factors there in, the present investigation has been taken up with the following objectives.

#### OBJECTIVES OF THE STUDY:

1. To develop and standardise a scale to measure farmer-labourer relationship in paddy production systems.
2. To analyse the farmer-labourer relationship existing in two different paddy production systems in Kerala.
3. To delineate the important dimensions of farmer-labourer relationship.

4. To isolate the socio-economic and psychological factors of farmers and labourers influencing farmer-labourer relationship.

#### SCOPE OF THE STUDY:

The study is the first of its kind to investigate farmer-labourer relationship employing dyadic approach and treating each dyad of farmer and labourer as a case to analyse the inter relationship between them. This study is of topical importance and aims at pin pointing the areas in which the relationship is strong and where it is weak. This knowledge will be of immense help in devising suitable strategies for improving the relationship. An insight into the various factors influencing the relationship as an outcome of this study can be made use of by the personnel of development department for manipulating some of these factors in a desirable direction to facilitate better relationship between farmers and labourers, so that these relationships are equally satisfying to both the sections. The measuring device proposed to be developed under this study will be a significant contribution to the body of research in agricultural extension. Above all, the findings of this study can have certain policy implications in order to annihilate tensions in the farmer-labourer front.

#### LIMITATIONS OF THE STUDY

The investigation experienced the limitations of time,

money and other resources, as it formed a part of the doctoral programme of the researcher. This inturn restricted the scope of extending the study to wider locations and including as many respondents as possible for data collection. However, utmost care has been taken in adopting a sound procedure to carry out the research programme systematically.

The study is focused on the farmer-labourer relationship existing only in paddy production systems of Kerala state and as such the findings of the study can be generalised to similar systems elsewhere. Since, the farmer-labourer relationship investigated under this study is expected to generally represent the mutual relationship between a farmer and a hired agricultural labourer irrespective of the crop enterprise, the findings can also be applicable to farmer-labourer relationship in agricultural front, but with caution, taking into account the specific situation differences. Though care has been taken to enlist accurate information on various aspects during data collection from the respondents, the chances of individual biases and prejudices that might have crept into the responses at times cannot be ruled out.

Notwithstanding the above limitations, it is hoped that the conclusions drawn from this study can stand the test of time.

# **THEORETICAL ORIENTATION**

## 2. THEORETICAL ORIENTATION

A detailed review of literature on the problem was undertaken to develop appropriate concepts of farmer-labourer relationship and to frame suitable theoretical frame work for the study. In the absence of adequate literature directly dealing with farmer-labourer relationship, review of relevant literature in the related fields like industrial relations, personnel management, and human resource development have been made. This chapter has been organized and presented as under with generalizations made at the end of each part regarding the concepts used in the study.

- 2.1 Concept of farmer
- 2.2 Concept of labourer
- 2.3 Concept of relationship
- 2.4 Studies on farmer-labourer relationship.
- 2.5 Relationship dimensions
- 2.6 Factors influencing farmer-labourer relationship
- 2.7 Theoretical model of the study.

### 2.1 CONCEPT OF FARMER

Websters Third New International Dictionary defined farmer as a person who cultivates crops or raises live stock; a person engaged in a particular kind of farming, a person



whose primary occupation is the raising of crops or livestock.

Harnby et al. (1968) defined farmer as a person who owns or manages a farm for growing crops and raising animals.

According to Sharma and Sharma (1981), farmer is the man who actually operates the farm with the help of family members and/or hired labour. The land which he operates may be owned by him or rented from other farmers. He makes decisions independently with regard to farming operations, buying and selling of inputs and out puts and financial arrangements.

Lukose (1982) opined that cultivators are land owners engaged in full/part time in cultivation of crops.

Somani and Tikka (1984) considered farmer as a person who raises a few hectares of crops or few numbers of live stock.

Joyce (1989) defined farmer as an owner or manager of a farm.

In this study farmer was conceptualized as a person owning land and engaged in the cultivation of paddy crop employing hired labour.

## 2.2 CONCEPT OF LABOURER

According to Websters Third New International Dictionary, labour is an economic group comprising those who

do manual labour or work for wages; workers employed in an establishment or available for work; hired help.

The First Agricultural Labour Enquiry Committee (Govt. of India, 1951) defined the term 'agricultural labourer' as those people who are engaged in raising crops on payment of wages. The Second Agricultural Labour Enquiry Committee (Govt. of India, 1956) enlarged the definition to include those who are engaged in other agricultural operations like dairy farming, horticulture, raising of live stock, bees, poultry etc.

Report of National Commission on Labour (Govt. of India, 1969) defined agricultural labourer as one who is basically unskilled and unorganized and has little for his livelihood than other personal labourer; as such, the major part of the income of such a worker is derived from wages for work on land.

According to Singh and Singhal (1969) agricultural labourer is a person who for more than half of total number of days on which he actually worked during the year, as an agricultural labourer.

Government of Kerala (1976) defined agricultural labourer as a person who, in consideration of the wages payable to him by a land owner, works on, or does any other agricultural operation in relation to the agricultural land of such land owner.

Rao (1976) was of the opinion that an agricultural labourer is a person who works in another person's land for wages in money, kind or share without any right or lease or contract on the land on which he works.

Lukose (1982) considered agricultural labourer as men or women engaged in full time or part time labour associated to the agricultural operations in the cultivation of crops.

Alex (1994) defined agricultural labourer as a person doing any kind of agricultural operation for a farmer in receipt of wages in the form of either cash or kind or both.

In the present study too, the agricultural labourer was considered as men or women available for hire employment to perform agricultural operations in paddy cultivation.

### 2.3 CONCEPT OF RELATIONSHIP

As per Webster's Third New International Dictionary, relationship is the state or character of being related or interrelated; connection by way of relation; it is a state of affairs existing between those having relations or dealings.

Scott (1988) defined relationship as a reciprocal influence between two or more elements such that together they form a distinct unit.

It is evident from the above that relationship is mostly concerned about the interactions between individuals which is otherwise referred to as interpersonal relations.

According to Richardson (1957), interpersonal relations refer to the day-to-day association between various categories of employees at the place of work.

Das (1984) defined interpersonal relation as the interaction of people at work, with special emphasis on the fundamental causes of individual and group relations.

Relationship as viewed from industry/management point of view as well from the point of view of agriculture has been reviewed, so as to develop a comprehensive idea regarding the concept of relationship.

#### 2.3.1 Relationship-as viewed in Industry/ Management :

In the most general sense, industry may be thought of as coextensive with the production of goods and services—partially synonymous with "economic organization". More specifically, industry is used to denote the orderly production of goods as distinguished from financial and commercial activities. In a still more limited sense, industry refers to extractive and manufacturing activities ordinarily involving the use of mechanical power. The use of the word will ordinarily exclude from the category 'industry' various types of independent handi-crafts and small scale agricultural production. However, the commercial agriculture in recent times involves the extension of industrial principles into the production of food. (Yoder, 1965).

The concept of industrial relations has reference both to the internal relationship within industrial organizations and to the external relations of industry to society. It includes not only what is ordinarily called industrial relations in the narrow sense namely the relations of management and labour, but also the whole network of organized activity that constitute the productive system.

Yoder (1965) defined industrial relations as the designation of a whole field of relationship that exist because of the necessary collaboration of men and women in the employment process of industry. Industrial relations are labour management relations such relations exist in a context, they are not discreet phenomenon in society, they are by and large determinate results of the social, political and economic currents, rather than determining forces. (Goyal, 1971).

According to Mills (1978), in labour management relations, as the terms imply, management has essentially a supervisory or leadership role at the work place, and the labour has essentially a performance role. Management and labour may be said to constitute the human side of an organization. Besides these, the industry also requires other inputs including energy, materials, machinery, physical facilities and working capital for production of goods. Management and labour are the human factors that organize and combine these inputs in order to produce goods and services.

Thus, industrial relation may be defined to be the processes by which human beings and organizations interact at the work place and more broadly in society as a whole to establish the terms and conditions of employment. This definition includes the industrial activities of agriculture such as distribution, processing and retailing of agricultural commodities.

In the view of Davar (1979) the term industrial relations is used to express the nature of relationship between the employer and the employee in an industry or an organization. Where willing cooperation emanates from employees towards the achievement of organizational goals, there is said to be good industrial relations. Prior to the industrial revolution the master and servant relationship existed was of simple and personal in nature. With the acceleration of industrialization and trade union activities amongst the workers, the relationship became complex and impersonal.

Singh (1982) described industrial relations as the state of relationship of employees and employer in an industrial organization, the cooperation and understanding, willingness and zest to work, the ability to solve problems in a constructive and mutually amicable manner and concern for productivity and production by the employees.

In recent years industrial managers and many professional social scientists have increasingly emphasized

'human relations' in industry. The importance of focusing attention on the phenomenon of human factor in industry is based on the findings of the Elton Mayo's Hawthorne researches that suggest that there is a relationship existing between interpersonal relations and other factors such as working conditions, work satisfaction, job security, wage/salary, welfare facilities, personal factors etc.

In the view of Carvell (1970), human relations include all orders of interactions of men with other men. It starts with the individual interacting with himself, and proceed to pairs of individuals or dyads, small groups and teams, large groups and societies.

According to Rudrabasavaraj (1979), human relations is the art and science of accomplishing predetermined company goals, the process of which promotes individual efficiency and satisfaction and group solidarity and effectiveness as well as company productivity, profitability and growth and in the ultimate analysis, the humanization of the interests and aspirations of the company on the one hand and the individual and the group on the other.

In a broad sense human relations denote all interactions amongst people in an organization or society in the process of productive work. It denotes the entire gamut of motivation, team work and the concept of human dignity and moral judgment involving professionalism and commitment to work (Singh, 1982).

Thus, under the present context, relationship in industry/management refers primarily to 'human relations' ie. the interaction of people at interpersonal, group and societal level both within and outside the industrial organizations and establishments. With increasing emphasis on commercialisation, the principles of industrial relations has greater applicability in the field of agriculture too.

### 2.3.2. Relationship as viewed in Agriculture :

In agriculture, relationship is usually referred to agrarian relations, which means the relationship amongst the people engaged in agricultural production. Agrarian relation is mostly governed by the basic agrarian structure existing in the society. Warriner (1969) opined that agrarian structure in India enclosed a world of its own, since it was neither a large estate or a peasant system, but a system of caste. In this context, Shah (1969) observed that the agricultural labourers belonged entirely to lower caste. Varghese (1970) noted that in the traditional society, the higher caste became the masters of the society and also had normally all important rights connected with land, but they did not assert their rights in a way that infringed on the rights of other inferior tenure-holders.

Alexander (1973) from his study concluded that as most of the labourers were the members of the lower castes and



the farmers belonged to upper castes, the farmer-labourer relationship was structured by inter-caste relationship. Bhalla (1974) had also observed that in our society agricultural labourers predominantly belonged to scheduled castes and backward classes and were generally bereft of any ownership rights in land.

Beteille (1974) noted that there were two kinds of relationship between caste and the agrarian class structure.

They were (i) the surface relationship which was revealed by the fact that the land owners belonged predominantly to the upper castes and the landless to the lower castes and (ii) a deeper relationship in which the hierarchical values of caste sustained and legitimised the unequal relationship among land owners, tenants and agricultural labourers.

In the views of Unni (1975), agrarian relation was highly influenced and directed by the principles of caste and the complex pattern of intercaste relations set by this dimension of the stratification affected in various ways the purely caste based principle of who would work for whom. According to Sen (1979) agrarian structure meant the institutional frame work of agricultural production which included land tenure system, distribution of ownership of land between large land owners and small peasants, tenancy system, the burdens imposed on the peasants by the governments and land owners.

Aziz (1980) noted that traditionally landless labourers

occupied the lowest rung of the ladder in the rural society and major portion of the agricultural labourers consisted of lower castes. According to Mukhopadhyay (1980), social division of labour on the basis of caste was the basic feature of agrarian society in India. The dominant agrarian categories were the non-cultivating land owners and the land supervisors belonging to the upper castes and a mass of scheduled castes and tribes who performed most of the arduous agricultural labour at the bottom. Krishna (1980) observed that the landless workers which constituted the bottom layer of the rural society had been living for the past several centuries at the mercy of an exploitative system based on caste and operated by a combination of coercion and intimidation.

In Indian social history, caste being a vital element often come up to maintain and safeguard the socio-economic power, it is not irrelevant to observe that the social hierarchy of caste as a whole generated economic differences too in the system, along with the development of other social relations of agrarian strata in the society. (Alexander 1981).

Wage condition is another important area of the relationship between labourers and cultivators. Nayar (1976) pointed out that wage rates differed not only from place to place but with different workers under the same land lord. Bardhan (1980) observed that the wage rate varied with the

sex of the labourers in agriculture with female labourers usually getting a lower rate. Mehta (1980) had also observed that wage rates varied with respect to agricultural operations.

Next to caste and wage rate, land is the important factor in shaping the agrarian relations. There is a whole range of relationship in rural India centering around the ownership, control and use of land. These relations are not only partly independent of caste, but have their own pattern of organization also. As early as 1920, a resolution of the Government of Bengal referred to agrarian relation as consisting of the relative rights, interests, and privileges of the various classes in the agricultural community owning, occupying managing or cultivating the lands and sharing in its products (Gupta, 1963).

Srinivas (1966) noted that in the traditional agrarian society in India, land ownership was a crucial factor in establishing dominance in all aspects of life, because land ownership meant not only wealth and status, but power over people also. The land owners not only had higher income than the landless, but also the traditional ties of dominance and dependence enabled the former to control the lives of the latter in multitude of ways. In India, the landless constituted the mass of agricultural labourers and it was the outcome of the whole scale exploitation of the peasantry. Thus landlessness became the root cause of exploitation of

agricultural labourers in our country. These exploitations assumed several dimensions of relationship in the agrarian system. Konar (1977) had also indicated that the land relations in the villages were primarily feudalistic in nature.

The introduction of land reforms and advancement in agricultural technology, besides the politicisation of agricultural workers had transformed the agrarian structure in India, and brought about radical changes in the agrarian relations, otherwise the farmer-labourer relationship.

In this study, the concept of relationship as derived from above refers to mutual interactions and associations between the farmers and the labourers in various spheres of relationship.

#### 2.4. STUDIES ON FARMER-LABOURER RELATIONSHIP

Aggarwal (1975) pointed out that in Punjab industrialization had absorbed a large proportion of agricultural labourers, creating a labour shortage, as against the increased demand for labour due to intensification of agriculture. This had led to substantial improvement in wage rates and fringe benefits. There was a greater demand from cultivators for labourers for completing the agricultural operations at proper time, necessitating them to behave in a more egalitarian way with the labourers.

However, there was little change in the traditional cultivator-labourer relations in Gujarat as observed by Joshi (1975). Even in the southern parts of the state where considerable commercialisation had occurred, little change in the traditional pattern had taken place in the cultivator-labourer relations. The prevalence of such traditional pattern of relationship between the cultivators and the labourers was also noted by Singh and Singh (1975) in Uttar Pradesh, Bihar, Orissa and to some extent in Maharashtra.

From a study conducted in three southern states Alexander (1975) concluded that in Karnataka despite substantial development and prosperity in areas like Mandya, there had been little change in the traditional cultivator-labourer relations. The condition of agricultural labourers continued to be very miserable, characterized by very low wage rates, long working hours and unequal working relations.

In contrast to this, he observed that in Thanjavur of Tamil Nadu and Alapuzha of Kerala the labourers were able to achieve considerable improvement in their status through labour union activities. The unions operating in this area were affiliated with the communist parties and worked as agencies for transferring their ideology to the labourers. Owing to this, inhuman practices disappeared, limitation in working hours achieved, wage rates increased and there had been a reduction in the observance of untouchability and other traditional practices. Along with this, the relations

between the cultivators and the labourers had become more equal.

Mencher (1975) also reported that the politicisation of agricultural workers through trade unionism had led to an increase in the wage rates, and other conditions of daily life for the workers. Thus, the farmer-labourer relationship, which was feudalistic and exploitative in nature a few decades back, had changed to a more egalitarian relationship with considerable improvement in the status of the agricultural workers.

Under the present context, Singh and Kumar (1977) indicated that the farmer-labourer relationship was an outcome of the long dealings between the two classes based up on the economic status, demand, supply and changes in the socio-economic and politico forces taking place from time to time. Lukose (1982) viewed agrarian relation as the various types of relationships-social, economic, political and occupational prevalent among cultivators and labourers in the agricultural field. With the attached labour system giving way for hired labour system on daily wage basis, the farmer-labourer relationship had become more of interpersonal relationship at the place of work.

The concept of relationship derived from the above for the study covered mutual interactions and associations between the farmers and the labourers in various spheres of relationship.

## 2.5. RELATIONSHIP DIMENSIONS

Anakaliker (1945) while discussing labour management pointed out that the management should take care of the desires of employees to avoid general conflict between employer and employees. The desires include economic security which means good wages, steady and continuous work, protection against unjust and indiscriminate discharges etc., physical security such as protection against injuries, occupational diseases and accidental death, happy and congenial work relation, conscious of their rights and trying for collective bargaining and motivation given by management by incentives of various kinds.

Yoder and Nelson (1955) noted that the relationship between employees and management included statement of the employee relation policies, relations with employees as individuals, employee organizations, collective bargaining, grievance procedure. arbitration and employee-management committees.

Yoder et al. (1958) listed out the functions or activities by which the goals or objectives of an organization were to be attained in a programme of employee relations. They can be grouped as:

Formulation and communication of labour policy, the determination of manpower requirement, the discovery,

recruitment, selection and placement of personnel, collective bargaining-contract negotiation and administration, maintenance of motivation through working conditions interms of compensation, transfer, promotion, personal rating, employee services and other relevant procedures and maintenance of records and research.

Hedges (1963) had identified and ranked some of the most important elements in sound relations between farmers and hired workers. They can be classified into

Employment basis-privileges, wage levels, vacations and other time off, regularity in wage payments, and definitions in hiring agreements.

Personal relationships-applying the Golden Rule on-the-job attitudes, supervisory methods, considerateness, and interest of the employer in workers and their families as persons "as humans".

Working conditions-length and regularity of hours, the employer working with the employees, availability of efficient structures, and equipments, conditions favorable to safety and health etc.

Grant and Smith (1969) indicated that trade unionism, collective bargaining, grievance procedures, industrial disputes and joint consultation as essential aspects of industrial relations.

In the view of Miner (1969), unionization, collective bargaining, labour-management agreement, union-management



cooperation and employee benefits and services, union-management conflicts, internal communications were the important aspects of labour relations in an organization to be considered for attempting to foster organizational maintenance.

Joshi (1973) had grouped into four parts the fundamentals of industrial relations technique as

Emergence of strong trade unions and employer's associations, free scope for collective bargaining, voluntary arbitration and industrial adjudication.

Davar (1979) enlisted the following conditions necessary for establishing and maintaining good industrial relations. They are recognition by the employer that the workers are a part of a team working towards common objectives, an attitude on the part of the employees of delivering the goods, that is giving their money's worth, fair redressal of the employees' grievances such as regarding working conditions, facilities, attitude of supervisors and other rights, avoidance by workers of being unduly influenced by political leaders staging strikes as a protest or a publicity for their own rights, payment of fair wages and adequate wage structure as well as establishment of satisfactory working conditions, adoption of a policy which ensures to the workers an equitable share of gains of increased productivity, introduction of a suitable system of employees' education at all levels as well as providing them

with appropriate equipment, where necessary, training in industrial relations and human relations to workers, technical staff and at all managerial levels, sufficient communication to keep the employees informed about decisions which effect their interest and establishment of an atmosphere of participation whether through joint committees or other methods.

Alexander (1981) in his study of farmer-labourer relationship in southern India indicated the three important aspects of relationship as:

patron-client relations-receiving/ presenting gifts on ceremonial occasions, rendering service, concern for each other at serious sickness, help to labourers for children's education, for building house etc., inter-caste relations-both eating together at teashop, allowing labourers to enter the house, labourers' washing the vessel after eating, labourers given food outside the house, showing the sign of respect, labourers addressed in third person, use of degrading words etc. and working conditions-fixed hours of work, extra pay for extra work, deciding the wage rate, prompt payment of wages etc.

Dwivedi (1981) viewed participative management, communication, industrial fatigue and frustration and motivation and morale as the important factors influencing the human behavior at work.

Lukose (1982) while studying the role of labour

movements on agrarian relations in Kerala pointed out intercaste relations, labour recruitment and wage conditions, instances of agrarian disputes, and pattern of social relationship are the important areas of relationship between the cultivators and the labourers.

Hinde (1983) proposed eight categorical dimensions by means of which relationship could be investigated and differentiated. They are the content of interactions (ie. what the participants do together), the diversity of interactions (whether solely one type or several types of interactions are involved), the qualities of interactions (the ways in which the participants do what they do), the relative frequency and patterning of interactions, the extent to which the relationship is based on reciprocity (where the partners, for example, do the same thing alternatively) or complementarity (where partners do different things which nonetheless compliment one another to serve a common goal), the degree of intimacy, the interpersonal perceptions held by the partners about each other and their relationship and the degree of commitment of the partners to the relationship.

Drawing inferences from the above references on industrial relations, personnel management, and human relations it is generalized that the farmer-labourer relationship also could be in the areas of working conditions, the social system in which both are operating,

the psychological make up of the farmer and the labourer and the style of management adopted by the farmer. Thus the dimensions of farmer-labourer relationship theoretically delineated from literature review are economic dimension, work dimension, communication dimension, management dimension, motivation dimension, human relations dimension and social dimension.

#### 2.5.1. Work dimension :

Rothenburg et al. (1973) had listed four major labour relation standards that help an employer to avoid unionization. They are the employee has the right to know the conditions under which he works, the employee has a right to reasonable job security including seniority standards, the employee should have readily available a practical grievance mechanism and the employee should receive a reasonable level of compensation, not the cheapest possible.

Mills (1978) indicated that good labour relations included local working conditions, recognition and union membership, rates of pay, job classification and incentives, hours of work and overtime, holiday, vacations, seniority, adjustment of complaints and grievances, discharge of employees, management functions and safety and health.

#### 2.5.2. Communication dimension :

Karlene and Charles (1975) while discussing the

importance of communication in organizations noted that in the case of down ward communication, if subordinates did not have trust in superiors, they were not as likely to listen or to believe management message. From a study of subordinates in four organizations they concluded that the higher the trust in their superior, the more they believed information from the superior was accurate.

Louis (1978) from a study of personnel managers of 175 largest companies in USA indicated that most of them had rated employee communication skills as vital. There was a direct correlation between employee communication and profitability.

Karlene and Charles (1979) commented that great management ideas were strictly armchair thoughts until a manager put them into effect through communication. A manager's plans might be the best in the world, but until they could be communicated they were worthless and when communication was effective, it tended to encourage better performance and job satisfaction, they observed further.

Hughes (1979) pointed out that employees at lower levels had a number of communication needs. Managers thought that they understood these needs, but often their employees did not think so. This fundamental difference in perception tended to exist at each level in organizations, there by making communication more difficult.

Davis (1981) commented that organizations could not

exist without communication. If there was no communication, employees could not know what their associates were doing and management could not give instructions. Coordination of work was impossible and the organization would collapse for lack of it.

#### 2.5.3. Management dimension :

Halsey (1953) observed that thoroughness, initiative, fairness, tact, enthusiasm, and emotional control as the important six qualities for a successful supervisor.

Harrel (1964) pointed out that communications, sensitivity to feelings, participation and knowledge of the effect of group pressures, attitude of labour and management leaders, sense of feeling of cooperation-symbiotic relationship as the psychological aspects of labour relations.

#### 2.5.4. Motivation dimension :

From a study of supervisors and workers in American industry Lindahl (1949) concluded that the supervisors generally ranked good wages, job security, promotion and good working conditions as the things workers want most from their jobs. On the other hand workers felt that what they wanted most was full appreciation for work done, feeling-in' on

things, and sympathetic understanding of personal problems.

Davis (1962) opined that reasonable pay, good leadership, treatment with dignity, opportunity to progress, relative independence and freedom in employee affairs, recognition from others, reasonable security, good working conditions, a meaningful job etc. were some of the employee wants in business organizations.

William (1975) in his discussion on motivation emphasized the need to integrate the economic and psychological rewards successfully. Employees differed in the amount of intrinsic and extrinsic rewards that they wanted, and jobs and organizational conditions also differed.

These conditions suggested that what was needed was a contingency approach to rewards that considered needs of workers, type of job, organizational environment etc. Only then an optimum balance of extrinsic and intrinsic rewards be provided.

Sharma (1988) indicated that the following personal policies and practices to which attention to be paid to create a positive organizational climate which in turn is likely to help improve employer-employee relations in India.

They are scope for advancement, grievance handling, monetary benefits, participative management, objectivity and rationality-impartial treatment, recognition and appreciation, safety and security, training and education and welfare facilities

#### 2.5.5. Human relations dimension :

Maier (1952) enlisted the following qualities a supervisor should possess, to be successful while dealing with the role of supervisors in human relations. They are supervisors attitude towards rights of the employees, serving the role of an expert, reducing hostility by permitting free expression, encourage all members to participate in discussion, protecting minority-showing special consideration to minority positions, giving a feeling that they have not been excluded from the group, making the group responsible for agreeing on a solution, sensitivity to the feelings and develop permissiveness to become an active listener.

Aggarwala (1977) pointed out individual recognition, understanding the personality, listening, avoiding arguments, no overbearing posture and giving a fair deal as some of the prerequisites for good human relations.

Srivastava (1982) indicated certain guide lines for improving human relations. They are workers wide participation in decision making, presence of favourable climate for developing group sprit, mutual confidence and feeling of cooperation, fulfillment of needs of recognition, security and sense of feeling and maintenance of intra-group and inter-group communications.

Saiyadain (1988) had observed the following while discussing about human resource management



In motivating employees, attempts have to be made to create situations that would lead to lasting motivation and satisfaction; good human relations, relative freedom on the job, two way communication, trust and sincerity can get more mileage than a monetary reward or short lived appreciation.

The personal relations between the supervisor and the subordinates have a lot to do with the way the subordinates view their jobs. A more personal relationship communicates to them that the leader approves both their work and themselves as individuals. The leader can give signals of personal interest by listening to their problems, showing tolerance when mistakes are made, appreciating when a job is well done and so forth.

The work environment has important bearing on the efficiency and satisfaction of the employees. Poor working conditions have been found to cause greater fatigue, negligence, absenteeism, indiscipline and insubordination among the employees.

McGrath (1989) listed certain points to be considered for effective supervision to make organizational life not only more productive, but more humane. They are know your people, stay in contact with them, be a good listener, know when to make decisions yourself and when to ask help from the group, foresee problems, be concerned about production and about your people, keep cool, be fair, take responsibility and do not run away from it, develop your people, know your

self and be yourself.

Rao and Rao (1990) indicated the following measures to promote and maintain sound human relations. They are by promoting honesty among individuals, to be frank to one self and appreciate the frankness of others, effective communication also, in a way improves relations among people, by developing sensitivity to others feelings and an ability to appreciate others ideas, by becoming a good leader, by speaking out your own mistakes before criticizing the others, by requesting others instead of issuing direct orders, by praising the subordinates publicly even for the slight improvement, by making the other person happy about doing the thing you suggest, showing respect for the other man's opinion and ideas, making one's own home and personal life happier, by treating the subordinates with dignity and respect, by understanding all the human needs and giving due weightage in satisfying them and by helping the people in performing their duties.

#### 2.5.6. Social dimension :

Trivedi (1969) listed the following social factors of labour relations for better productivity. They are mutual appreciation of and sympathetic understanding of the problems affecting human behavior, recognition of the legitimate role of labour unions, attitude of the employees-towards job

security, better wages, promotions, bonus and fringe benefits, including facilities for housing, health, transport, education and recreation, and fair amount of recognition for the job.

## 2.6. FACTORS INFLUENCING FARMER-LABOURER RELATIONSHIP

The socio-economic and psychological characteristics of the farmers and the labourers were considered as the factors influencing farmer-labourer relationship under this study. In the absence of adequate studies on the factors influencing farmer-labourer relationship, studies related to managerial efficiency of farmers, successfulness of supervisors in industry and labour efficiency were considered for inclusion in the study because of the following reasons.

Labour management, a measure of relationship with the labourers forms a part of the overall managerial efficiency of the farmers. Successfulness of the supervisors is an indirect indicator of the nature of the relationship of supervisors with his subordinates and labour efficiency is likely to be influenced by the nature of relationship existing between the farmers and the hired labourers.

The list of factors considered in the study are detailed below.

### 2.6.1. Common variables :

These variables are applicable to both the farmers as well the labourers.

#### 2.6.1.1. Age :

Alexander (1974) while studying the changing agrarian relations found that age was not associated with the role expectation of farmers and labourers. Likewise Subramony (1979) reported that age was not a significant factor in differentiating successful supervisors from that of non-successful ones under industrial conditions. In contrast, Padmanabhan (1981) found out a negative significant relation between age and labour efficiency, an indirect measure of relationship with farmers.

#### 2.6.1.2. Education :

A non significant association between education and successfulness of supervisors was reported by Subramony (1979) and between education and managerial efficiency of cassava farmers, by Anantharaman (1991). However, Padmanabhan (1981) found a positive relationship between education and efficiency of male labourers, but not with women labourers. Howard and McEvan (1989) opined that

education should also be considered along with other characteristics of labourers, to help farmers develop optimal human resource management policies. Bhople and Patki (1992) found that farm women labourers with no formal education were found to be higher in their role performance than that of others. Alex (1994) reported that education was not associated with role perception/role performance of labourers with regard to their participation in decision making with farmers in paddy production.

#### 2.6.1.3. Farming/ Labour Experience :

Subramony (1979) reported a negative relationship between experience and successfulness of supervisors in industry. Similar kind of negative association of experience with labour efficiency was observed by Padmanabhan (1981), whereas Alex (1994) found a significant positive relationship between experience and role perception/role performance of male labourers and not in case of female labourers.

#### 2.6.1.4. Caste :

Alexander (1974) observed a significant association of caste with role expectation of farmers and labourers. The findings of Lukose (1982) was not different from above. He found that farmers belonging to higher castes were less

satisfied with the performance of labourers. He further observed a significant association of caste with the nature of relationship during former days, but not at present.

#### 2.6.1.5. Family income :

Alexander (1974) found that family income was not associated with role expectation of farmers or labourers.

#### 2.6.1.6. Farm size :

Alexander (1974) reported that farmsize was not associated with the role expectation of farmers and labourers. A similar kind of association was observed by Alex (1994) between farm size and role perception/role performance of labourers. However Lukose (1982) observed that big land owners were less satisfied with labour performance than small farmers. He also noted a significant association of farm size with the nature of relationship both during former days as well as at present. Anantharaman (1991) reported a significant negative relationship between land holding size and managerial efficiency of cassava farmers.

#### 2.6.1.7. Exposure to media :

Alexander (1974) and Anantharaman (1991) did not find

any influence of mass media participation on role expectation of farmers or labourers and on managerial efficiency of cassava farmers, respectively.

#### 2.6.1.8. Social participation :

Subramony (1979) observed social participation as a significant factor in distinguishing successful supervisors from non-successful supervisors under industrial conditions.

In contrast, Anantharaman (1991) and Alex (1994) reported a non significant relationship between social participation and managerial efficiency of cassava farmers and role perception/role performance of labourers, respectively.

#### 2.6.1.9. Participation in union activities :

Alexander (1974) reported no association of participation in union activities with role expectation. Likewise Lukose (1982) found no association of this variable with satisfaction of labour performance and nature of relationship.

#### 2.6.1.10 Political affiliation :

Alexander (1974) reported that political affiliation was not associated with role expectation of farmers, but

associated in the case of labourers, whereas Subramony (1979) observed no association of this variable with the successfulness of industrial supervisors. Lukose (1982) found a significant association between political affiliation and satisfaction of labour performance and nature of relationship both during former days and at present.

2.6.1.11. Incidence of disputes/ strikes :

Lukose (1982) observed no association of incidence of disputes/strikes with satisfaction of labour performance and nature of relationship.

2.6.1.12. Mechanism of settling disputes/ strikes :

Lukose (1982) did not notice any influence of this variable on satisfaction of labour performance as well as nature of relationship.

2.6.1.13. Family labour availability :

Lukose (1982) reported a significant association between family labour availability and nature of relationship during former days and at present.

2.6.1.14. Attitude towards labour unions :

Subramony (1979) noticed attitude towards labour unions



not a significant factor in differentiating successful supervisors in industry from that of unsuccessful ones. Similar results were obtained by Lukose (1982) with nature of farmer-labourer relationship and by Padmanabhan (1981) with labour efficiency.

#### 2.6.1.15. Ideological orientation :

Alexander (1974) found a significant positive association between ideological orientation and role expectation of labourers and a significant negative relationship in case of farmers.

#### 2.6.1.16. Social sensibility :

Subramony (1979) did not notice any significant association of social sensibility with successfulness of supervisors in industry.

#### 2.6.1.17. Gregariousness :

Subramony (1979) reported a significant positive association between gregariousness and successfulness of supervisors under industrial conditions.

#### 2.6.1.18. Thoughtfulness :

Subramony (1979) reported that thoughtfulness was not

differentiating significantly the successful supervisors from unsuccessful under industry conditions.

2.6.1.19. Maladjustment :

Subramony (1979) observed a significant association between maladjustment and successfulness of industrial supervisors. He concluded that successful supervisors were less maladjusted as compared to unsuccessful supervisors.

2.6.2. Farmer-related variables :

These variables are applicable exclusively for the farmers.

2.6.2.1. Area under crop :

Lukose (1982) and Anantharaman (1991) observed a significant positive association of area under crop with nature of relationship and area and managerial efficiency, respectively.

2.6.2.2. Involvement in group farming activities :

With the introduction of group farming approach in paddy cultivation during 1989 in Kerala state, the relationship between cultivators and labourers was observed

to be congenial (Govt. of Kerala, 1990).

2.6.2.3. Opinion about labourers :

Padmanabhan (1981) reported a significant positive association of attitude towards labourers with labour efficiency.

2.6.2.4. Scientific orientation :

Anantharaman (1991) observed a significant positive relationship between the attitude of cassava farmers towards scientific agriculture and their managerial efficiency.

2.6.2.5. Management orientation :

Anantharaman (1991) used management orientation for establishing the construct validity of the managerial efficiency scale developed by him. He found a strong positive correlation between management orientation and managerial efficiency of cassava farmers.

2.6.2.6. Orientation towards competition :

Anantharaman (1991) did not notice any relationship between orientation towards competition and managerial

efficiency of cassava farmers.

2.6.2.7. Critical attributes of employer :

Pareek and Rao (1981) while discussing on human resource management indicated that persuasiveness, ability to handle conflicts, openness, ability to motivate, perceptiveness, investment in subordinates, firmness and fairness and flexibility/adaptability were the critical attributes of an employer which were very much essential for better and effective human resource management and influence his/her relationship with the subordinates.

2.6.3. Labourer-related variables :

These variables are applicable exclusively for the labourers.

2.6.3.1. Employment days :

Padmanabhan (1981) observed a significant positive relationship between period of employment and labour efficiency in case of male labourers. Like wise Alex (1994) reported a significant positive relationship of employment days with role perception/ role performance of labourers.

#### 2.6.3.2. Orientation towards work :

Padmanabhan (1981) found a significant positive association of attitude towards work with labour efficiency.

The findings of Alex (1994) in the study of participation in decision making by labourers with farmers was in same line with that of above finding.

#### 2.6.3.3. Opinion about farmers :

Padmanabhan (1981) observed a significant positive relationship between attitude towards employer and labour efficiency. Same kind of finding was also reported by Alex (1994) in the study of participative decision making by labourers.

#### 2.6.3.4. Level of aspiration :

Padmanabhan (1981) found that aspiration and labour efficiency were significantly and positively related in case of male labourers, but not in women labourers.

#### 2.6.3.5. Achievement motivation :

Alex (1994) reported a significant positive relationship between achievement motivation of labourers and

their role perception/role performance in decision making with farmers.

2.6.3.6. Participation in decision making with farmers :

Padmanabhan (1981) found a significant positive relationship of this variable with labour efficiency.

2.6.3.7. Feeling of responsibility in increasing agricultural production :

Padmanabhan (1981) and Alex (1994) reported significant positive relationship of this variable with labour efficiency and role perception/role performance in decision making, respectively.

2.6.4. Other Variables :

The following variables were identified to be having influence on farmer-labourer relationship through discussion with experts. There were no studies available with regard to the nature of relationship of these variables with farmer-labourer relationship. However, in the opinion of experts and through field observation they were found to be important in influencing farmer-labourer relationship and hence included in the study. They are,

#### 2.6.4.1. Common Variables :

Awareness about labour welfare measures, interpersonal trust, attitude towards mechanisation, attitude towards personal influence, self concept and level of indebtedness.

#### 2.6.4.2. Farmer-related variables :

Area under high yielding varieties of paddy, level of mechanisation, labour use efficiency, economic performance, productivity, yield index, marketed surplus, adoption quotient, opinion on paddy cultivation, cropping intensity and risk orientation.

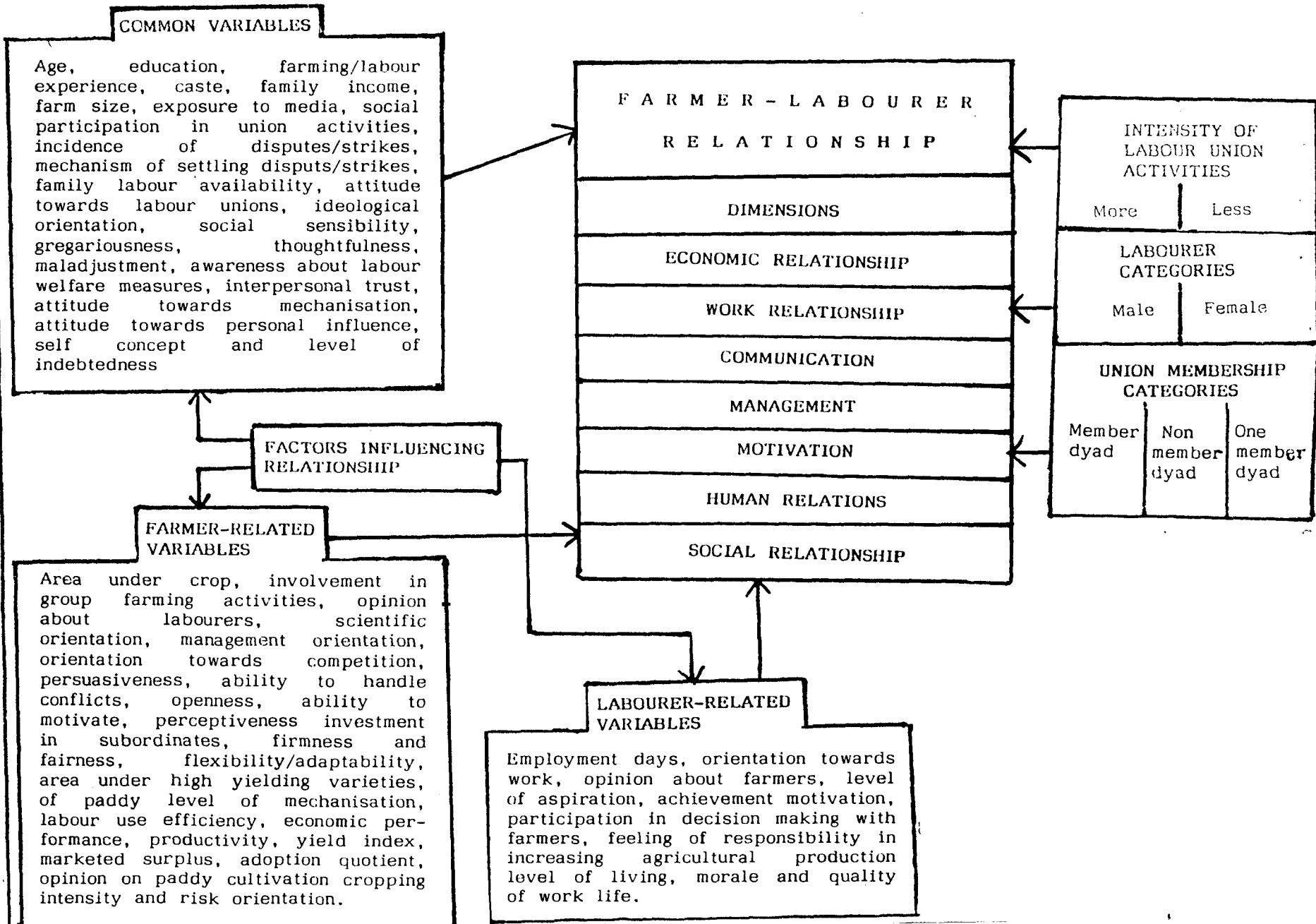
#### 2.6.4.3. Labourer-related variables :

Level of living, morale and quality of work life.

### 2.7. THEORETICAL MODEL OF THE STUDY

A theoretical model of the study has been framed based on the objectives set forth for the study and the concepts theoretically derived from the review of literature and the factors influencing the farmer-labourer relationship derived through literature review and discussion with experts connected with the study. The model has two parts located on either side of farmer-labourer relationship which is situated

Fig.1 THEORETICAL MODEL OF THE STUDY





at the centre of the model. This is divided into seven compartments, each representing one dimension theoretically derived under this chapter. The part on the left side indicates the factors which are likely to influence the farmer-labourer relationship. This part is divided into three segments, each one representing the common variables, farmer-related variables and labourer-related variables. The part on the right side represents the external factors which are likely to cause variation in the farmer-labourer relationship and are located outside the relationship system. This part is again divided into three segments and segment one represents the intensity of labour union activities which is divided into more and less. The labourer categories-male and female is shown in the second segment. The third segment indicates the union membership categories and is partitioned into three. They are member (both farmers and labourers are members of union), one member (either farmer or labourer being the member of union) and non-member (both are not members of union) categories.

# **METHODOLOGY**

### 3. METHODOLOGY

The methodology adopted in the study is presented in the following headings.

- 3.1           Locale of the study
- 3.2           Selection of the respondents
- 3.3           Selection of the variables for the study
- 3.4           Operationalisation and measurement of the variables
- 3.5           Procedure employed in data collection
- 3.6           Statistical tools used in the study
- 3.7           Hypotheses set for the study

#### 3.1.           LOCALE OF THE STUDY

The study was conducted in two distinctly different paddy production systems in Kerala State.

##### 3.1.1           Selection of the study area :

Thiruvananthapuram and Alapuzha districts have been selected for conducting the study considering the intensity of labour union activities, labour unions' influence on farmer-labourer relationship and differences in paddy production systems as selection criteria. Jose (1980) while analysing the growth of labour union movement in agriculture in Kerala described that the organisation of agricultural

labourers emerged first in Kuttanadu region of Alapuzha district. They came as early as 1940 with the registration of the Travancore Karshaka Thozhilali Union, whereas in other regions including Thiruvananthapuram they emerged only by mid sixties, particularly after 1968. George (1983) commented that the unions that spread deep roots in Kuttanadu and the strength of their network formed the fountainhead of a series of struggles waged in the years that followed especially in 1951, 1955 and 1957 for higher wages, for higher share of produce for harvesting (theerpu) and for reduction of working hours. According to Jose (1980), by 1974 in Kuttanadu region there were 14 registered trade unions which together formed about 40 per cent of the total number of agricultural labour organisations in the state. Lukose (1982) in his analysis of agricultural labour unions indicated that the membership of the Kerala State Karshaka Thozhilali Union in Alapuzha district which was 17400 during 1970 went upto 35107 during 1972, as against a mere 800 in 1970 in Thiruvananthapuram district which increased to 8480 in 1972. The latest statistics on agricultural labour unions in Kerala obtained from the records of the central labour enforcement officer, Thiruvananthapuram who have come forward for membership verification in 1992, indicated that there were 10 registered unions in Alapuzha district with a claimed membership strength of 26935 while only four unions were in Thiruvananthapuram district with a strength of 15450 members. The above

observations amply testify the difference in the intensity of labour union activities between Alapuzha and Thiruvananthapuram districts.

Alexander (1974) pointed out that labour union activities enabled the labourers to achieve considerable improvement in their status in southern India especially in Thanjavur of TamilNadu and Alapuzha of Kerala. These activities started much earlier than the beginning of the agricultural development programmes suggesting that agricultural development was not the main cause of the changing labourer-cultivator relations, he further commented. The observations of Verghese (1986) from a study in Kuttanadu area of Kerala was not different from the above. He concluded that trade unions brought about material benefits to the labourers and enabled them to feel their collective strength. Great changes have taken place in the relationship between the farmer and the farm labourer.

The paddy production system in Thiruvananthapuram district with transplanted crop of paddy raised during kharif and rabi seasons is distinctly different from that of the production system practised in Kuttanadu region of Alapuzha district wherein direct sown paddy is cultivated mainly during summer season and an additional crop of paddy is grown in the subsequent season wherever possible. Keeping the aforesaid observations, it was proposed to conduct the study in Alapuzha district, the bastion of agricultural trade union movement in

Kerala and in Thiruvananthapuram district having relatively less union influence in the agricultural sector for comparison purpose. Moreover, these two districts represent two different paddy production systems existing in Kerala state as detailed elsewhere.

3.1.2. Brief description about study area :

3.1.2.1. Thiruvananthapuram district

It is the southern most district in Kerala surrounded by Kollam district in north, Kanyakumari district of TamilNadu in south, Nellaikattabomman district of TamilNadu in east and Arabian sea in west. The district has four taluks and 12 blocks and is divided into three agricultural subdivisions. The average rainfall in the district is about 2000m.m. with 5.50 per cent of net area sown under irrigation. Karamana, Neyyar and Vamanapuram rivers flow through this district. Forests occupy nearly 22 per cent of the total geographical area of the district. Forest loams, red loams, laterite and coastal alluvium are the major soil types in the district. Paddy, coconut, tapioca and rubber are the important crops cultivated in this district. The area under paddy in the district is around 19600 hectares accounting for nearly 3.60 per cent of the total paddy area in the state with a productivity of 1.71 t/ha. There are 101965 cultivators and 26385 agricultural labourers in the district.

### 3.1.2.1.1 Paddy production system :

Generally two crops of transplanted rice is cultivated in this district during April-May to September-October season (viruppu) and the second crop during September- October to December-January season (mundakan). During first crop, about 45 per cent of total paddy area is covered by high yielding varieties like Jaya, Bharathi, Mahsuri, Triveni, Jyothi etc., whereas 73 per cent of area during second season is covered by local varieties. Farmers apply only need based insecticides and avoid prophylactic measures in nursery. When the seedlings are at 4 to 5 leaf stage after 18 to 25 days of planting, they are transplanted in the mainfield. Only partial quantity of recommended dose of fertilizers is applied by the farmers. Generally phosphorus application is avoided during basal dressing and medium amount of fertilizers are top dressed at tillering and panicle initiation stage. Harvesting is done after 4 to 5 months of planting depending upon the duration of the varieties cultivated. (Kerala Agricultural University, 1985)

Mostly human labour is used for paddy cultivation and at times power tiller is used for land preparation in certain localities. While men are engaged for operations such as land preparation, fertilizer application, plant protection etc., women are mostly employed for transplanting and weeding and both are employed for harvesting. About 116 mandays of

labourer is employed for cultivating one hectare of paddy in this district. The wage rate for male labourers is around Rs.50 per day, whereas women labourers get only Rs.35 per day. Wage is paid in cash for all operations excepting harvesting for which it is given in the form of paddy.

### 3.1.2.2. Alapuzha district :

It is located in the central region of Kerala and is surrounded by Ernakulam district in north, Kollam district in south, Kottayam district in east and Arabian sea in west. The district has six taluks and 12 blocks and is divided into four agricultural subdivisions. The district receives around 3000m.m. of rain annually with 30 per cent of net area sown under irrigation. The district is benefited by Pamba, Achankoil and Manimala rivers which empty into Vembanad lake. Laterite and alluvium are the important soil types in the district with paddy and coconut being the major crops grown. The district has around 55880 hectares of paddy which account for 10.32 per cent of paddy area in the state with a productivity of 2.08 t/ha. There are 48009 cultivators and 145641 agricultural labourers in the district. In Alapuzha district, the study was carried out in Kuttanadu subdivision wherein the system of paddy production is distinctly different from that of Thiruvananthapuram district.

Kuttanadu region comprises the low lying lands and the



back water system found in the districts of Alapuzha and Kottayam. The paddy fields are mostly lands reclaimed from the backwaters. The soil types are peat or kari soils with a pH ranging from 4.5 to 5.5. The fields are lying at a level of 1.0 to 2.5 meters below mean sea level and are subject to inundation of salt water. One or two crops of paddy are raised with summer (punja) crop being the dominant one. At times a second crop is grown depending upon the location of paddy fields and weather conditions. The area of each field (padasekharam) ranges from few hectares to above 1000 hectares owned by several cultivators.

#### 3.1.2.2.1 Paddy production system :

Paddy is cultivated mainly during summer season from December-January to April-May as punja crop. Depending upon the location of fields and weather conditions, an additional crop is taken succeeding the first one. The cultivation operations begin two to three months prior to actual season with dewatering of paddy fields using electric pumpsets for which subsidy is given by the Government. Tractor ploughing followed by bullock power is used for land preparation. The seeds are broadcast and replanting along with weeding is done 45-60 days after seeding. High yielding varieties occupy more than 90 per cent of area in Kuttanadu region. The farmers apply almost the recommended quantity of fertilizers

and adopt appropriate plant protection measures as recommended. Watering followed by dewatering is practised about 10 to 12 times during the crop season. The crop is harvested 4 to 5 months after planting depending up on the duration of the varieties cultivated.

Mechanisation is followed to a great extent for land preparation and to a certain extent for thrashing and winnowing. Majority of labour force for paddy cultivation in this district come from womenfolk and men do limited operations such as land preparation, fertilizer application and plant protection. Wage is paid both on the basis of mandays and on area basis. While operations like broadcasting of seeds, fertilizer application, plant protection and ploughing with tractor receive a fixed amount ha, for other operations wage is paid according to the number of labourers employed to do such operations. The average wage rate for males is around Rs.40 per day as against Rs.30 per day for women. The labour requirement for cultivation of one hectare of paddy in this district is around 98 mandays. The mode of payment of wages in Alapuzha district is similar to that of Thiruvananthapuram district.

### 3.2. SELECTION OF THE RESPONDENTS

The procedure adopted in the selection of farmer-respondents and labourer-respondents from the study districts

is described below.

3.2.1. Selection of Sub-divisions, ADA circles and Panchayats:

3.2.1.1. Thiruvananthapuram district:

The three agricultural subdivisions namely Neyyatinkara, Nedumangad and Attingal in Thiruvananthapuram district were selected. The Assistant Director of Agriculture (ADA) circles in the above subdivisions were listed out along with their area under paddy. From this two ADA circles from each subdivision having largest paddy area were selected. In the next step, all the Krishi Bhavans (Panchayats) in the selected ADA circles with their corresponding paddy area were listed and from this two Krishi bhavans with highest area under paddy were selected from each circle.

3.2.1.2. Alapuzha district :

In case of Alapuzha district the study was undertaken only in Kuttanadu subdivision owing to the following reasons.

1. Kuttanadu is the birth place of agricultural labour movement in Kerala and if at all any study on farmer-labourer relationship is to be conducted in Alapuzha district, it should be conducted first in Kuttanadu region.

2. The paddy production system in Kuttanadu is entirely different from the one practised in other subdivisions of Alapuzha district which is similar to that of the one prevalent in Thiruvananthapuram district as detailed elsewhere.
3. The area under paddy in Kuttanadu subdivision is around 40000 hectares accounting for about 58 percent of the paddy area in Alapuzha district. Moreover, paddy area in Kuttanadu is more than the total area under paddy (22000 hectares) in Thiruvananthapuram district.

All the two ADA circles and 12 Krishi Bhavans in Kuttanadu sub division were considered for the study

### 3.2.2. Selection of farmer-respondents :

The farmer-respondents were selected adhering to the criteria given below relevant to the study.

1. The farmer-respondents should be the practising paddy farmers
2. They should have cultivated paddy for at least three consecutive seasons employing hired agricultural labourers prior to data collection.
3. They should have an operational holding of not less than 0.16 ha. under paddy in Thiruvananthapuram district and 0.20 ha. in Alapuzha district, as these being the average

size of holdings in the respective districts. ( Govt. of Kerala, 1992).

3.2.3. Selection of labourer-respondents :

Keeping the following conditions, the labourer-respondents for the study were selected.

1. The labourer-respondents should derive major portion of their income by rendering service as hired agricultural labourers.
2. They should have worked with a particular farmer for not less than three consecutive paddy crop seasons, so as to develop relationship with that farmers.

A list of farmers satisfying the criteria mentioned earlier from each of the selected panchayats was prepared in consultation with the extension personnel of the concerned Krishi bhavans. The required number of farmers were apportioned randomly to the paddy area under each panchayat from the prepared list. In the next step, each of the selected farmers was requested to indicate the names of male and female labourers who fulfilled the conditions mentioned earlier. From this list one labourer per farmer was selected randomly and the pair of farmer and labourer constituted one dyadic case under the study. While selecting the labourers care was taken to avoid repetition of the same labourer getting selected for different farmers under each panchayat

and to give representation to both male and female labourers. Altogether, 150 farmer-labourer dyads were selected for the study at the rate of 75 dyads from each district. The list of Agricultural sub-divisions, ADA circles, Panchayats and number of farmer-labourer dyads selected for the study is furnished in Table 1 and the map showing the locale of the study is depicted in Fig.2.

### 3.3. SELECTION OF THE VARIABLES FOR THE STUDY

#### 3.3.1. Dependent variable :

Farmer-labourer relationship in rice production systems of Kerala is the dependent variable of the study.

#### 3.3.2. Independent variables :

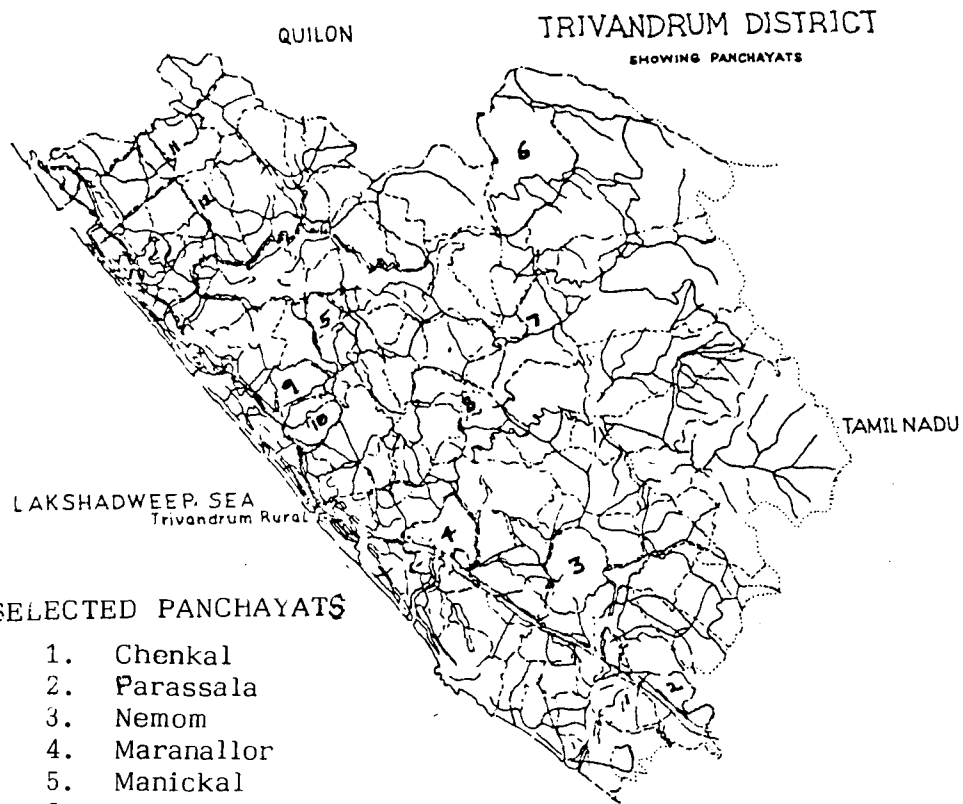
The socio-economic and psychological factors of farmers and labourers are referred as independent variables in the study and the procedure adopted in the selection of these variables is as follows.

An exhaustive list of socio-economic and psychological variables that are likely to influence the farmer-labourer relationship as postulated under the theoretical orientation chapter was prepared. These variables were classified into three groups-common variables applicable to both farmers and

Table 1 Agricultural subdivisions, ADA circles, Panchayats and number of farmer-labourer dyads selected

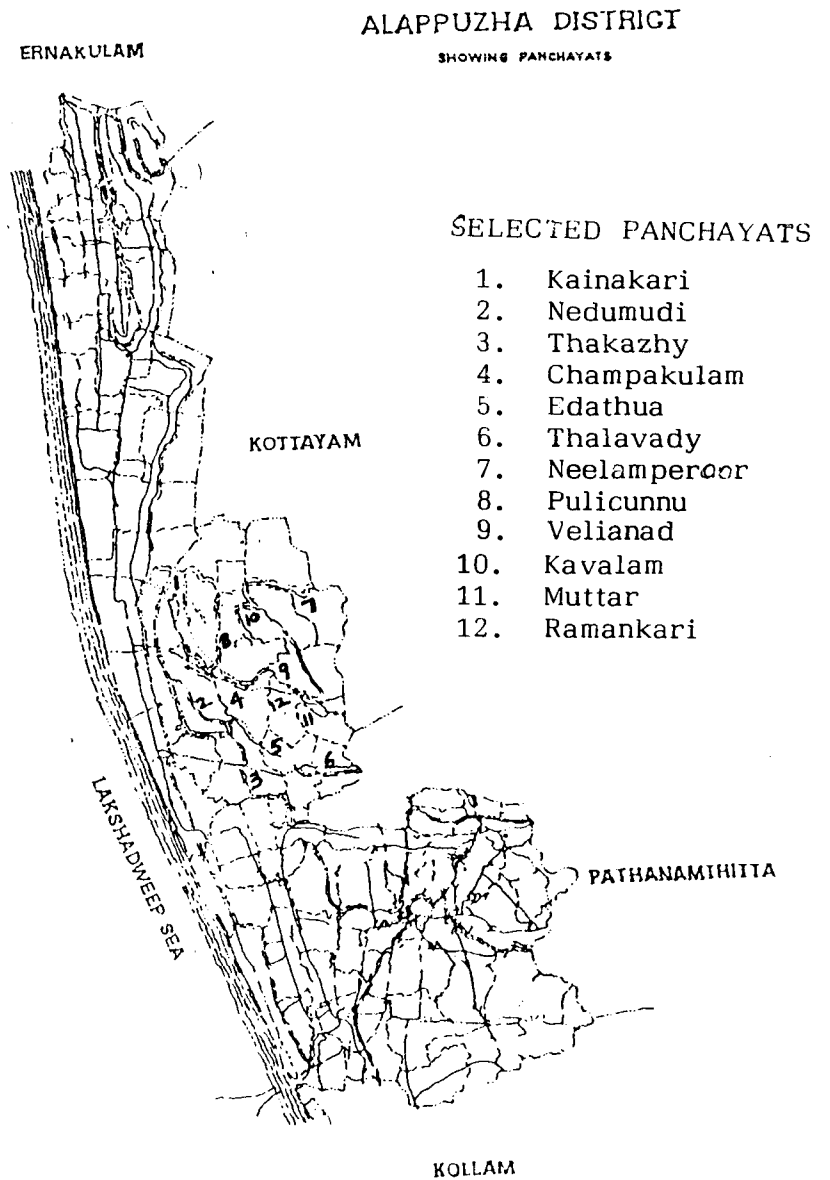
District	Subdivision	ADA circle	Panchayat	No.of farmer-labourer dyads.
1.Thiruvananthapuram.	1. Neyyatinkara	1. Pallichal	1. Maranallor	6
			2. Nemom	6
		2. Parassala	1. Parassala	6
			2. Chenkal	5
	2. Nedumangad	1. Vamanapuram	1. Peringamala	7
			2. Manickal	6
		2. Nedumangad	1. Nedumangad Municipality	8
			2. Anad	2
	3. Attingal	1. Pulimath	1. Karavaram	11
			2. Navaikulam	7
		2. Kazhakootam	1. Andoorkonam	6
			2. Kazhakootam	5
2.Alapuzha	1. Kuttanadu	1. Champakulam	1. Kainakari	9
			2. Nedumudi	7
			3. Thakazhy	7
			4. Champakulam	6
			5. Edathua	6
			6. Thalavady	4
	2. Ramankari	1. Nee lamperoor	1. Nee lamperoor	13
			2. Pulicunnu	8
			3. Velianad	5
			4. Kavalam	4
			5. Muttar	3
			6. Ramankari	3

Fig.2 MAP INDICATING THE SELECTED DISTRICTS AND PANCHAYATS



SELECTED PANCHAYATS

1. Chenkal
2. Parassala
3. Nemon
4. Maranallor
5. Manickal
6. Peringamala
7. Anad
8. Nedumangad  
municipality
9. Andcorkonam
10. Kazhakootam
11. Navaikulam
12. Karavaram



SELECTED PANCHAYATS

1. Kainakari
2. Nedumudi
3. Thakazhy
4. Champakulam
5. Edathua
6. Thalavady
7. Neelamperoor
8. Pulicunnu
9. Velianad
10. Kavalam
11. Muttar
12. Ramankari



labourers, farmer-related variables and labourer-related variables. The list was sent to 60 experts in the field of agricultural extension, with a request to rate the importance of each variable in influencing the farmer-labourer relationship on a three point continuum of 'most important' 'important' and 'least important' with weightages of 3, 2 and 1 respectively. (Appendix I). Out of 60 experts, 41 (68.30%) returned the list after recording their judgment. Mean score and co-efficient of variation were used for the selection of the independent variables as followed by Anantharaman (1991) for selection of variables. Mean score for each variable was calculated by summing up the weightages obtained for a variable and dividing it by the number of judges responded. Similarly co-efficient of variation was worked out by dividing the standard deviation of a variable by its mean score and expressed as percentage. Then, pooling all the mean score, and the co-efficient of variation, group-wise grand mean score and grand co-efficient of variation were worked out by dividing with the number of variables included under each group. The variables with their corresponding mean scores and co-efficient of variation are given in Appendix II.

The variables having high mean score and low co-efficient of variation were selected group-wise for the study. The former one indicated variables' higher degree of importance and the latter revealed higher degree of agreement among the judges on the importance of the variables. Thus 11

common variables namely age, education, farming/labour experience, family income, exposure to media, social participation, participation in union activities, awareness about labour welfare measures, interpersonal trust, attitude towards labour unions and gregariousness, seven farmer-related variables namely labour use efficiency, adoption quotient, opinion about labourers, management orientation, persuasiveness, ability to handle conflicts and flexibility and four labourer-related variables namely employment days, orientation towards work, opinion about farmers and participation in decision making with the farmers were selected.

#### 3.4. OPERATIONALISATION AND MEASUREMENT OF THE VARIABLES

##### 3.4.1. Dependent variable : farmer-labourer relationship

The dependent variable, farmer-labourer relationship was measured by a scale constructed in this study. An attempt has been made to take stock of the different approaches and measurement tools developed to measure interpersonal relationship in various fields like industry, business organisations, agriculture etc. and the same are furnished below. This was found essential, so as to facilitate the construction of a farmer-labourer relationship scale conceptualised under the study on a sound footing.

#### 3.4.1.1. Approaches and measurement tools developed :

The approaches in measuring interpersonal relationship can be broadly classified into two categories as revealed from the review of relevant literature in this field. They are unit or work group approach and dyadic approach.

##### 3.4.1.1.1. Unit or work group approach :

This is a popular and widely employed approach in measuring interpersonal relationship in industry, education, clinical psychology, domestic sector etc., wherein using a structured questionnaire/interview schedule/inventory or in some cases a well constructed scale, responses on employer-employee or manager-worker relationship is obtained separately from either one or both the parties involved in the relationship treating them as a unit or group. It is assumed here that the relationship between an employer and each of his employees are homogeneous (can be treated as the same) and thus can be appropriately averaged. Moreover, studies employing this approach adopted procedures of data collection, design and analysis that were appropriate to this approach.

##### 3.4.1.1.1.1. Studies and measurement tools developed in non-agricultural fields :

Studies on leader-member relationship in formal

organisations by Cantor (1949), Meyer (1949), Parker et al. (1959), Tucker et al.(1967), Thornton (1968), Graham and Oleno (1970), Heller (1971) and Templer (1973) are the notable examples in the study of interpersonal relationship employing unit approach. Rao and Raju (1988) used this approach in studying the employment relations in domestic sector by interviewing 300 house wives and 100 house-maids using two separate questionnaires covering areas such as employment wages, benefits, nature of duties, internal union among domestic servants, grievances, desirable changes etc. Like wise Rao and Rao (1991) analysed the nature of relationship between workers, co-workers, and supervisors, employees and councillors and employees and public in municipalities of Andhra Pradesh using group approach, wherein 200 administrative and technical staff from 10 municipalities were contacted and data collected with a structured interview schedule.

In the field of clinical psychology Pierloot and De Bleeker (1972) studied the relationship patterns existing between doctors and asthmatic patients by interviewing a group of asthmatic patients undergoing treatment in hospitals using a simple questionnaire. Noel (1983) investigated the black male-female relationship by surveying through questionnaires 155 middle class black men to obtain data on their perception of key issues related to the problems affecting black male-female relationships.

3.4.1.1.1.2. Studies and measurement tools developed in agriculture :

In the field of agriculture, evidences can be obtained on the study of cultivator-labourer relation on a overall basis as denoted by agrarian relation. In majority of the studies, the unit or group approach was found adopted in investigating the relationship. (Mukhopadhyay,1975; Page,1975; Singh and Singh,1975, Joshi,1975; Aggarwal,1975; and Parthasarathy and Prasad,1975). All these investigations attempted to analyse the changing agrarian relations in various parts of India and the effect of land reforms, labour movements, technological advancements etc. on the agrarian relationship. A focus on inter personal relationship existing between farmer and labourer was analysed in the study conducted by Alexander (1981) and Lukose (1982).

Alexander (1981) used a farmer-labourer relations scale containing 15 items which included patron-client relations, intercaste relations and working conditions. Response on this scale was obtained from both the farmer- respondents and the labourer-respondents drawn from the states of Karnataka, Kerala and TamilNadu. A score of '2' was given for the response indicating egalitarian relation and '1' for traditional relation. Lukose (1982) studied the role of labour movements on agrarian relations in Kerala by interviewing cultivators, labourers and labour unions

separately, selected from the districts of Alapuzha and Palakkad, covering the aspects of labour recruitment, wages, incidences of disputes, unionisation, social relationships etc. Frequency and simple percentage were used in analysing and interpreting the data collected.

Inspite of its common use, the unit or group approach was found inadequate to study interpersonal relationships. Stogdill (1948) from the survey of leadership studies in which attempts had been made to determine the traits or characteristics of leaders, concluded that this approach to the study of leadership was an inadequate one. "Leadership appears rather to be an working relationship among members of a group, in which the leader acquires status through active participation and demonstration of his capacity for carrying co-operative tasks through to completion" he commented. Gibb (1950) pointed out from a survey of leadership studies that the function of the leader was to embody and give expression to the needs and wishes of the group and to contribute positively to the satisfaction of these needs. Roethlisberger (1938) and Barnard (1946) among many others who had contributed significantly in the study of industrial relations have regarded such an ability as an important one for effective leadership. In this regard, the unit approach was found inappropriate. Moreover, the results from the studies using group approach suggested that leader-member/ employer-employee agreement was seldom achieved with respect

of their interdependencies. (Graen and Schiemann, 1978). Instead they proposed a dyadic approach to the problem of studying interpersonal relationship. This approach was found to overcome the lacunae noticed in unit approach, to a great extent.

#### 3.4.1.1.2. Dyadic approach :

A dyad is the smallest unit of interaction and in many ways it is a microcosm of all larger groups. It represents interpersonal relationship between two individuals in an interacting situation. Each dyad is treated as a single unit for analysing and interpreting the relationship between the members of the dyad. There are only few studies in the past using dyadic approach. Graen and Schiemann (1978) used vertical dyad linkage model to test whether the agreement between a leader and a member regarding the meaning of certain mutually expressed events and situations would covary with the quality of their dyadic interdependencies. It was assumed here that the linkages between a leader and each of the members within a unit were potentially heterogeneous and hence could not be appropriately averaged as was done in unit approach. Each vertical dyad was treated as a unit of leadership and analysed. The study had demonstrated that leader-member agreement could be analysed by employing vertical dyad linkage model, than using average leadership

style approach. In case of agriculture hardly any studies wherein dyadic approach is used are available. However, Reddy and Reddy (1990) analysed the degree of homophily-heterophily having a bearing on the interpersonal communication behaviour efficiency among exclusive agricultural communication dyads using dyadic approach.

#### 3.4.1.2. Development of farmer-labourer relationship scale :

Farmer-labourer relationship is operationally defined as the extent and nature of dyadic agreement on day-to-day interactions focusing on various items of relationship taking place between a farmer and a hired agricultural labourer during work and non-work situations. The farmer-labourer relations scale developed by Alexander (1981) did not cover the entire gamut of relationship. In addition, the unit approach adopted in getting the response and the type of response pattern used were some of the limitations of this scale. Therefore, a farmer-labourer relationship scale was developed employing vertical dyadic approach considering its supremacy over unit or group approach for the study of interrelationship. The steps followed in the development of the scale is detailed below.

##### 3.4.1.2.1. Item generation :

As an initial step in the scale development all the



possible items of relationship were collected by reviewing literature in the areas of industrial relations, interpersonal relationship in business organizations and agriculture and in consultation with the experts in these fields. The critical incident technique suggested by Flanagan (1954) was also employed to collect items from field situation. This technique uses detailed description of an individuals behaviour regarded as favourable or unfavourable in a given situation. It involved asking persons who are in the best position to observe for behaviours that they have noted that led to unusual success. Five farmers and five agricultural labourers each from the district of Thiruvananthapuram and Alapuzha having rich experience in farming were identified with the help of the extension personnel of the districts concerned and were requested to describe their experiences in their relationship both favourable and unfavourable. These were utilised in the formation of relationship items. Altogether 148 items were generated and theoretically classified under seven dimensions namely economic, work, management, motivation, communication, human relations and social. The appropriateness and feasibility of the items were pretested with a group of farmers and labourers.

#### 3.4.1.2.2. Preliminary screening of items by relevancy rating:

The relevancy or otherwise of the 148 items generated in

the first step was established by sending these items to 120 judges with appropriate instructions (Appendix III). The judges comprised experts in the field of extension, organisational management and field level extension functionaries. They were asked to rate the degree of relevancy of each item in measuring the farmer-labourer relationship on a three point of continuum of 'most relevant', 'relevant' and 'least relevant' with corresponding score of 3, 2 and 1, respectively. Out of 120 judges, 71 (59.16%) responded. The mean relevancy score and coefficient of variation for each item was worked out as per the procedure outlined under the selection of independent variables. The items with mean relevancy scores above grand mean relevancy score and coefficient of variation below grand coefficient of variation were selected as was done earlier. By employing this selection procedure 64 items were selected (Appendix IV) and subjected to further analysis.

#### 3.4.1.2.3. Item analysis :

It refers to a set of procedures that is applied to know the indices of truthfulness of items (Singh, 1986). Item difficulty, discrimination index, correlation of item score with total score are the most common indices used in item analysis (Anastasi, 1961 and Guilford, 1971). Under this study, item discrimination, dyadic agreement of items and

item-total correlation were the indices used in the selection of items.

#### 3.4.1.2.3.1 Pilot survey :

A pilot survey has been undertaken to generate data on farmer-labourer relationship necessary for performing item analysis. This was conducted with two dyadic groups of 30 farmers and labourers each selected from the non-sample area of the study districts. The known group technique was adopted in the selection of dyadic groups because of the following reasons. By identification of dyadic groups through random selection, it was feared that the quality of relationship of the dyads selected might possibly be falling at either extremes of the best or worst or at the middle. Moreover, the chance of occurrence of dyads with erratic relationship could not be ruled out. Such type of dyads would not facilitate in performing the indices of item analysis as contemplated earlier. Hence, the known group technique was followed, where in two groups of farmer-labourer dyads were selected. It was originally thought of making two dyadic groups one representing best relationship and the other representing worst. However, under field conditions the occurrence of farmer-labourer dyads with worst relationship could not be identified. Once the relationship tended to become worse, the farmer no longer employed such labourers, the relationship

ceases to exist and never proceeded further. Moreover, the study aimed to analyse the farmer-labourer relationships as they exist and not as they existed some time ago (Expost facto). So, in the absence of worst relationship group, a normal relationship dyadic group was selected. The dyadic groups were formed by listing out the names of paddy farmers in the non-sample area and were asked to indicate the names of labourers with whom they had best relationship and normal relationship. The quality of dyadic relationship was rechecked with the concerned labourers and was also cross checked by obtaining the opinion of neighbouring farmers and labourers. From this list, two dyadic groups of 30 each were formed one having best relationship and another having normal relationship.

#### 3.4.1.2.3.2. Response pattern of relationship items :

Use of bipolar adjectives as in the case of semantic differential technique of Osgood (1952) was preferred over frequency rating for getting the response of the dyadic groups on the items of relationship owing to the following reason.

The farmer-labourer relationship concerns primarily with the behaviour of farmers and labourers at work situation and the nature of relationship is such that it can range from the best to the worst. Hence, bipolar adjectives can be appropriate to get suitable response on relationship.

Bipolar adjectives as in the semantic differential technique which is widely used in the study of new concepts, was at times employed in the study of interrelationship as revealed from the following studies.

Weaver (1958) utilized bipolar adjectives of SD technique for the quantification of the frame of reference in labour management communication in the area of industrial relations. Like wise Hoornaert and Pierloot (1976) studied the transference aspects of doctor-patient relationship in psychosomatic patients, employing bipolar adjectives. Hobart (1988) made use of bipolar adjectives to elicit information on the quality of parent-(step) child relationships as perceived by remarried and first married husbands and wives. The afore mentioned studies amply justify the use bipolar adjectives for the study of farmer-labourer relationship. The items selected from relevancy rating were reframed without changing the content to facilitate the use of bipolar adjectives in the present study (Appendix V). The response on the items were obtained on a 5 point scale as indicated below.

Item : Payment of wages ..... Immediately - delayed.

<u>Response pattern :</u>	<u>Score allotted</u>
1. Very much immediately	5
2. Some what immediately	4
3. Neither immediately nor delayed	3
4. Somewhat delayed.	2
5. Very much delayed.	1

3.4.1.2.3.3. Item discrimination, dyadic agreement and item - total score correlation.

The items which satisfied the mentioned below criteria for item discrimination, dyadic agreement and item-total score correlation were selected for inclusion in the farmer-labourer relationship scale.

There should be a significant difference in the response of best relationship dyadic group from that of the normal relationship dyadic group with regard to relationship items. This indicated the power of the items to discriminate the best relationship group from the normal relationship group.

There should not be any significant difference in the response of farmer-respondents from that of labourer-respondents within the each dyadic group with respect to relationship items. This was nothing but the dyadic agreement of items, indicating the homogeneity in response.

There should be a significant item-total correlation for each item between the item score and total score which indicates the internal consistency of the developed scale. Pearson's product-moment method was used to work out the item-total correlation of each of the items for farmer-respondents and labourer-respondents separately. Correlation was also found for the combined sample, wherein the average of the dyadic response was used for calculation.

The 2x2 factorial design analysis as suggested by Ferguson (1976) was employed in item analysis, as it involved finding out the effects of dyadic groups and class of respondents ie. the farmers and the labourers on the response pattern of the relationship items. The interaction effects, however were not considered for selection of items, since those were not directly influencing the selection process.

#### 3.4.1.2.3.4. Selection of items for final scale :

The results of the item analysis of 64 items performed on the basis of item discrimination, dyadic agreement of items and item-total correlation are presented in Appendix V. Thirty three items which had significant discrimination, in significant class response (dyadic agreement of items) and significant item-total correlation were selected for inclusion in the final scale.

#### 3.4.1.2.4 Classification of relationship items into dimensions :

There are various ways of grouping the items into dimensions both on theoretical lines and by employing statistical measures. Factor analysis, principal component analysis, McQuitty linkage analysis and cluster analysis are some of the statistical methods used for grouping of objects.

Considering its simplicity, effectiveness and novelty in application in the field of agricultural extension, cluster analysis, as suggested by Chatfield and Collins (1980), which was hitherto mostly used in biometrics was employed to classify the 33 farmer-labourer relationship items selected through item analysis and included in the scale. This facilitated analysing and interpreting the relationship of farmer-labourer dyads with respect to various dimensions delineated from the cluster analysis.

#### 3.4.1.2.4.1. Cluster analysis:

Cluster analysis is the general procedure by which entities are grouped together objectively on the basis of their similarities or differences (Bignen, 1970 and Tyron and Bailey, 1970). According to Chansarkar (1987) one can either group together the general properties of the objects called clustering of variables-V analysis or group together the objects into types or classes called clustering of objects-O analysis. The type of analysis employed under the present study belonged to the latter type considering the nature of the problem investigated.

Cluster analysis aims to allocate a set of individuals or objects to a set of mutually exclusive, exhaustive groups such that the individuals or objects within a group are similar to one another, while individuals or objects in



different groups are dissimilar. This set of group is usually called a partition. The group forming a partition may be subdivided into smaller sets or grouped into larger sets, one that eventually ends up with the complete hierarchial structure of a given set of objects/individuals. This structure is often called a hierarchical tree and can be presented diagrammatically. The term 'cluster analysis' is most synonymously used with 'classification' to denote grouping techniques where categories are determined from the data.

In order to carry out a cluster analysis, the similarity (or dissimilarity) of every pair of individuals is measured and there are many ways of doing this. While the similarities are sometimes observed directly, in other cases they are derived from the data in an appropriate way. Lin et al. (1986) enlisted two major classes of similarity measures: unicriterion and multicriterion. For the former, there are four groups: (i) euclidean distance (d) (ii) standardised distance (ds) (iii) dissimilarity index (D) and (iv) correlation coefficient (r). Amongst these, euclidean distance proposed by Hanson (1970) and used by Mungomery et al. (1974) and Johnson (1977) is one of the most common measures of dissimilarity.

Since the items included in the present scale represented the unicriterion of farmer-labourer relationship, euclidean distance was used in the present study and the same

for every pair of items was calculated using the formula.

$$d^{2ii'} = \sum_{j=1}^q (x_{ij} - x_{i'j})^2$$

where  $d^{2ii'}$  = euclidean distance between items  $i$  and  $i'$   
 $(x_{ij} - x_{i'j})$  = difference between the scores of items  $i$   
and  $i'$  for  $j$ th respondent.

Having calculated the pair-wise euclidean distance of items, grouping of items into clusters was carried out employing the method suggested by Tocher as followed Rao (1952). The various steps involved in Tocher method are described below.

In the first step of grouping the items into distinct clusters, the items are arranged in order of their relative distances from one another in ascending order in the form of a matrix. The euclidean distance matrix of 33 items of farmer-labourer relationship scale is given in Appendix VI.

In the next step the two items having smallest distance from each other are considered to form a cluster.

To the above two items, a third item having smallest average euclidean distance from the first two populations is added.

Then the nearest fourth item is added and it is continued, till there is a disrupt increase in the average euclidean distance value. This completes the formation of the first cluster.

The above steps are repeated to form second and

subsequent clusters, till all the items are included into one or other cluster. The above process can be explained by the example as under. It is considered that items A and B are having the smallest euclidean distance and this is the first cluster. To this item C, having smallest distance from A and B is added. Now with 3 items in a cluster there are  $n(n-1)/2$  possible item distances ie  $3(3-1)/2 = 3$ , the distance from item A to B, B to C and A to C. The total euclidean distance values is then equal to  $d^2(A \rightarrow B) + d^2(B \rightarrow C) + d^2(A \rightarrow C)$  which is termed as  $d^2_3$ . After adding item C in cluster 1, there is an increase in  $d^2$  value ie  $d^2_3 - d^2_2$ .

Before adding item C to cluster 1, there is only one cluster distance (p) from item A to B ie  $p = 1$ . After including the item C, there are  $3(3-1)/2 = 3$  cluster distances, say  $n=3$ . Thus there is an increase in the number of combinations, that is  $n-p = 3-1 = 2$ . The average increase after adding item C is  $(d^2_3 - d^2_2)/2$ . This average increase in  $d^2$  distance is permissible, till this increase is approximately near to maximum  $d^2$  value between any two populations in the first row of the matrix, where euclidean distance values are arranged in increasing order of magnitude. By employing this process various clusters are formed till all the items are included in one or other cluster. The results of the cluster analysis and the various dimensions of farmer-labourer relationship identified are presented under results chapter.

#### 3.4.1.2.4.2. Labeling of clusters :

After forming the clusters employing Tocher method, these clusters were considered to represent the various dimensions of farmer-labourer relationship. They were labeled suitably taking into consideration the common content of the items grouped under each cluster as followed by Nehru (1993).

#### 3.4.1.3. Final format of the scale and quantifying procedure.

The final format of the scale contained the dimensions and the items grouped under each of the dimensions (part D of Appendix VIII). The response categories for the items and the scores allotted for the response categories are the same as described in the item analysis part.

In the present study the score obtained by the farmer-respondent and the corresponding labourer-respondent on each item was averaged, which represented the item score of the farmer-labourer dyad, since there was a dyadic agreement in the response pattern of the items included in the scale, established through item analysis. This can be represented

by a notation as

$$\sum_{i=1}^n f_i l_i = (f_1+l_1/2) + (f_2+l_2/2) \dots\dots\dots + (f_n+l_n/2)$$

where  $f_1 \dots\dots\dots f_n$  refer to individual scores on items obtained by the farmer-respondent and  $l_1 \dots\dots\dots l_n$  represent individual scores on items obtained by the labourer-

respondent. The dimension score was derived by simple addition of scores obtained by dyads on the items grouped under a particular dimension. Then, the farmer-labourer relationship score was computed by summing the dimension-wise scores. This can be denoted as

$$\sum_{i=1}^n D_i = D_1 + D_2 + \dots + D_n$$

where  $D_1, \dots, D_n$  refer to individual score on dimensions. Owing to the significant item validity of all the items included in the scale, it was assumed that their contribution towards relationship were on par. Moreover, as there was variation in the number of items clustered under different dimensions, that itself had accounted for differential weights for different dimensions. Hence, differential weightages were not awarded to the selected items. This kind of scoring procedure was adopted by Anantharaman (1991) for arriving at the managerial efficiency score of cassava farmers using the managerial efficiency scale developed.

The final format of the scale given in Appendix VIII has thirty three items grouped under nine dimensions. The minimum score obtainable by a respondent by using this scale is 33 and the maximum is 165. The average relationship score obtained by a group of farmer-labourer dyad to whom the scale is applied in worked out and this score is used to categorise the dyads as high and low groups. High group refers to those dyads whose relationship score is higher than the average

score and the dyads having low relationship score come under low group.

#### 3.4.1.1. Standardisation of the scale:

The scale has been standardised by establishing the reliability and validity of the scale.

#### 3.4.1.4.1. Reliability :

The reliability of a test refers to the consistency of scores obtained by same individuals on different occasions or with different sets of equivalent forms. (Anastasi,1961). In this study, reliability was determined by test-retest method. The scale was administered to 30 farmer-labourer dyads of non-sample villages in Thiruvananthapuram and Alapuzha districts twice at 15 days interval. The correlation co-efficient (0.79) worked out between the two sets of relationship scores was highly significant indicating the high reliability of the scale.

#### 3.4.1.4.2. Validity :

A scale is said to be valid, when it actually measures what it claims to measure. (Goode and Hatt, 1952). The validity of the scale was found by using the following methods.

#### 3.4.1.4.2.1. Content Validity :

It is concerned with whether or not the test covers a representative sample of behaviour domain to be measured. (Anastasi, 1961) This was ensured during the preparation of the scale itself, during which time, utmost care was taken to include all the items to represent the universe of contents.

#### 3.4.1.4.2.2. Construct Validity :

The construct validity of a test is the extent to which the test may be said to measure the theoretical construct or trait and correlation between the new test and similar earlier test gives evidence that the new test measures the same area of behaviour as other tests designated by the same name (Anastasi, 1961). For the study, the construct validity was tested by working out correlation coefficient between relationship scores of 30 farmer-labourer dyads of non-sample villages from Thiruvananthapuram and Alapuzha districts and their scores on the earlier developed cultivator-labourer relations scale by Alexander (1981). The correlation co-efficient computed was 0.81, which was highly significant, revealing that the scale has construct validity.

#### 3.4.1.4.2.3. Known group validity :

According to this method a scale is administered among

persons who are known to hold a particular opinion or belonging to a particular category and the results are then compared with known facts. (Bhatnagar,1990) For testing the validity of the scale using this method, the already identified two dyadic groups of 30 each one having best relationship and another having normal relationship for item analysis was utilized. The scale was administered to these two dyadic groups and the mean relationship scores of these two groups were compared and tested for significance of difference ie critical ratio. The computed critical value of 7.26 was highly significant, establishing the known group validity of the scale.

#### 3.4.2. Independent variables :

##### 3.4.2.1. Common variables :

Common variables are operationally defined as the socio-economic and psychological characteristics of respondents applicable to both the farmer-respondents and the labourer-respondents of the study.

##### 3.4.2.1.1. Age :

It refers to the chronological age of farmer/labourer respondent. The actual age of the respondent in completed years at the time of data collection was taken as the age of the respondent.



## 3.4.2.1.2. Education :

It refers to the level of formal education attained by a farmer/labourer respondent. The procedure followed in the socio-economic scale of Trivedi (1963) was used for scoring the various educational levels of the respondents. The scoring procedure was as follows.

Level of Education	Scores
Illiterate	0
Can read only	1
Can read and write	2
Primary School	3
Middle level	4
High School	5
College	6
Above college	7

## 3.4.2.1.3. Farming/labour Experience :

It refers to the number of years of experience as a farmer cultivating paddy/labourer employed in paddy cultivation of the respondents. Experience in farming/farm labour in total number of years as followed by Chandran (1988) and Jaleel (1992) was adopted in the present study.

#### 3.4.2.1.4 : Family income :

It refers to the annual income in rupees obtained by a farmer/labourer respondent and his/her family members. This was directly measured from the response of the respondents.

#### 3.4.2.1.5 : Exposure to media :

It refers to the extent to which farmer/labourer respondent is exposed to various information media. The measurement procedure adopted by Syamala (1988) was used to quantify this variable. The weightages with reference to the frequency of usage are given below.

Frequency	Scores
Two or more times a week	4
Once a week	3
Once a fortnight	2
Once a month	1
Never	0

The exposure to media score of each respondent was computed by adding the score secured in each of the media, and the various information media included in the study are furnished in part A of Appendix VIII.

#### 3.4.2.1.6. Social participation:

It refers to the extent of involvement of a farmer/

labourer respondent in formal social organisations either as members or office-bearers and the frequency of attendance in meetings. The procedure developed by Lokhande (1974) was adopted for the measurement of social participation. The procedure is as under.

Item	Scores
No membership	0
Membership in one organisation	1
Membership in more than one organisation	2
Office-bearer in one organisation	3
Office-bearer in more than one organisation	4
Distinctive features (MLA,MP etc.)	6

Scores of 3,2 and 1 were assigned for attending meetings regularly, occasionally and never, respectively. The total score of the respondent was computed by multiplying the membership/ office-bearer score with attendance score for each organisation and these scores were summed up for the social organisations in which participation was reported.

#### 3.4.2.1.7. Participation in union activities :

It refers to the extent and nature of participation of

farmer/labourer respondent in various activities of union/association. A scoring procedure on the lines of social participation of Lokhande (1974) was developed for measuring this variable. The details of the procedure developed are given below.

Item	Scores
Membership in union/association	1
Office-bearer in union/association	2

Weightages of 3,2 and 1 were assigned for regularly, occasionally and never, respectively for participation in various union/association activities such as giving subscription, attending meetings, taking part in agitations, conferences, raising funds etc. The membership/office-bearer score of the respondent was multiplied with his/her participation score for each activity and these were added to get the final score of the variable.

#### 3.4.2.1.8 Awareness about labour welfare measures :

It refers to the extent of awareness of a farmer/labourer respondent on various labour welfare measures being operated by the government of Kerala. This was measured with a teacher-made awareness test developed by Fathimabi (1993) on the lines as explained by Remmers et al. (1967). The test

consisted of 15 items covering the two important labour welfare measures - 'Agricultural Labourers' Pension Scheme' and 'Agricultural Labourers' Welfare Fund Scheme. A score of '1' for correct answer and '0' for incorrect answer was given for each item and the total awareness score of the respondent was calculated by adding the score assigned to each of the items. The details of the items included under awareness test are furnished in part A of Appendix VIII.

#### 3.4.2.1.9. Interpersonal trust :

It refers to the extent of positive or negative feeling of a farmer/labourer respondent towards mutual trust and confidence. The interpersonal trust scale developed by Christopher (1974) was used to measure this variable with slight modifications to suit the present study. The scale consists of 10 statements and the respondents were asked to respond to each statement on a five-point continuum of strongly agree, agree, neutral, disagree and strongly disagree. For positive statements weights of 5,4,3,2 and 1 in that order were given and the scoring procedure was reversed in the case of negative statements. The total score of the respondent was found by summing up the scores on all the statements. The modified interpersonal trust scale is presented in part A of Appendix VIII.

#### 3.4.2.1.10. Gregariousness:

It refers to the habit of a farmer/labourer respondent in making friends easily, being talkative, taking part in discussions and other social activities, assuming leadership etc. This was measured using Mathew Temperament Scale developed by Subramony (1979) with slight modification to suit the purpose of the study. The scale has 15 items on various activities measuring gregariousness of a person and the respondents were asked to indicate the frequency of involvement in each activity. A weightage of 5,4,3,2 and 1 was given for mostly, often, sometimes, rarely and never, respectively. The gregariousness score of the respondent was calculated by adding the scores assigned to each activity. The format of the scale is given in part A of Appendix VIII.

#### 3.4.2.1.11. Attitude towards labour unions :

It refers to the degree of liking or disliking of a farmer/labourer respondent towards labour unions. This was measured with an attitude scale constructed exclusively for the study following Thurstone's equal appearing interval method as described by Edwards (1957). The details of the steps followed in the construction of the scale are given below.

#### 3.4.2.11.1. Collection of items :

The statements, both favourable and unfavourable towards labour unions were collected from the review of literature on labour unions and discussion with experts. A total of 75 statements were collected and after editing them based on the criteria suggested by Edwards (1957), 52 statements were retained.

#### 3.4.2.1.11.2. Item analysis :

The edited items were administered to 35 experts in the field of agricultural extension, requesting them to sort and place each statement on a 7 point continuum of highly unfavourable (1) to highly favourable (7) with a neutral (4) point in the middle. It was assumed that the intervals into which the statements were sorted or rated are equal and the attitude of the subjects did not influence the sorting of the statements into various intervals. In other words subjects having favourable attitude and those having unfavourable attitude would do the sorting in a similar manner. Thus the scale value of the statements is independent of the attitude of the judges.

In the next step the scale value and Q value of each statement was calculated by constructing a frequency table of sorting. From this frequency table the median and Q were

calculated for each statement separately. The median is the scale value of the statement and Q indicated the extent of disagreement among the experts regarding the degree of attributes possessed by the statement. The median or scale value was calculated by the formula.

$$\text{Scale value (Median)} = l + \frac{(N/2 - F)}{F_m} i$$

where  $l$  = the lower limit of the interval in which the median falls.

$F$  = Sum of all frequencies below  $l$  or the cumulative frequency of the interval below  $l$ .

$F_m$  = Frequency of the interval that contains the median.

$i$  = width of the interval which was assumed to be 1.00

and

$N$  = number of subjects.

For estimating Q, Q1 and Q3 were calculated using the formula given below.

$$Q1 = l + \frac{(3N/4 - \text{cum.F})}{(F_q)} i$$

where  $Q1$  = first quartile or 25<sup>th</sup> percentile.

$l$  = lower limit of the interval in which 3N/4 falls.



cum.F = cumulative frequency of the interval below l

Fq = the frequency of the interval which contains  
N/4.

i = width of the interval which was assumed to  
be 1.00.

and

N = number of subjects.

$$Q3 = l + \frac{(3N/4 - \text{cum.F})}{(Fq)} i$$

where Q3 = third quartile or 75<sup>th</sup> percentile.

l = lower limit of the interval in which 3N/4  
falls.

cum.F = cumulative frequency of the interval below  
l.

Fq = the frequency of the interval which  
contains 3N/4.

i = width of the interval which was assumed to  
be 1.00.

and

N = number of subjects.

After calculating Q1 and Q3, Q was calculated by the formula.

$$Q = Q3 - Q1$$

The statements with their respective scale values and Q values are given in Appendix VII. Q is a measure of the spread of the middle 50 per cent of judgments. When the subjects are in close agreement with the degree of favourableness or unfavourableness shown by a statement, the value of Q will be small. Statements with largest Q value were omitted as suggested by Guilford (1954) and such statements were generally considered to be vague and ambiguous and therefore dropped. Hence, starting from the statements having the lowest Q value, totally 22 statements with less Q value (Thurstone and Chave, 1929) were selected for the final scale with 11 each positive and negative statements. The final format of the scale is presented in part A of Appendix VIII.

#### 3.4.2.1.11.3. Scoring:

The respondents were asked to indicate their agreement or disagreement to each of the attitude statement. Then, the respective scale values were assigned to the statements for which the respondents indicated their agreement. The attitude score of the respondent was found by calculating the mean of the scale values of all those statements endorsed by him/her.

#### 3.4.2.1.11.4 Reliability of the scale :

Reliability of the scale was measured by using test-

retest method. The scale was administered to 30 farmer-respondents and 30 labourer-respondents selected from a non-sample area in Thiruvananthapuram district twice at an interval of 15 days. The correlation coefficient (0.71) worked out between the two sets of scores was found to be highly significant. This indicated that the scale was reliable.

#### 3.4.2.1.11.4. Validity of the scale :

The scale was examined for the content validity by determining how well the contents of the scale represent the subject matter under study. As all the possible statements, covering the universe of content were selected from literature and discussion with experts, the scale satisfied the content validity. Moreover, the highly significant correlation (0.83) between the constructed scale with a similar type of scale developed by Subramony (1979) under industrial conditions confirmed the construct validity of the scale.

#### 3.4.2.2. Farmer-related variables :

##### 3.4.2.2.1. Labour use efficiency :

It refers to the number of labourers used in producing one kilogram of paddy by a farmer-respondent. This was estimated from the data on the total number of hired agricultural labourers, both male and female employed for

paddy cultivation and the yield of paddy obtained by a farmer-respondent during the past two seasons preceding the period of data collection. Taking into account the wage difference, three units of female labour was converted into two units of male labour. This kind of conversion of female labour into male labour on the basis of wage difference was followed by Nirmala (1992) while analysing the economics of rice cultivation in T.Nadu. Labour use efficiency was worked out as in line with the marginal physical productivity of inputs used by Patel (1982) for finding out the inputs productivity in agriculture. This was done separately for each season by dividing the quantity of paddy yield in kilogram by the number of labourers employed for producing the same and the average of two seasons was computed for use in the study.

#### 3.4.2.2.2. Adoption quotient :

It refers to the extent of adoption of scientific practices in paddy cultivation by a farmer-respondent taking into consideration the potentiality and extent of adoption of such practice. This was measured using the procedure developed by Chattopadhyay (1963). Use of high yielding varieties, seed treatment, soil testing, liming, use of chemical fertilizers and use of plant protection measures were the six improved practices selected for measuring this

variable, as considered by Ramachandran (1992) for studying the impact of rice minikit trials on adoption behaviour of farmers. The adoption quotient was calculated using the formula as under.

$$\text{Adoption quotient} = \frac{\sum_{i=1}^n e/p}{N} \times 100$$

where

$\Sigma$  = the summation

e = extent of adoption of each practice

p = potentiality of adoption of each practice

and

N = total number of practices selected.

#### 3.4.2.2.3. Opinion about labourers :

It refers to the general idea a farmer-respondent has in mind about the hired agricultural labourers employed for crop cultivation. This was measured using the schedule developed by Padmanabhan (1981) with slight modification. There are 10 statements in the schedule and the respondents were asked to indicate their degree of agreement or disagreement to these statements on a five point continuum. A weightage of 5,4,3,2 and 1 was given to strongly agree, agree, neutral, disagree and strongly disagree, respectively for positive statements and the scoring was reversed for negative statements. The

opinion score of the respondent was found by summing up the weightages allotted to each statement. The schedule format used in the study is presented in part B of Appendix VIII.

#### 3.4.2.2.4. Management orientation :

It refers to the degree to which a farmer-respondent is oriented towards scientific management comprising of planning, production and marketing of his farm enterprise. This was measured by the management orientation scale of Samanta (1977) which has 18 statements, six each under planning, production and marketing. A score of '1' for agreement and '0' for disagreement was given for positive statements and the scoring was reversed for negative statements. By adding the scores allotted to each statement, the management orientation score of the respondent was computed. The format of the scale is furnished in part B of Appendix VIII.

#### 3.4.2.2.5. Persuasiveness :

It refers to the ability of farmer-respondent to influence by arguments, by reasons, by inducements or to win over other person to accept something to be true, credible, essential, commendable or worthy. This was measured by an arbitrary schedule developed for the study on the lines of the principles of communication-persuasion process outlined by

McGurie (1973). The schedule has 10 statements and the respondents were asked to give their response on a three point continuum of always, some times and never. A weightage of 3, 2 and 1 was allotted in that order to positive statements and the scoring was reversed for negative statements. By summing up the scores allotted to all the statements, the persuasiveness score of the respondent was found. The schedule developed is presented in part B of Appendix VIII.

#### 3.4.2.2.6 Ability to handle conflicts :

It refers to the ability of a farmer-respondent to manage differences with the labourers to the greatest satisfaction of all the involved persons. This was measured by an arbitrary schedule developed for the study on the lines of conflict management scale of Pareek (1988) developed under formal organisation condition. The schedule comprised 10 statements and the response was obtained on a three point continuum of always, sometimes and never with corresponding weightages of 3,2 and 1 for positive statements and the scoring was reversed for negative statements. By addition of scores allotted to each statement, the total score of the respondent for this variable was worked out. The format of the schedule developed is given in part B of Appendix VIII.

#### 3.4.2.2.7. Flexibility

It refers to the ability of a farmer-respondent to

respond quickly to different people, changing environment, and situations. This variable was measured by an arbitrary schedule developed in line with the adjustment scale of Parikh and Das (1988) developed under formal organisation condition. The schedule has 10 statements and the farmer-respondents were asked to give their response on a three point continuum of always, sometimes and never. A weightage of 3,2 and 1 was assigned in that order for positive statements and the scoring was reversed for negative statements. The flexibility score of the respondent was computed by summing up the scores allotted to each statement. The format of the schedule developed is furnished in part B of Appendix VIII.

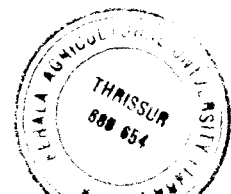
3.4.2.3. Labourer - related variables :

3.4.2.3.1 Employment days :

It refers to the number of days of employment of a labourer-respondent as hired agricultural labourer during the last year. It was directly measured from the response of the respondents.

3.4.2.3.2. Orientation towards work :

It refers to the extent to which a labourer-respondent is oriented towards various aspects of work as a hired agricultural labourer. This was measured using the schedule





developed by Padmanabhan (1981) with suitable modifications. There are 10 statements in the schedule and the respondents were asked to record their extent of agreement or disagreement to these statements on a five point continuum of strongly agree, agree, neutral, disagree and strongly disagree. A weightage of 5,4,3,2 and 1 in that order was assigned to positive statements and for negative statements the scoring order was reversed. The orientation score of the respondent was worked out by adding the scores of all the statements. The format of the schedule is given in part C of Appendix VIII.

#### 3.4.2.3.3. Opinion about farmers :

It refers to the general idea a labourer-respondent has about the farmers with whom he is employed as hired labourer for crop cultivation. This was measured by adopting the schedule developed by Padmanabhan (1981) with slight modifications. This has six statements and the response to these statements were obtained on a five point continuum of strongly agree, agree, neutral, disagree and strongly disagree with weightages of 5,4,3,2 and 1 respectively for positive statements and the scoring was reversed for negative statements. The total score on this variable was computed by summing up the scores assigned to all the statements. The schedule developed is given in part C of Appendix VIII.

#### 3.4.2.3.4. Participation in decision making with farmers :

It refers to the extent to which a labourer-respondent is involved in decision making with the farmers regarding what to cultivate, how to cultivate etc. This was measured using the schedule of Padmanabhan (1981) which comprised 12 decision making activities of the farmers and the labourer-respondents were asked to indicate their extent of participation in such activities. A weightage of 4,3,2 and 1 was assigned to most often, often, sometimes and never respectively for positive items and the scoring was reversed for negative items. The total score of the respondent on this variable was worked out by adding the scores on all the activities. The schedule used in the study is given in part C of Appendix VIII

#### 3.5. PROCEDURE EMPLOYED IN DATA COLLECTION

The data collection was done using a structured interview schedule prepared for the purpose of the study (Appendix VIII). The interview schedule consisted of four parts. Part A was employed to collect information from both the farmer-respondents and the labourer-respondents on common variables and in Part-B data on farmer-related variables were gathered from the farmer-respondents. Part C was concerned with the information on labourer-related variables to be collected from the labourer-respondents. The final one, Part

D was meant to record the response of both the classes of respondents on the farmer-labourer relationship scale.

### 3.6. STATISTICAL TOOLS USED FOR THE STUDY

The data collected from the farmer-respondents and the labourer-respondents were scored, tabulated and analysed using appropriate statistical methods. While analysing it was assumed that the data followed a normal distribution pattern, hence as per the suggestions of Bonean (1960) and McNemar (1962) more of parametric tests were preferred and used. The statistical techniques employed in the analysis of the data under the study are detailed below, besides the one explained under scale development procedure. The entire analyses in the study were performed at the Computer unit of the Department of Agricultural Statistics, College of Agriculture, Vellayani.

#### 3.6.1. Mean :

This was used to find out the mean relationship score of the respondents in the total sample and the dimension-wise relationship scores. This was used as a cut-off point to categorise the respondents into high and low relationship groups and make comparisons in over all relationship, dimension-wise relationship and in district, labourer and union membership categories.

### 3.6.2. Simple percentage :

This was employed to find out the percentage distribution of the respondents under high and low relationship groups in overall relationship and dimension-wise relationship with regard to total sample, district, labourer and union membership categories, after grouping them using mean relationship scores.

### 3.6.3. Analysis of variance :

This was used to test the significant difference between the respondents of district, labourer, and union membership categories in the overall relationship and relationship dimensions.

### 3.6.4. Percentage mean score :

This was arrived at by dividing the mean score obtained for the dimensions by the respondents of each district, labourer and union membership category by the product of maximum score attainable for an item and number of items in a dimension and multiplying by 100. This was used to compare and rank the dimensions. This kind of analysis was suggested by Mathew (1989) and used by Anantharaman (1991) and Nehru (1993).

Spearman rank order correlation was computed to know whether the rankings obtained on various dimensions with regard to district and labourer categories had significant agreement.

3.6.6. Kruskal-Wallis One-way Analysis of Variance by ranks:

This test was used to test the significance of difference among the union membership categories with regard to the dimensions of relationship.

3.6.7. Friedman Two-way Analysis of Variance by ranks :

This test was used to test the significance of difference among the dimensions of relationship and compare them with regard to the district, labourer and union membership categories separately. In the cases, where the test was significant multiple comparison procedure as suggested by Siegel and Castellan (1988) was used to make comparisons.

3.6.8. Step-wise regression analysis :

This was used to find out the contribution of socio-

economic and psychological factors of farmer-respondents and labourer-respondents in the variation in relationship.

3.6.9. Path co-efficient analysis :

Path analysis originally developed by Wright (1921) and followed by Li (1955) was used to analyse the direct and indirect effects of a set of independent variables on dependent variable.

3.7. HYPOTHESES SET FOR THE STUDY

Keeping the objectives and assumptions of the study and the relationship of variables contemplated as per the theoretical orientation in mind, the following general null hypotheses are set for the study.

1. There would be no significant difference in the farmer labourer relationship between the respondents of two districts, two labourer categories and three union membership categories.
2. There would be no significant difference in the dimensions of farmer-labourer relationship between the respondents of the two districts, two labourer categories and three union membership categories.
3. There would be no difference in the dimension-wise relationship performance of farmer-labourer dyads in the

total sample and in the district, labourer and union membership categories.

4. The variation in the farmer-labourer relationship of the respondents would not be explained by the socio-economic and psychological factors included in the study.
5. There would be no significant contribution of each of the socio-economic and psychological factors towards farmer-labourer relationship of the respondents.

## **RESULTS AND DISCUSSION**



## 4. RESULTS AND DISCUSSION

Taking into consideration the objectives of the study the results have been presented and discussed under the following heads.

- 4.1. Dimensions of farmer-labourer relationship scale
- 4.2. Relationship of farmer-labourer dyads
- 4.3. Socio-economic and psychological factors of farmer-labourer dyads.
- 4.4. Relationship between socio-economic and psychological factors and farmer-labourer relationship.
- 4.5. Farmer-Labourer relationship - A bird's eye view.

### 4.1. DIMENSIONS OF FARMER-LABOURER RELATIONSHIP SCALE

Cluster analysis was found appropriate for classifying the items and the procedure for classification of 33 items into nine clusters was described in the previous chapter. The clusters thus formed represented the dimensions of the scale and are referred as relationship dimensions.

The theoretical dimensions of relationship were delineated based mainly on the literature available on management and industrial relations, as studies dealing directly on farmer-labourer relationship were few in number.

However, while naming the empirical dimensions, a deviation

from the theoretical classification was resorted to, keeping in mind the content of the items and the dyadic interpersonal nature of farmer-labourer relationship. It was noticed that all these dimensions did not occur in exclusively independent clusters, rather they occurred in combinations. Hence, depending up on the nature and content of the majority items present in a cluster, the clusters were named suitably. The relationship dimensions identified through cluster analysis are represented in Fig 3 and are presented below.

#### 4.1.1. Dimension 1. Facilitation.

This is the first cluster to be formed with 11 items getting clustered under this dimension. The items grouped under facilitation with their average euclidean distance are given in Table 2. The average euclidean distance ranged from 0.5 to 32.15 for the various items of this dimension. The items were 'opportunities for the progress of the labourers', 'opportunities for labourers to get trained in skilled operations like planting, plant protection etc.', 'facilitation of labourers in availing various beneficial schemes being operated by different departments', 'timing of information to labourers on cultivation operations to be performed', 'response of farmers to labourers' faults', 'team spirit amongst the labourers', 'labourers' contribution towards high profits accrued in cultivation', 'labourers'

Fig.3 HIERARCHICAL TREE OF THE CLUSTER ANALYSIS OF THE ITEMS OF FARMER-LABOURER RELATIONSHIP

FARMER - LABOURER RELATIONSHIP

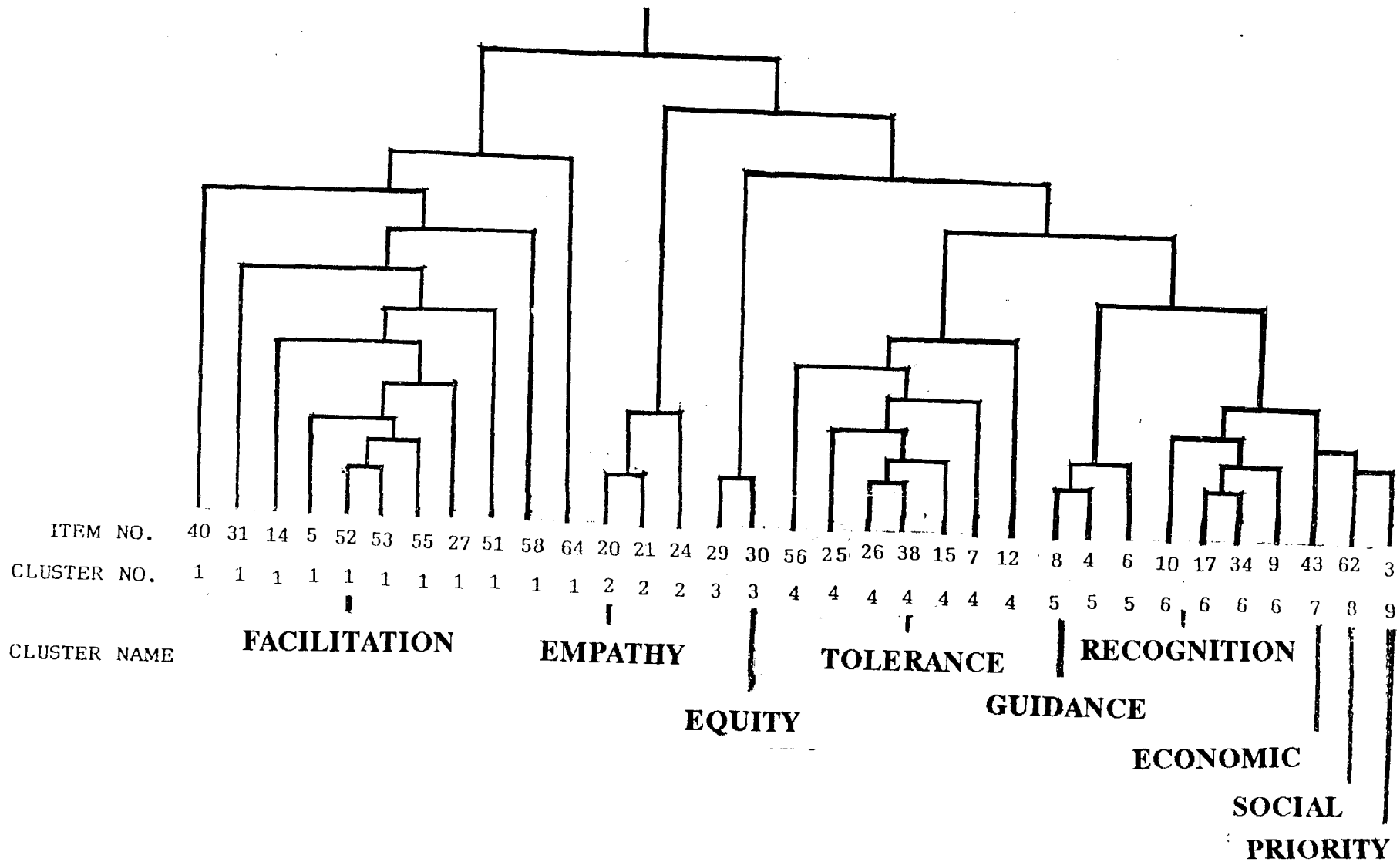


Table - 2 : Dimension 1 : Facilitation

Sl. No.	Item No	Item	Average Euclidean Distance
1.	52	Oppurtunities for the progress of the labourers facilitated - blocked	0.50
2.	53	Oppurtunities for labourers to get trained in skilled operations like planting, plant protction etc. facilitated - blocked	
3.	55	Fecilitation of labourers in availing various beneficial schemes being operated by different departments facilitated - blocked	1.50
4.	5	Timing of informanation to labourers on cultivation operations to be performed well in - very much advance delayed	16.00
5.	27	Response of farmers to labourers' faults slighted - magnified	17.63
6.	14	Team sprit amongst the labourers encouraged - discouraged	22.90
7.	51	Labourers' contribution towards high profits accrued in cultivation recognised - ignored	23.00
8.	31	Labourers' suggestions regarding work encouraged - discouraged	22.04
9.	58	Enhancement of the morale of labourers attempted - avoided	24.59
10.	40	Promptness in taking care of complanints of labourers prompt - indifferent	23.94
11.	64	Protection of labourers' interests while mechanising cultivation existent - non-existent	32.15

suggestions regarding work, 'promptness in taking care of the complaints of labourers' and 'protection of labourers' interests while mechanizing cultivation'. A mere look at the content of majority of items would reveal that they reflected the facilitation aspects of farmer-labourer relationship. Hence, this cluster was labeled as 'facilitation'.

#### 4.1.2. Dimension 2. Empathy

There were three items grouped under this dimension with the average euclidean distance of 4.25 and 37.75 respectively. (Table 3). The items were 'use of personal touch rather than authority in getting the work done by labourers', 'tactful and diplomatic way of getting the work done by labourers' and 'consideration of each others' feeling before speaking or acting'. As the nature of the items indicated the ability of the farmers to empathise in getting the work done by the labourers, this cluster was named as 'empathy'.

#### 4.1.3. Dimension 3. Equity

The items clustered under this dimension with their respective average euclidean distance are presented in Table 4. The two items of this dimension were 'discussion of problems of work with labourers' and 'solutions to the

Table - 3 : Dimension 2 : Empathy

Sl. No	Item No	Item	Average Euclidean Distance
1.	20	Use of personal touch rather than authority in getting the work done by labourers. preponderant - absent	4.25
2.	21	Tactful and diplomatic way of getting the work done by labourers. preponderant - absent	
3.	24	Consideration of each others' feeling before speaking or acting. recognised - ignored	37.75

Table - 4 : Dimension 3 : Equity

Sl: No	Item No	Item	Average Euclidean Distance
1.	29	Discussion of problems of work with labourers existent - non-existent	5.00
2.	30	Solutions to the problems of work arrived at. jointly - unilaterally	

problems of work arrived at'. It is evident from the content of the items that they reflected the mentality of the farmers in treating the labourers as equal partners in decision making with regard to the problems of work. Accordingly this cluster was given the name 'equity'.

#### 4.1.4. . Dimension 4. Tolerance

This dimension had seven items with their average euclidean distance ranging from 9.00 to 34.54, as evidenced from Table 5. The items included were, 'minor comments by each other during work situation', 'heed to the problems of labourers', 'treatment of labourers during work situation', 'differences of opinion with each other during work situation', 'clarity of instructions regarding work given to labourers', 'feeling of indispensability of labourers in cultivation' and 'labourers doing the work as instructed even in the absence of farmers'. The analysis of the nature of these items indicated that the former four represented the ability of farmers to tolerate differences with labourers and also in adopting a give and take policy while dealing with labourers. The latter three items reflected the empathy aspect of relationship, which in a way indicate the accommodative nature of farmers. Owing to these reasons, this cluster was labeled as 'tolerance'.

Table - 5 : Dimension 4 : Tolerance

Sl: No	Item No	Item	Average Euclidean Distance
1.	26	Minor comments by each other during work situation sighted -valued	9.00
2.	38	Heed to the problems of labourers. patient -impatient	
3.	15	Treatment of labourers during work situation impartial-partial	17.75
4.	25	Differnces of opinion with each other during work situation tolerated-precipitated.	21.33
5.	7	Clarity of instructions regarding work given to labourers. clear - hazy	21.38
6.	56	Feeling of indispensibility of labourers in cultivation. existent - non-existent	27.65
7.	12	Labourers doing the work as instructed even in the absence of farmers. ensured - neglected.	34.54



#### 4.1.5. Dimension 5. Guidance

The three items grouped under this dimension with their corresponding average euclidean distance are given in Table 6. 'Guidance to the labourers as and when required during work situation', 'rapport with the labourers engaged in field work' and 'propriety of instructions to labourers on scientific practices' were the items clustered under this dimension. The common content of these items was concerned about the guidance aspect of relationship between farmers and labourers during work situation. Hence, this dimension was named as 'guidance'.

#### 4.1.6. Dimension 6. Recognition

The items clustered under this dimension and their respective average euclidean distances are furnished in Table 7. The items were 'address each other respectfully', 'ridicule labourers before others for not doing the work properly', 'nagging of labourers for doing work' and 'wastage of working time by discussing unnecessary matters by labourers'. The cluster was labeled as 'recognition', since the common content of the items of this cluster indicated the recognition the farmers give to the labourers during work situation so as to make them perform better.

Table - 6 : Dimension 5 : Guidance

Sl: No: Distance	Item No	Item	Average Euclidean
1.	8	Guidance to the labourers as and when required during work situation adequate - inadequate	34.25
2.	4	Rapport with the labourers engaged in field work excellent - worst	
3.	6	Propriety of instructions to labourers on scientific practices proper - improper	38.75

Table - 7: Dimension 6 : Recognition

Sl. No.	Item No.	Item	Average Euclidean Distance
1.	17	Address each other respectfully existent - non-existent	38.50
2.	34	Ridicule labourers before others for not doing the work properly. avoided - attempted	
3.	9	Nagging of labourers for doing work avoided - attempted	39.36
4.	10	Wastage of working time by discussing unnecessary matters by labourers. avoided - allowed	41.00

#### 4.1.7. Dimension 7. Economic

This dimension had only one item with an average euclidean distance of 41.50, as presented in Table 8. The item under this dimension 'payment of extra wages for extra work' was theoretically categorised under economic dimension, and the cluster analysis too confirmed this theoretical grouping.

#### 4.1.8. Dimension 8. Social

The item 'concern for each other when becoming seriously ill' with an average euclidean distance of 42.75 was clustered under this dimension (Table 9). Both the theoretical grouping as well as the cluster analysis justified the placement of this item under social dimension of farmer-labourer relationship.

#### 4.1.9. Dimension 9. Priority

This dimension had only one item 'priority for the particular labourer while selecting for work' with a corresponding average euclidean distance of 43.25, as given in Table 10. This item was labeled as 'priority' as it indicated the farmers' priority for a particular labourer for work.

Table - 8 : Dimension 7 : Economic

Sl. No.	Item No.	Item	Average Edclidean Distance
1.	43	Payment of extra wages for extra work paid - refused	41.50

Table - 9 : Dimension 8 : Social

Sl. No.	Item No.	Item	Average Edclidean Distance
1.	62	Concern for each other when becoming seriously ill prevalent - absent	42.75

The majority of the items of farmer-labourer relationship scale and the dimensions identified through cluster analysis revealed that they represented purely the work situation relationship between the farmers and the hired labourers. This is a conclusive proof to show that the farmer-labourer relationship under present circumstance is more or less a relationship confined to work situation and is formal in nature. It is not a surprise to note this kind of relationship between the farmers and the hired agricultural labourers under present context, considering the radical change that had taken place in the cultivator-labourer relations during the past two or three decades owing to a multiplicity of factors such as unionisation amongst labourers, advancement in agricultural production technologies, rapid industrialisation etc. This finding is a reconfirmation of the observations of several authorities in the earlier years who generally noticed a gradual shift in the farmer-labourer relationship from a more informal to the present formal nature.

From a study in Palghat and Alapuzha districts of Kerala, Lukose (1982) concluded that at present only 10.50 per cent of the farmers admitted of having informal social relations with labourers, as against a major part (76.25 per cent) of cultivators who maintained quite informal relations in the past. George (1984) observed that the emergence of capital mode of production in the early thirties in

agricultural sector in Kuttanadu region of Kerala demanded large number of seasonal labourers, which the attached labour system was not able to provide completely. The distinguishing feature of this new category of labour was that they were paid on a daily basis. This aspect was important in the sense that it affected the then land lord-labourer relationship in favour of workers, making more formal and independent, and thereby creating a conducive atmosphere for trade union activities.

In close line with above observations and the findings of the present study, Verghese (1986) from a study in Kuttanadu concluded that the patron-client relationship which bound the village communities was a thing of the past and instead formal relationship existed. Similarly, Mukhopadhyay (1988) from the study of agrarian relations in West Bengal noticed that the cultivator-labourer relations in the fringe (intermediate distance from industrial centres) and proximate villages (close to industrial centres) were of contractual, formal and impersonal type, as compared to informal relations in the interior villages. The analysis of agrarian relations and development in Sikkim as reported by Tanaka (1988) revealed that the introduction of chemical fertilizers, pesticides, high yielding varieties etc. had an impact on agrarian relations which were gradually shifted from reciprocal to market-oriented with wage labouring becoming more and more popular. Hence, the emergence of work

situation relationship as the farmer-labourer relationship under the present study has been amply justified by the above observations.

#### 4.2. RELATIONSHIP OF FARMER-LABOURER DYADS.

##### 4.2.1. .Distribution of farmer-labourer dyads under low and high relationship group.

The percentage distribution of farmer-labourer dyads under low and high relationship group with respect to their overall relationship and the relationship dimensions for the total sample, district, labourer and union membership categories are furnished below.

##### 4.2.1.1. Distribution of farmer-labourer dyads (total sample) based on overall relationship

The percentage of farmer-labourer dyads under low and high relationship group for overall relationship along with mean relationship score are presented in Table 11. It is evident from the table that a majority of the dyads (56.67 per cent) belonged to high group and the rest to low relationship group.

Table - 10 : Dimension 9 : Priority

Sl. No.	Item No.	Item	Average Edclidean Distance
1.	3	Priority for the particular labourer while selecting for work heeded - avoided	43.25

Table - 11 : Distribution of farmer-labourer dyads based on overall relationship

Particulars	Mean score	Relationship group n = 150 dyads	
		Low (%)	High (%)
Farmer - labourer relationship	128.54	43.33	56.67



4.2.1.2. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on overall relationship.

The percentage distribution of farmer-labourer dyads of low and high groups of district, labourer and union membership categories under overall relationship with mean scores and the results of the analysis of variance of the three categories are furnished in Table 12. In case of district categories it was observed that majority of the dyads belonged to high group in both Thiruvananthapuram (56.00 per cent) and Alapuzha (50.67 per cent) districts. The results of the analysis of variance (F value) computed between the two districts (0.38) was not significant, indicating that the farmer-labourer relationship in both the study districts was on par. Hence, the hypothesis that there would be no significant difference in the farmer-labourer relationship between the respondents of Thiruvananthapuram and Alapuzha districts was accepted.

The distribution pattern of farmer-labourer dyads of the two labourer categories indicated that majority of the male labourer dyads (64.63 per cent) were under high group, as against 60.29 per cent of female labourer dyads belonging to low group. The mean relationship score of male labourer dyads was 136.85 which was comparatively higher than female labourer dyads (132.40). The analysis of variance between

Table - 12 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on overall relationship

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
I <u>Districts</u>			
1. Thiruvananthapuram (n = 75 dyads)	44.00	56.00	134.32
2. Alapuzha (n = 75 dyads)	49.33	50.67	135.35
F <sub>1</sub> , 148		0.38	
II <u>Labourer categories</u>			
1. Male (n = 82 dyads)	35.37	64.63	136.85
2. Female (n = 68 dyads)	60.29	39.71	132.40
F <sub>1</sub> , 148		7.85**	
III <u>Union membership categories.</u>			
1. Member dyad (n = 40 dyads)	50.00	50.00	134.99
2. Non-member dyad (n = 35 dyads)	34.29	65.71	136.44
3. One member dyad (n = 75 dyads)	49.33	50.67	134.00
F <sub>2</sub> , 147		0.68	
**	Significant	(P < 0.01	)

the two labourer categories revealed that the difference in their mean relationship score was highly significant. This led to the conclusion that the farmer-labourer relationship of male labourer dyads was significantly superior and higher than the female labourer dyads. As a result of this, the hypothesis that there would be no significant difference in the farmer-labourer relationship of the two labourer categories was rejected.

The distribution pattern of farmer-labourer dyads of three union membership categories indicated that majority of non-member dyads (65.71 per cent) and one member dyad (50.67 per cent) were under high group, and in the case of member dyads equal proportion of dyads belonged to both low and high groups. The mean relationship score of member, non-member and one member dyads were 134.99, 136.44 and 134.00 respectively. The little differences between the scores was not found to be significant as evidenced from the F value (0.68) computed. Hence, the hypothesis that there would be no significant difference in the farmer-labourer relationship of three union membership categories was accepted.

#### 4.2.1.3. Distribution of farmer-labourer dyads (total sample) based on relationship dimensions.

The percentage distribution of farmer-labourer dyads under low and high relationship groups based an relationship

dimensions along with the corresponding mean scores are presented in Table 13. It is clear from the table that majority of the dyads belonged to high group under the dimensions facilitation, equity, tolerance, guidance, social and priority. An equal proportion of dyads came under low and high groups in economic dimension. In contrast, dimensions such as empathy, and recognition had large proportion of farmer-labourer dyads under low relationship group.

4.2.1.4. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on facilitation.

The distribution pattern of farmer-labourer dyads under low and high relationship groups of district, labourer and union membership categories based on facilitation dimension with mean relationship scores are given in Table 14. The table also contained the F value computed to compare the mean scores of various categories. It is evident from the table that larger proportion of dyads fell under high group in all the district, labourer and union membership categories, with only female labourer dyads (45.59 per cent) and member dyads (45 per cent) deviating from this pattern which exhibited lesser proportion of dyads under high group. The mean scores of the two district, two labourer and three union membership

Table - 13 : Distribution of farmer-labourer dyads based on relationship dimensions.

Dimensions	Mean Score	Relationship group	
		Low (%)	High (%)
1. Facilitation	37.77	44.67	53.33
2. Empathy	12.07	52.67	47.33
3. Equity	6.74	38.67	61.33
4. Tolerance	32.33	42.00	58.00
5. Guidance	11.85	43.33	56.67
6. Recognition	16.02	55.33	44.67
7. Economic	4.27	50.00	50.00
8. Social	3.99	34.00	66.00
9. Priority	3.48	45.33	54.67

Table 14: Distrubution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on facilitation .

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
I <u>Districts:</u>			
1. Thiruvananthapuram	37.33	62.67	34.84
2. Alapuzha	49.33	50.67	37.69
$F_1, 148$		0.11	
II <u>Labourer categories</u>			
1. Male	36.59	63.41	38.08
2. Female	54.41	45.59	37.39
$F_1, 148$			2.58
III <u>Union membership categories.</u>			
1. Member dyad	55.00	45.00	37.38
2. Non-member dyad	28.57	71.43	38.23
3. One member dyad	46.67	53.33	37.76
$F_2, 147$		0.97	

categories were more or less same and whatever little differences existed in their mean scores were not statistically significant, as revealed from the F values computed. Hence, the hypothesis that there would be no significant difference in facilitation dimension of relationship of district, labourer and union membership categories was accepted.

4.2.1.5. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on empathy

The percentage distribution of dyads under low and high groups of district, labourer and union membership categories based on empathy with mean relationship scores and the results of the analysis of variance are presented in Table 15. The distribution pattern indicated that more or less an equal proportion of dyads came under low and high groups in majority of the categories, however with the exception of Alapuzha district, female dyads and one-member dyads which had majority of dyads under low group. Non-member dyad had slightly higher proportion of dyads under high group. The results of the analysis of variance was similar to that of facilitation dimension with none of the district, labourer and union membership categories exhibiting significant differences in their mean relationship scores. The F values

Table - 15 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on empathy

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I. Districts</u>			
1. Thiruvananthapuram	49.33	50.67	12.23
2. Alapuzha	58.67	41.33	11.91
$F_1, 148$			1.73
<u>II. Labourer categories</u>			
1. Male	50.00	50.00	12.15
2. Female	55.88	44.12	11.98
$F_1, 148$			0.49
<u>III. Union membership categories</u>			
1. Member dyad	50.00	50.00	11.96
2. Non-member dyad	48.57	51.43	12.43
3. One member dyad	56.00	44.00	11.96
$F_2, 147$			1.36



computed to compare district, labourer and union membership categories were not significant. This led to the acceptance of the hypothesis that there would be no significant difference in empathy dimension of relationship of district, labourer and union membership categories.

#### 4.2.1.6. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on equity

The group-wise distribution of farmer-labourer dyads of district, labourer and union membership categories based on equity with mean scores and F values computed are furnished in Table 16. The results revealed that majority of the dyads of district, labourer and union membership categories belonged to high relationship group, however with the exception of female labourer dyad which had equal proportion of respondents under low and high group. The comparison of mean relationship scores based on analysis of variance indicated that there existed a highly significant difference between the mean scores of male and female labourer dyads. The male labourer dyads had significantly higher mean relationship score than their counterparts. The mean score differences with respect of district and union membership categories, however were not significant. Hence, the hypothesis that there would be no significant difference in

Table 16: Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on equity

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I Districts:</u>			
1. Thiruvananthapuram	42.67	57.33	6.49
2. Alappuzha	34.67	65.33	7.00
$F_1, 148$			2.59
<u>II. Labourer categories</u>			
1. Male	28.05	71.95	7.23
2. Female	50.00	50.00	6.16
$F_1, 148$			11.69**
<u>III Union membership categories</u>			
1. Member dyad	32.50	67.50	7.14
2. Non-member dyad	40.00	60.00	6.56
3. One member dyad	41.33	58.67	6.62
$F_2, 147$			1.11
** Significant (P < 0.01)			

equity dimension of relationship was accepted with respect of district and union membership categories and rejected in case of labourer categories.

4.2.1.7. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on tolerance

The percentage distribution of farmer-labourer dyads under low and high groups of district, labourer and union membership categories based on tolerance dimension with mean scores are presented in Table 17. The F value computed to compare the various categories are also given in the table. The distribution pattern of dyads under this dimension with respect of district, labourer and union membership categories followed the same trend as that of earlier three dimensions, wherein large proportion of farmer-labourer dyads were under high relationship group. A different pattern of distribution was noticed only in case of Thiruvananthapuram district which had higher proportion (52 per cent) of dyads under low relationship group. In addition, member dyad had equal proportion under low and high relationship groups. The mean relationship scores of various district, labourer and union membership categories were almost same and the little difference observed in the mean scores were not significant, as revealed from the results of the analysis of variance. As

Table - 17 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on tolerance

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I Districts</u>			
1. Thiruvananthapuram	52.00	48.00	32.10
2. Alapuzha	32.00	68.00	32.57
$F_1, 148$			1.90
<u>II Labourer categories</u>			
1. Male	36.00	64.00	32.37
2. Female	41.18	58.82	32.29
$F_1, 148$			0.06
<u>III Union membership categories</u>			
1. Member dyad	50.00	50.00	31.76
2. Non-member dyad	45.71	54.29	32.34
3. One member dyad	36.00	64.00	32.59
$F_2, 147$			2.12

a result, the hypothesis that there would be no significant difference in tolerance dimension of district, labourer and union membership categories was accepted.

4.2.1.8. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on guidance

The group-wise distribution of farmer-labourer dyads of district, labourer and union membership categories based on guidance dimension with mean relationship scores and F values are presented in Table 18. The distribution pattern exhibited a similar trend as that of earlier dimensions with higher proportion of farmer-labourer dyads falling under high relationship group, the only exception being the female labourer dyad comprising equal proportion of dyads under high and low relationship group. The mean score of Alapuzha district was 12.15 which was higher than 11.55 of Thiruvananthapuram district. The difference in the mean scores of these two districts was statistically significant, as revealed from the F value (5.33) computed. Likewise the male labourer dyad had significantly higher mean score (12.12) than their counterparts (11.54). In contrast, the mean relationship scores of the three union membership categories were almost the same and the analysis of variance also confirmed this with a non significant F value (0.32).

Table - 18 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on guidance

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I Districts:</u>			
1. Thiruvananthapuram	49.33	50.67	11.55
2. Alapuzha	38.67	61.33	12.15
$F_1, 148$			5.33*
<u>II Labourer categories</u>			
1. Male	36.69	63.41	12.12
2. Female	50.00	50.00	11.54
$F_1, 148$			4.91*
<u>III Union membership categories</u>			
1. Member dyad	42.50	57.50	11.96
2. Non-member dyad	42.86	57.14	11.96
3. One member dyad	44.00	56.00	11.75
$F_2, 147$			0.32
* Significant (P < 0.05)			

The conclusions drawn above under guidance dimension led to the acceptance of the hypothesis that there would be no significant difference in guidance dimension of union membership categories and rejection of the same with respect of district and labourer categories.

4.2.1.9. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on recognition.

The distribution pattern of farmer-labourer dyads under low and high relationship groups of district, labourer and union membership categories based on recognition with mean scores and the results of the analysis of variance are furnished in Table 19. There existed a distribution pattern which was just the opposite of the one observed in the previous dimensions with majority of the farmer-labourer dyads coming under low group in six out of seven categories studied. Non-member dyad was the only exception to this phenomenon which had higher proportion of dyads under high group. The analysis of variance indicated that the mean score differences with respect of the various district, labourer and union membership categories were not significant, rather they were on par. Hence, the hypothesis that there would be no significant difference in recognition dimension of the district, labourer and union membership categories was accepted.

Table - 19 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on recognition

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I Districts</u>			
1. Thiruvananthapuram	52.00	48.00	16.16
2. Alapuzha	60.00	40.00	15.89
$F_1, 148$		1.00	
<u>II Labourer categories</u>			
1. Male	54.88	45.12	16.16
2. Female	58.82	41.18	15.85
$F_1, 148$		1.29	
<u>III Union membership categories</u>			
1. Member dyad	55.00	45.00	16.09
2. Non-member dyad	42.86	57.14	16.34
3. One member dyad	62.67	37.33	15.84
$F_2, 147$		1.11	



4.2.1.10. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on economic.

The percentage distribution of farmer-labourer dyads under low and high groups of district, labourer and union membership categories based on economic dimension with mean relationship scores are presented in table 20. A differential pattern of distribution of farmer-labourer dyads was noticed with regard to the various categories compared. While in Thiruvananthapuram district 26.67 per cent of dyads came under high group and the rest under low group, whereas it was just the opposite in Alapuzha district. Male labour dyads had 56.10 per cent under high group as against 42.65 per cent under high group in female labourer dyads. In case of non-member and one member dyads majority were under low relationship group and with respect of member dyads higher proportion of farmer-labourer dyads were under high group. The results of the analysis of variance showed that Alapuzha had significantly higher mean score than Thiruvananthapuram and similarly male labourer dyad had significantly higher mean score than their counterparts. Like wise, the mean scores of three union membership categories were significantly different, with member dyad having significantly higher mean score (4.53) than non-member and one member dyads whose mean scores were on par. Hence, the

Table - 20 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on economic

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I Districts</u>			
1. Thiruvananthapuram	73.33	26.67	3.88
2. Alapuzha	26.67	73.33	4.66
$F_{1, 148}$			65.55**
<u>II Labourer categories</u>			
1. Male	43.90	56.10	4.38
2. Female	57.35	42.65	4.13
$F_{1, 148}$			5.16*
<u>III Union membership categories</u>			
1. Member dyad	37.50	62.50	4.53
2. Non-member dyad	51.43	48.47	4.11
3. One member dyad	56.00	44.00	4.21
$F_{2, 147}$			3.82*
* Significant	(P <0.05)		
** Significant	(P <0.01)		

hypothesis that there would be no significant difference in economic dimension of district, labourer and union membership categories was rejected.

4.2.1.11. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on social.

The group-wise distribution of farmer-labourer dyads of district, labourer and union membership categories based on social dimension with mean scores and F values computed are presented in Table 21. It is evident from the table that all the various categories of farmer-labourer dyads compared had majority of the dyads belonging to high relationship group. The mean relationship scores of district, labourer, and union membership categories were more or less same and the F values computed also confirmed that the differences in the mean scores were not significant. As a result, the hypothesis that there would be no significant difference in social dimension of district, labourer and union membership categories was accepted.

4.2.1.12. Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on priority.

The percentage distribution of farmer-labourer dyads

Table - 21 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on social

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I. Districts</u>			
1. Thiruvananthapuram	38.67	61.33	3.98
2. Alapuzha	30.67	69.33	4.00
F <sub>1</sub> , 148		0.02	
<u>II. Labourer categories</u>			
1. Male	30.49	69.51	4.05
2. Female	36.76	63.24	3.92
F <sub>1</sub> , 148		1.31	
<u>III Union membership categories</u>			
1. Member dyad	22.50	77.50	4.11
2. Non-member dyad	31.43	68.57	4.06
3. One member dyad	41.33	58.67	3.89
F <sub>2</sub> , 147			1.33

under low and high groups of district, labourer and union membership categories based on priority dimension with mean scores and the results of the analysis of variance are given in Table 22. The two district categories, male labourer dyad under labourer category and member and non-member dyad under union membership category had majority of dyads under high relationship group, as against higher proportion of dyads under low group with regard to female labour dyad and one member dyad categories. The results of the analysis of variance under this dimension were identical to that of the results obtained under the preceding dimension, wherein none of the mean scores of the district, labourer and union membership categories were significantly different. This led to the acceptance of the hypothesis that there would be no significant difference in priority dimension of district, labourer and union membership categories.

It is very clear from the distribution of farmer-labourer dyads in high relationship group in Tables 11 and 13 that in general farmer-labourer dyads were found to be good in overall relationship and in the relationship dimensions of facilitation, equity, tolerance, guidance, social and priority. In contrast, with respect of the dimensions empathy and recognition, majority of the dyads were observed to have low relationship. In the case of economic dimension, the farmer-labourer dyads neither had good relationship nor had bad relationship, as equal proportion of dyads came under

Table - 22 : Distribution and comparison of farmer-labourer dyads of district, labourer and union membership categories based on priority

Categories	Relationship group		Mean Score
	Low (%)	High (%)	
<u>I Districts</u>			
1. Thiruvananthapuram	46.67	53.33	3.53
2. Alapuzha	44.00	56.00	3.43
F <sub>1</sub> , 148			0.70
<u>II Labourer Categories</u>			
1. Male	36.59	63.41	3.59
2. Female	55.88	44.12	3.36
F <sub>1</sub> , 148			3.56
<u>III Union membership categories</u>			
1. Member dyad	45.00	55.00	3.56
2. Non-member dyad	34.29	65.71	3.66
3. One member dyad	50.67	49.33	3.35
F <sub>2</sub> .147			1.33

low and high relationship groups. The reasons for observing generally good farmer-labourer relationship may be as follows.

Paddy is an important food crop of Kerala which is always deficient in production. In spite of the hardships like escalating wage rates for labourers and shortage of labourers for agricultural work, it becomes imperative on the part of the government as well as the growers to sustain the present production level of paddy in the state and increase the same if possible. Moreover, amongst the major crops of Kerala, paddy is the one requiring large numbers of hired labourer for its production and presently farmers reportedly are experiencing labour shortage especially for agricultural operations, as alternate avenues of employment in the skilled work are on the increase in the state. It is pertinent to point out that the farmers and the labourers in paddy production systems of state have now started realising that paddy cultivation is indispensable for sustained agricultural development in the state, thanks to the efforts of environmentalists and the media. Under this circumstance, it becomes necessary on the part of the paddy farmers as well as the labourers to develop and maintain harmonious relationship, so that it will be mutually beneficial to both. The necessity of fostering such a kind of symbiotic relationship might have been well understood by the paddy growers and the labourers engaged in paddy cultivation. In

addition, the general high literacy rate of the people of Kerala, to which both the farmers and the labourers belong, could have acted as a catalyst in realising this fact. This may be the reason for noticing good farmer-labourer relationship in the over all level and in majority of the relationship dimensions.

This is in conformity with the findings of Alexander (1974) who reported from a study in Alapuzha district of Kerala that majority of the farmers and the labourers had substituted their traditional relational norms by egalitarian relational norms and egalitarian role expectations, thereby paving way for better relations between the two. Similarly, from a study in Andhra Pradesh Rao (1989) noticed that 49.21 per cent of attached labourers and 54 per cent of farmers reported having cordial relations with each other. It was also observed from the impact of group farming approach in paddy that there was an improvement in the farmer-labourer relationship due to the implementation of the programme (Govt. of Kerala, 1990). With the informal relations paving way for formal relations as observed by Lukose (1982), George (1984), Verghese (1986) and Tanaka (1988), it is quite natural to notice the same trend under present study too.

Presently, the farmers have to pay not only a high wage rate to the labourers, but also face shortage of labourers at most of the times. Besides, majority of the farmers reported not having good opinion on the sincerity and dedication of



the workers in their job. Owing to this, the farmers have to be little rigid in extracting the work from the labourers as well as in observing strictly the working hours without giving any liberty to the labourers in wasting their working time unnecessarily. These may be the reasons for not observing sound relationship in empathizing and recognizing the efforts of the labourers by the farmers especially in getting the work done by the labourers.

The reasons for the lack of any significant difference in the two study districts with regard to overall relationship of farmer-labourer dyads and in almost all the relationship dimensions except economic and guidance may be as follows.

In Kerala the cultivator-labourer relations have undergone radical changes as compared to other states. Kerala leads first in the enforcement of Land Reforms Act as well as in enacting Kerala Agricultural Workers Act way back in 1974, and also in the unionization amongst both labourers and farmers. Union activities in Alapuzha, though started much earlier than in Thiruvananthapuram district, its influence has spread to all parts of the state at present. In spite of the differences in the intensity of labour union activities in various regions of the state, the benefits of such activities have reached almost all the labourers spread throughout the state, thereby reducing the gap among the status of workers in various districts of Kerala and their

relationship with the cultivators. Hence, under present circumstances, it is hard to notice any regional variation in the type of relationship between the farmers and the hired agricultural labourers. Alapuzha and Thiruvananthapuram districts are no exception to this. However, there existed a significant difference in the farmer-labourer relationship between these two districts in the 'economic' and 'guidance' dimensions.

The variation in the intensity of labour union activities and adoption pattern of rice production technologies existing in the two study districts might have contributed significantly towards the difference in the farmer-labourer relationship in 'guidance' and 'economic' dimensions. The greater intensity of labour union activity in Alapuzha district especially in Kuttanadu region as compared to Thiruvananthapuram district is a well established phenomenon which has been discussed in detail elsewhere. Streamlining the working hours and working conditions of labourers along with improvement in wage rate was the most significant achievement, besides various other benefits brought about by the activities of labour unions. A well formalized system of labour employment, working conditions, and wage payment was found existing in Alapuzha district, but not in Thiruvananthapuram district.

Further, it was observed during the course of the study, that the labourers in Kuttanadu worked for a fixed six

hours and paid a fixed wage rate, as decided by the Industrial Relations Committee (IRC). The per hour wage rate was calculated and in case a labourer worked for the complete six hours, he/she was paid the full wage, and the wage rate was either increased or decreased depending upon the number of hours of work. This well knit system of wage payment in Alapuzha district facilitated compulsory payment of extra wages for extra hours of work. In contrast, such a rigid system of working hours and wage payment did not exist in Thiruvananthapuram district. The labourers in this district did oblige farmers at times to work over time in completing a particular operation for which extra payment was not always made. Hence, the sound economic relationship, an outcome of intense labour union activity in Alapuzha district, but not so in Thiruvananthapuram district has come out explicitly from the findings of the present study.

The comparison of adoption behavior of improved rice production technology by the farmers of Alapuzha and Thiruvananthapuram districts (Table 39) clearly indicated the superiority of Kuttanadu farmers in adopting improved rice production technologies than their counterparts in Thiruvananthapuram district. Moreover, there existed a vast difference in the rice production systems between the study districts. This has been reflected in the yield levels too with Kuttanadu farmers getting an average paddy yield of 2.08t/ ha., as against 1.1t/ ha. obtained by the farmers of

Thiruvananthapuram district. The afore mentioned factors might have influenced the Kuttanadu farmers to give better guidance to their hired labourers to sustain and improve the production level of paddy, the sole major crop grown in this region than the farmers of Thiruvananthapuram district.

The strong gender bias against women coupled with the recognition of rights and privileges as male attributes which are perpetuated for centuries are still seem to be active in creating a significant difference in the farmer-labourer relationship between male and female labourer dyads. In the view of Amsden (1980) women spend proportionately fewer years in the labour force than men. Firstly, they interrupt their work to bear and rear children. Secondly, when women are working, the job they choose provide them fewer opportunities to enhance their skills. Thereby they acquire less experience and on the job training which is reflected in their earnings. Heggade (1982) also opined that lack of independent source of income and individual status were the factors impinging the ability of women to take decisions independently to participate in any kind of social and economic decision making process.

It was found out that although economic distress was forcing women at grass roots to play a changing role in household resource generation, very little shift was taking place at the levels of values and ideology. The concept of the traditional roles of women remained strong. (Khan,

1985). From the analysis of data collected from four villages in Kerala, D'Amico (1986) concluded that women were required for fewer jobs, but in greater number than male labourers. The important supervisory roles of women and their shares in the making of decisions in the organization of production were not acknowledged. ICAR (1988) also pointed out that although farm women played a significant role in Indian agriculture, they had not been given the importance they deserve in agricultural research, education and extension. They were often labeled as 'invisible workers' as their achievements had not been adequately recognized and appreciated. The observations of Kalaimathi (1988), Lampe (1988), Pandey et al. (1988) and Solanki (1988) were not different from above. They noticed that in general farm women had far too long been perceived as invisible, unpaid resources with minimal influence on farm productivity and little or no role in decision making.

Kurian (1989) from a study in Sri Lanka concluded that the sexual division of labour and control mechanisms in the domestic sector and economic spheres reinforced male domination and female discrimination. Both were based on a system of values which viewed male labourer to be superior and which 'invisibilized' and 'inferiorized' female labourer.

Ellis (1990) reported that in peasant societies individual women could rarely be thought to possess freedom of action in their neo-classical economic sense, social custom and

obligation predominated over individual choice and decisions did not correspond to marginal utility criteria. While analyzing the changing status of women in the society, Rita (1991) noticed that the cultural conditioning and customs, rituals, traditions and the very agencies of socialization in our society forced women to accept that woman was inferior to a man in diverse ways and that the prime aim of her life was to bear and rear children and to look after the home. Jeemol (1992) also expressed more or less a similar view regarding women's participation in agriculture. She opined that irrespective of the sphere of activity women were reported to be engaged in lower occupational categories, in tedious operations or jobs for lower wages and with poorer terms and conditions of work compared to their male counterparts.

Alex (1994) found that role perception in 20 out of 31 areas of decision making in agriculture was perceived to be 'not important' by all the women labourers studied, as against only 8 in case of male labourers. Likewise all female labourers never performed any role in deciding 29 out of 31 areas of decision making activities in agriculture by the farmers. The corresponding figures for male labourers was only 9 out of 31 areas. It was further observed that in 25 out of 31 areas of decision making all the farmer-respondents perceived the role of female labourers to be of 'no importance', whereas it was just 5 areas in case of male labourers.

computed to rank the dimensions from best to least performed by the farmer-labourer dyads. The dimension-wise relationship performance of farmer-labourer dyads in the total sample, two district, two labourer and three union membership categories are detailed below.

#### 4.2.2.1. Dimension-wise relationship performance of farmer-labourer dyads (total sample)

The percentage mean score of the dimensions with their corresponding rankings are presented in Table 23 and depicted in Fig 4. It is evident from the table and the figure that the relationship performance of farmer-labourer dyads was in the order of tolerance, economic, empathy, recognition, social, guidance, priority, facilitation, and equity.

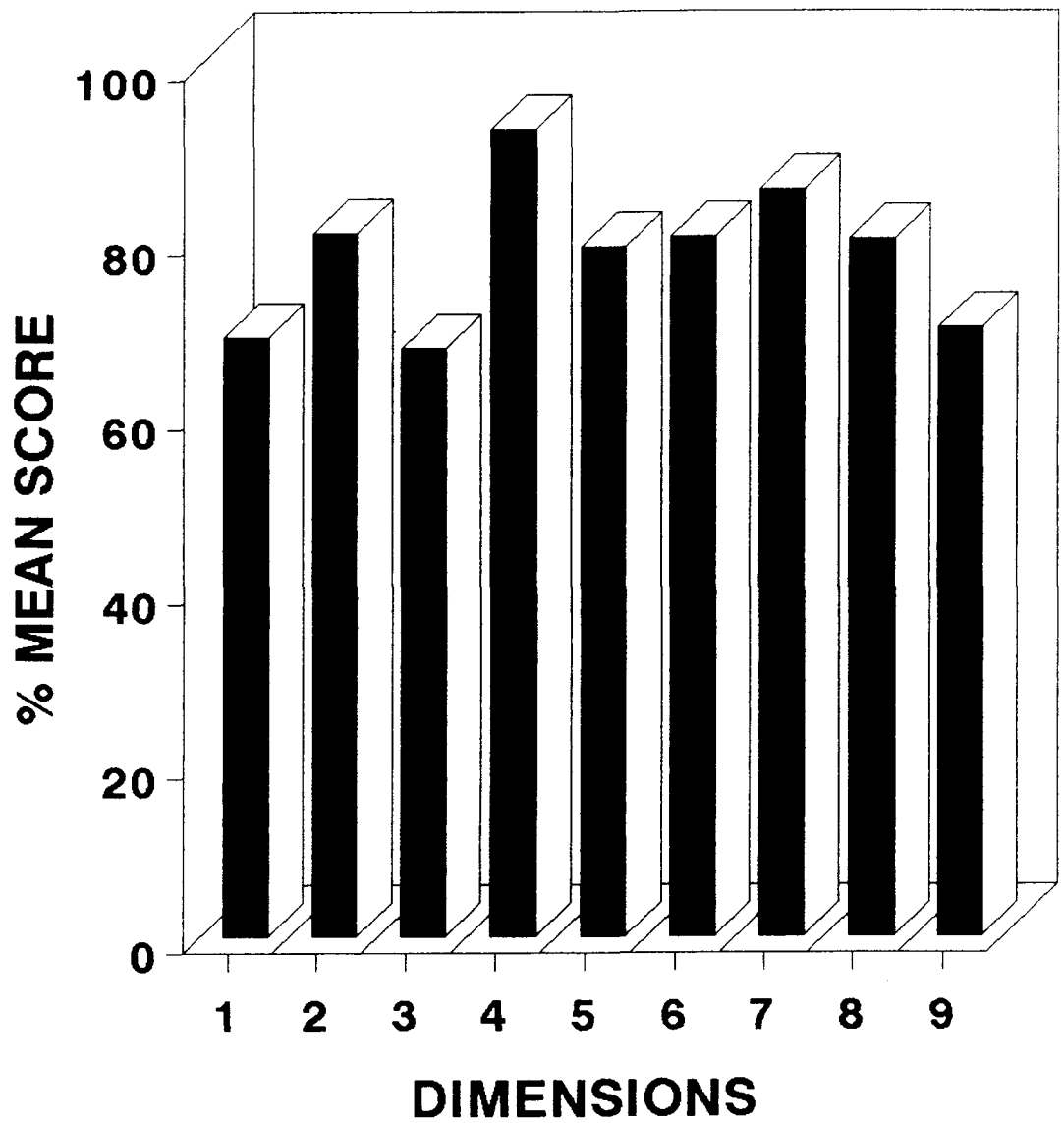
The results of Friedman test to compare the difference among rank sums of the dimensions of relationship of farmer-labourer dyads in the total sample, the critical ratio and Fr value are given in Table 24. The significant Fr value indicated that relationship dimensions significantly differed from one another. Looking at the critical ratio computed based on multiple comparison which was 151.78, it is clear that the 'tolerance' dimension (D4) differed significantly with all the remaining dimensions as the difference among the rank sums exceeded the critical ratio. Like wise, the dimension 'economic' (D7) differed significantly with all the

Table - 23 : Dimension-wise relationship performance of farmer-labourer dyads. (Total sample)

	Dimensions	Percentage mean score	Rank
1.	Facilitation	68.67	8
2.	Empathy	80.47	3
3.	Equity	67.40	9
4.	Tolerance	92.37	1
5.	Guidance	79.00	6
6.	Recognition	80.10	4
7.	Economic	85.40	2
8.	Social	79.80	5
9.	Priority	69.60	7



**Fig.4. DIMENSION-WISE RELATIONSHIP PERFORMANCE (Total sample)**



**1.Facilitation 2.Empathy 3.Equity  
4.Tolerance 5.Guidance 6.Recognition  
7.Economic 8.Social 9.Priority**

Table - 24 : Dimension-wise comparison of relationship of farmer-labourer dyads (total sample)

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	422*	77.5	821.5*	376.5*	410*	589.5*	437.5*	96.5
D2		344.5*	399.5*	45.5	12	167.5*	15.5	325.5*
D3			744*	299*	332.5*	512*	360*	19
D4				445*	411.5*	232*	384*	725*
D5					33.5	213*	61	280*
D6						179.5*	27.5	313.5*
D7							152*	493*
D8								341*

Fr = 519.04\*\*                      Critical ratio 151.78  
 \*\* Significant (P < 0.01)  
 \* Significant difference.

D1 = Facilitation      D2 = Empathy      D3 = Equity  
 D4 = Tolerance        D5 = Guidance     D6 = Recognition  
 D7 = Economic        D8 = Social        D9 = Priority

remaining eight dimensions. The dimensions 'facilitation' (D1) and 'priority' (D9) differed significantly with six of the remaining eight dimensions excepting 'equity' (D3) and 'priority' (D9) in the case of 'facilitation', and 'facilitation' (D1) and 'equity' (D3) in the case of 'priority' respectively. Hence, the hypothesis that there would be no difference in the dimension-wise relationship performance of farmer-labourer dyad in the total sample was rejected.

4.2.2.2. Comparison of district categories with regard to dimension-wise relationship performance of farmer-labourer dyads.

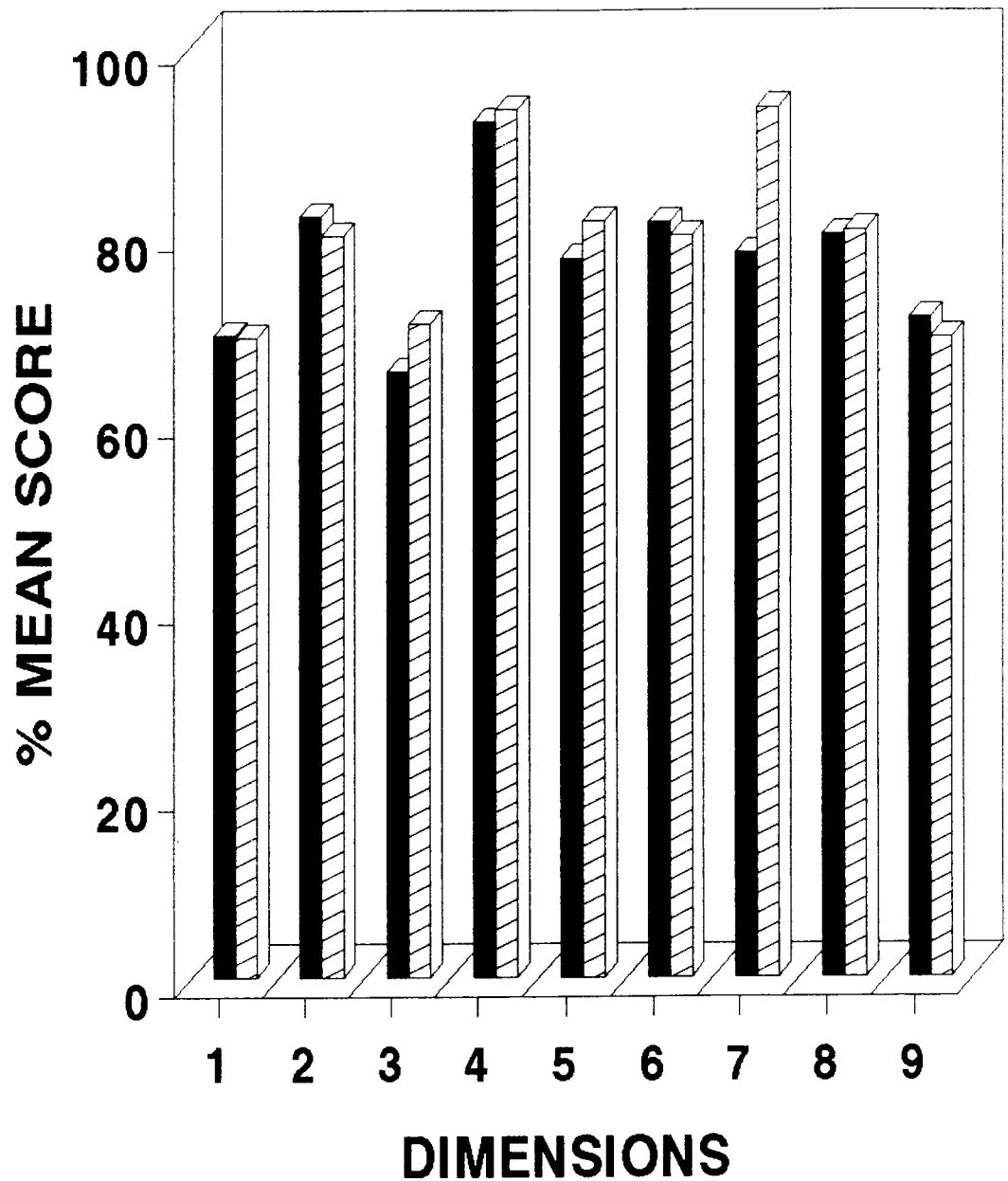
The dimension-wise relationship performance of farmer-labourer dyads of Thiruvananthapuram and Alapuzha districts with their respective percentage mean scores and rankings are furnished in Table 25 and diagrammatically represented in Fig.5. It could be noted from the table and figure that the relationship performance of the dimensions were in the order of tolerance, empathy, recognition, social, economic, guidance, priority, facilitation and equity in the case of Thiruvananthapuram district, whereas in the case of Alapuzha district they were in the order of economic, tolerance guidance social, recognition, empathy, equity, priority and facilitation. There existed a vast dissimilarity in the

Table - 25 : Comparison of district categories with regard to dimension-wise relationship performance of farmer-labourer dyads.

Dimensions	Thiruvananthapuram		Alapuzha	
	Percentage mean score	Rank	Percentage mean score	Rank
1. Facilitation	68.80	8	68.53	9
2. Empathy	81.53	2	79.40	6
3. Equity	64.90	9	70.00	7
4. Tolerance	91.71	1	93.05	2
5. Guidance	77.00	6	81.00	3
6. Recognition	80.80	3	79.45	5
7. Economic	77.60	5	93.20	1
8. Social	79.60	4	80.00	4
9. Priority	70.60	7	68.60	8

Rank correlation coefficient = 0.57<sup>ns</sup>  
 ns Not significant.

**Fig. 5. DIMENSION-WISE RELATIONSHIP PERFORMANCE IN DISTRICT CATEGORIES**



■ THIRUVANANTHAPURAM    ▨ ALAPUZHA

1. Facilitation    2. Empathy    3. Equity  
4. Tolerance    5. Guidance    6. Recognition  
7. Economic    8. Social    9. Priority

relationship performance of dimensions of Thiruvananthapuram and Alapuzha districts. The rank order correlation worked out to find the degree of agreement in the dimension-wise performance of the two districts, indicated a non-significant rank correlation coefficient revealing that the dimension-wise relationship performance of both the districts were different.

The results of Friedman test to compare the difference among rank sums of the dimensions of relationship of farmer-labourer dyads of Thiruvananthapuram district, the critical ratio and Fr value are presented in Table 26 and the same information with respect of Alapuzha district was furnished in Table 27. In both the districts, a significant Fr value was obtained which indicated that the relationship dimensions differed significantly from each other. On the basis of multiple comparison, critical ratios were worked out for Thiruvananthapuram and Alapuzha districts separately. Viewing at the critical ratios, it could be inferred that in, Thiruvananthapuram district the dimensions 'tolerance' (D4) and 'guidance' (D5) differed significantly with all the eight remaining dimensions except 'priority' (D9) and 'empathy' (D2) respectively. With regard to Alapuzha district, the dimensions 'facilitation' (D1), 'tolerance' (D4), 'guidance' (D5), 'economic' (D7) and 'priority' (D9) significantly differed with six out of eight remaining dimensions. Based on the conclusions drawn above, the hypothesis that there would

Table - 26 : Dimension-wise comparison of relationship of farmer-labourer dyads in Thiruvananthapuram district

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	244.5*	1.5	418.5*	168.5*	228*	178*	234.5*	71
D2		243*	174*	76	16.5	66.5	15	173.5*
D3			417*	167*	226.5*	176.5*	228*	69.5
D4				215*	190.5*	240.5*	189*	347.5*
D5					59.5	9.5	61	97.5
D6						50	1.5	157*
D7							51.5	107
D8								158.5*

Fr = 275.69\*\*                      Critical ratio 107.33

\*\* Significant ( P < 0.01)

\* Significant difference

D1 = Facilitation	D2 = Empathy	D3 = Equity
D4 = Tolerance	D5 = Guidance	D6 = Recognition
D7 = Economic	D8 = Social	D9 = Priority

Table - 27 : Dimension-wise comparison of relationship of farmer-labourer dyads in Alapuzha district

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	177.5*	76	403*	208*	182*	411.5*	208*	25.5
D2		101.5	225.5*	30.5	4.5	234*	30.5	152*
D3			327*	132*	106	335.5*	132*	50.5
D4				195*	221*	8.5	195*	377.5*
D5					26	203.5*	-	182.5*
D6						229.5*	26	156.5*
D7							203.5*	386*
D8								182.5*

Fr = 306.98\*\*

Critical ratio 107.33

\*\* Sinificant (P &lt;0.01)

\* Sinificant differenece

D1 = Facilitation	D2 = Empathy	D3 = Equity
D4 = Tolerance	D5 = Guidance	D6 = Recognition
D7 = Economic	D8 = Social	D9 = Priority



be no difference in the dimension-wise relationship performance of farmer-labourer dyads in the district categories was rejected.

#### 4.2.2.3 Comparison of labourer categories with regard to dimension-wise relationship performance of farmer-labourer dyads.

The dimension-wise percentage mean score of the relationship performance of farmer-labourer dyads of male and female labourer categories with their corresponding ranks in both the study districts separately are furnished in Table 28. and in Fig 6. The dimension-wise relationship performance of both male and female categories in the study districts of Thiruvananthapuram and Alapuzha districts were identical in nature, as revealed from the rankings of the percentage mean scores of the dimensions. In Thiruvananthapuram district, the relationship performance of dimensions of male labourer dyads was in the order of 'tolerance', 'recognition', 'social', 'economic', 'guidance', 'empathy', 'priority', 'facilitation' and 'equity'. In case of female labourer dyads, the ranking of various dimensions was more or less same except for 'empathy', 'recognition', 'social' and 'economic' which had taken second, third, fourth and sixth place respectively. The significant rank correlation coefficient (0.97) confirmed the similarity in ranking of

Table 28: Comparison of labourer categories with regard to dimension-wise relationship performance of farmer-labourer dyads in the two study districts.

Dimensions	<u>Ranks</u> <u>Thiruvananthapuram</u>		<u>Ranks</u> <u>Alapuzha</u>	
	Male	Female	Male	Female
1. Facilitation	8 (70.02)	8 (67.60)	9 (68.58)	7 (68.45)
2. Empathy	6 (75.80)	2 (81.13)	5 (80.20)	6 (78.20)
3. Equity	9 (69.70)	9 (60.10)	7 (74.30)	9 (63.50)
4. Tolerance	1 (92.11)	1 (91.31)	2 (92.80)	1 (93.37)
5. Guidance	5 (78.80)	5 (75.27)	3 (82.40)	4 (79.00)
6. Recognition	2 (82.35)	3 (79.30)	6 (79.55)	3 (79.25)
7. Economic	4 (80.20)	6 (75.00)	1 (93.80)	2 (92.40)
8. Social	3 (80.80)	4 (78.40)	4 (81.20)	5 (78.40)
9. Priority	7 (72.20)	7 (69.20)	8 (71.40)	8 (64.60)

Rank correlation  
coefficient

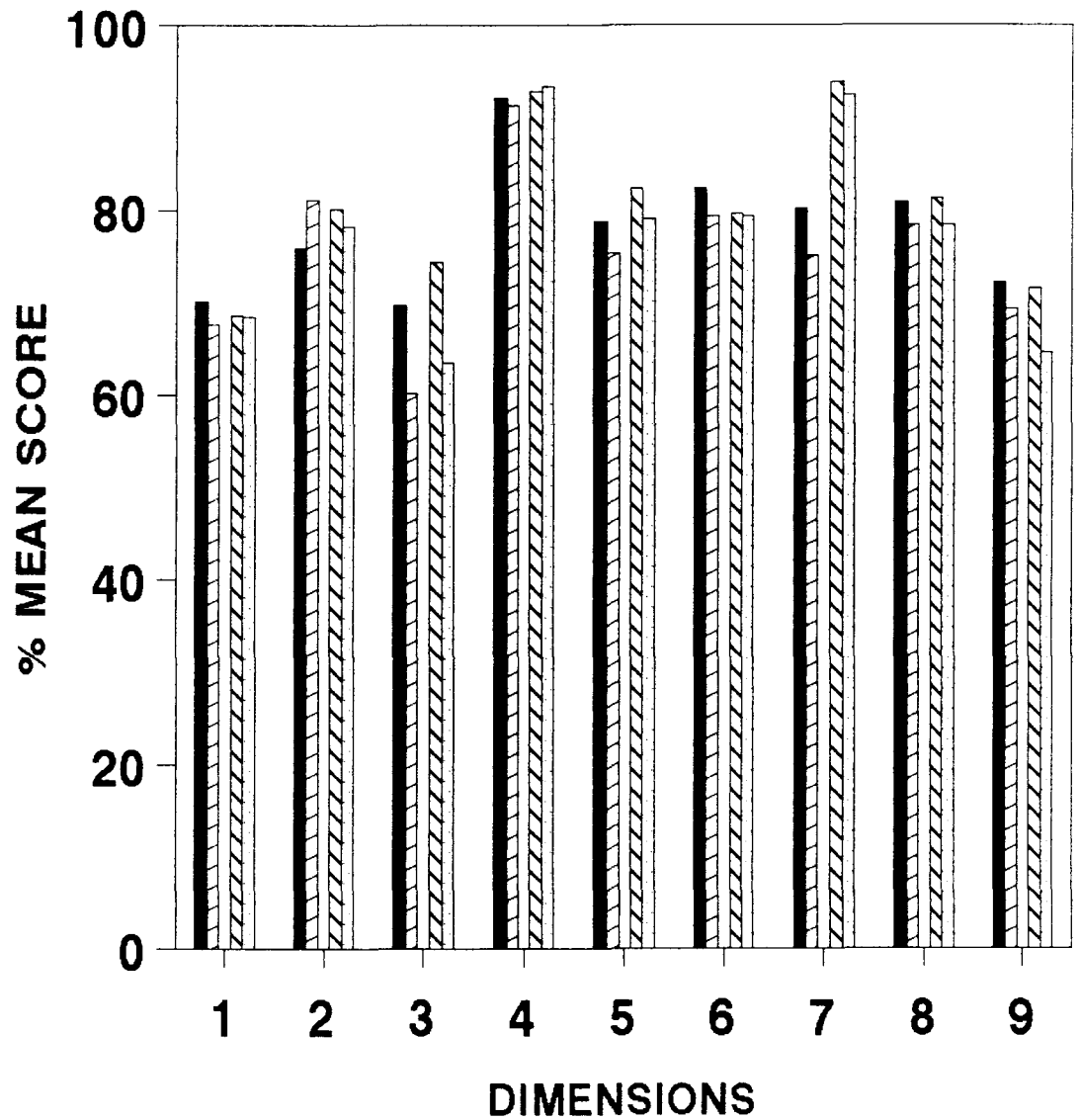
0.97\*\*

0.97\*\*

\*\* Significant (P <0.01)

Figures in parantheses indicate percentage mean score.

**Fig. 6. DIMENSION-WISE RELATIONSHIP PERFORMANCE IN LABOURER CATEGORIES IN TWO STUDY DISTRICTS**



MALE (TVM)       FEMALE (TVM)  
 MALE (APA)       FEMALE (APA)

1. Facilitation    2. Empathy    3. Equity  
 4. Tolerance    5. Guidance    6. Recognition  
 7. Economic    8. Social    9. Priority

dimensions of relationship of both male and female labourer categories. In Alapuzha district also, the ranking of the percentage mean scores of dimension-wise relationship performance of male and female labourer dyads exhibited similarity, as revealed by the significant rank correlation coefficient (0.97). Since the dimension-wise relationship performance of labourer categories were same in both the study districts, dimension-wise comparison of relationship was done only with respect to male and female labourer dyads in the total sample and not separately for each of the two study districts.

Comparison of dimension-wise relationship based on difference in their rank sums using Friedman test was carried out. The results of this test, the critical ratio and Fr value with regard to male and female labourer dyads are furnished in Tables 29 and 30 respectively. There was a significant difference among the relationship dimensions in both male and female labourer dyads, as the Fr values of these two labourer categories were significant. In case of, male labourer dyads, the dimension 'tolerance' (D4) was significantly different with all other dimensions except 'priority' (D9). Similarly the dimensions 'facilitation' (D1) and 'priority' (D9) was significantly different with six of the eight remaining dimensions. The results obtained in female labourer dyads were more or less a replica of the results of male labourer dyads with the dimensions

Table - 29 : Dimension-wise comparison of relationship of farmer-labourer dyads with regard to male labourers

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	248*	98.5	466*	232.5*	233.5*	366.5*	252*	85
D2		149.5*	218*	15.5	14.5	118.5*	4	163*
D3			367.5*	134*	135*	268*	153.5*	13.5
D4				233.5*	232.5*	99.5	214*	381*
D5					1	134*	19.5	147.5*
D6						133*	18.5	148.5*
D7							114.5*	281.5*
D8								167*

Fr = 277.32\*\*

Critical ratio 112.22

\*\* Sinificant (P &lt;0.01)

\* Sinificant differnece

D1 = Facilitation    D2 = Empathy    D3 = Equity  
D4 = Tolerance        D5 = Guidance    D6 = Recognition  
D7 = Economic        D8 = Social        D9 = Priority

Table - 30 : Dimension-wise comparison of relationship of farmer-labourer dyads with regard to female labourers.

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	174*	21	355.5*	144*	176.5*	223*	185.5*	11.5
D2		195*	181.5*	30	2.5	49	11.5	162.5
D3			376.5*	165*	197.5*	244*	206.5*	32.5*
D4				211.5*	179*	132.5*	170*	344*
D5					32.5	79	41.5	132.5*
D6						46.5	9	165*
D7							37.5	211.5*
D8								174*

Fr = 250.36\*\*

Critical ratio 102.21

\*\* Significant (P&lt;0.01)

\* Significant difference

D1 = Facilitation	D2 = Empathy	D3 = Equity
D4 = Tolerance	D5 = Guidance	D6 = Recognition
D7 = Economic	D8 = Social	D9 = Priority

'tolerance' and 'priority' significantly differing with remaining seven and six each dimensions respectively. Owing to this, the hypothesis that there would be no difference in the dimension-wise relationship performance of farmer-labourer dyads in the labourer categories was rejected.

4.2.2.4. Comparison of union membership categories with regard to dimension-wise relationship performance of farmer-labourer dyads.

The percentage mean score of the dimension-wise relationship performance of farmer-labourer dyads in the three union membership categories with their concerned rankings are given in Table 31 and depicted in Fig 7. for each of the study districts separately. Kruskal-Wallis test was employed to find whether there was any significant difference among the three union membership categories in the dimension-wise relationship performance. It could be observed from the table that there was no significant difference among the union membership categories with regard to dimension-wise performance, as the values of KW in Thiruvananthapuram (1.29) and Alapuzha (0.37) districts were not significant. Hence, it was concluded that the union membership categories were in agreement with regard to dimension-wise relationship performance of farmer-labourer dyads irrespective of the study districts.

Table -31 : Comparison of union membership categories with regard to dimension-wise relationship performance of farmer-labourer dyads in the two study districts.

Dimensions	Rankings			Rankings		
	Thiruvananthapuram			Alapuzha		
	MD	NMD	OMD	MD	NMD	OMD
1. Facilitation	5 (68.64)	6 (69.35)	4 (68.42)	3 (67.78)	7 (70.31)	5 (68.89)
2. Empathy	16 (79.07)	24 (82.53)	19.5 (81.20)	15 (79.87)	20 (84.67)	11.5 (78.20)
3. Equity	8 (73.10)	2 (65.00)	1 (58.30)	8 (70.90)	4 (68.30)	6 (69.50)
4. Tolerance	27 (92.14)	26 (92.06)	25 (91.34)	22 (90.40)	26 (95.71)	25 (94.91)
5. Guidance	17 (79.60)	12.5 (77.60)	11 (76.00)	14 (79.80)	21 (90.00)	17 (80.60)
6. Recognition	21.5 (81.90)	21.5 (81.90)	18 (79.75)	16 (80.10)	18 (80.85)	13 (78.65)
7. Economic	19.5 (81.20)	15 (79.00)	10 (75.80)	23.5 (92.80)	27 (98.40)	23.5 (92.80)
8. Social	14 (78.80)	23 (82.40)	12.5 (77.60)	19 (83.20)	10 (75.00)	11.5 (78.20)
9. Priority	7 (71.20)	9 (75.60)	3 (66.80)	9 (71.60)	1 (61.60)	2 (67.20)
Rank sum	135	139	104	129.5	134	114.5
Rank mean	15	15.44	11.56	14.39	14.89	12.72
KW		1.29 <sup>ns</sup>		0.37 <sup>ns</sup>		

ns ..... Not significant

Figures in parantheses indicate percentage mean score.

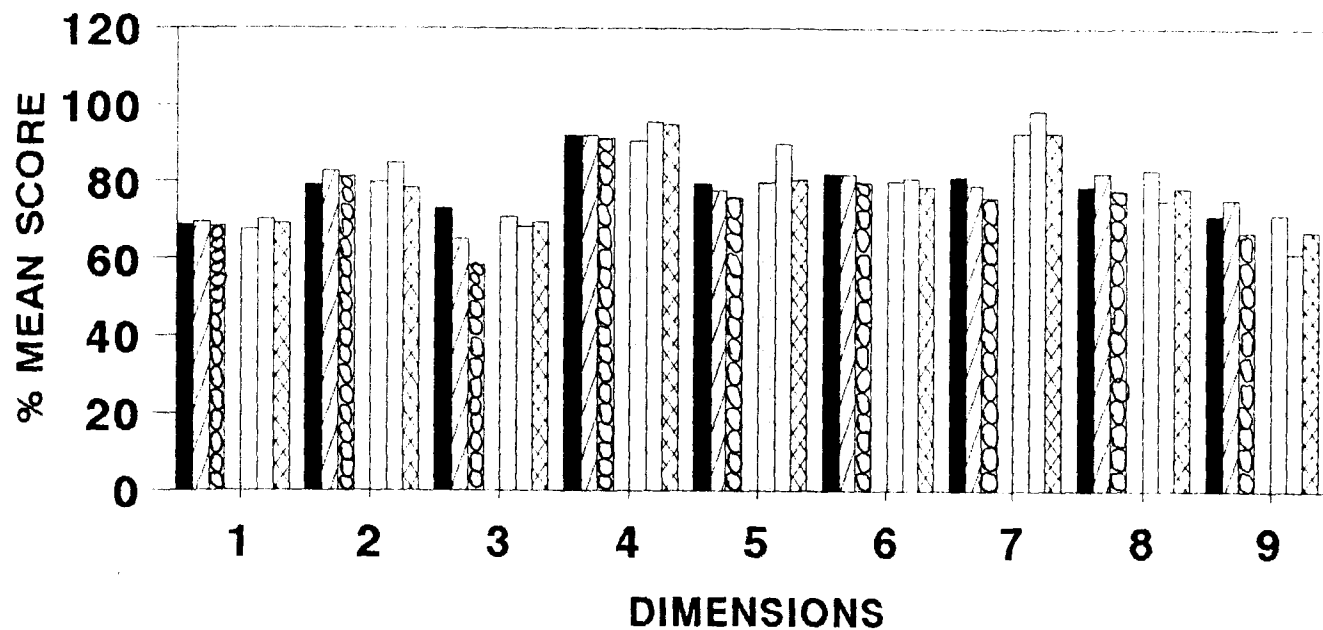
MD = member dyad.

NMD = non-member dyad.

OMD = one member dyad



**Fig. 7. DIMENSION-WISE RELATIONSHIP PERFORMANCE OF UNION MEMBERSHIP CATEGORIES IN TWO STUDY DISTRICTS**



**MEMBER DYAD(TVM)**      **NON-MEMBER DYAD(TVM)**      **ONE MEMBER DYAD(TVM)**  
**MEMBER DYAD(APA)**      **NON-MEMBER DYAD(APA)**      **ONE MEMBER DYAD(APA)**  
**Series 8**

**1.Facilitation 2.Empathy 3.Equity**  
**4.Tolerance 5.Guidance 6.Recognition**  
**7.Economic 8.Social 9.Priority**

The results of Friedman test to compare the difference among rank sums of the dimensions of relationship of farmer-labourer dyads, the critical ratio and Fr value of member dyads, non-member dyads and one member dyads are presented in Tables 32,33 and 34 respectively. The significant Fr values observed in case of all the three union membership categories pointed out the fact that the relationship dimensions significantly differed from one another in case of three union membership categories. It could be noted from Table 32, that the dimensions 'facilitation' (D1) and 'economic' (D7) differed significantly with six out of eight remaining dimensions in member dyads. In the same dyad 'tolerance' dimension (D4) too exhibited significant difference with six of the remaining eight dimensions. With regard to non-member dyads as revealed from Table 33, the dimension 'tolerance' (D4) had significant difference with all the rest eight dimensions. A significant difference in rank sums was noticed between the dimensions 'facilitation' (D1) 'equity' (D3) and rest of the six other dimensions. Interestingly, the dimension 'priority' (D9) differed significantly with only 'tolerance' (D4) and not with other seven dimensions. A significant difference in rank sums was noticed between the dimensions 'facilitation' (D1), 'equity' (D3) and rest of the six other dimensions. A perusal of the results presented in Table 34 indicated that 'tolerance' (D4) dimension showed significant difference with all other dimensions in one-

Table - 32 : Dimension-wise comparison of relationship of farmer-labourer dyads with regard to member dyads.

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	107.5*	45	218.5*	111.5*	116*	211*	141*	36
D2		62.5	111*	4	8.5	103.5*	33.5	71.5
D3			173.5*	66.5	71	166*	96*	9
D4				107*	102.5*	7.5	77.5	182.5*
D5					4.5	99.5*	29.5	75.5
D6						95*	25	80*
D7							70	175*
D8								105*

Fr = 154.99\*\*

Critical ratio 78.37

\*\* Significant (P&lt;0.01)

\* Significant difference.

D1 = Facilitation	D2 = Empathy	D3 = Equity
D4 = Tolerance	D5 = Guidance	D6 = Recognition
D7 = Economic	D8 = Social	D9 = Priority

Table - 33 : Dimension-wise comparison of relationship of farmer-labourer dyads with regard to non-member dyads.

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	102*	1	196.5*	84.5*	109.5*	116.5*	116*	54.5
D2		110*	87.5*	24.5	0.5	7.5	7	54.5
D3			197.5*	85.5*	110.5*	117.5*	117*	55.5
D4				112*	87*	80*	80.5*	142*
D5					25	32	31.5	30
D6						7	6.5	55
D7							0.5	62
D8								61.5

Fr = 139.66\*\*                      Critical ratio 73.31

\*\* Significant (P<0.01)

\* Significant difference

D1 = Facilitation	D2 = Empathy	D3 = Equity
D4 = Tolerance	D5 = Guidance	D6 = Recognition
D7 = Economic	D8 = Social	D9 = Priority

Table - 34 : Dimension-wise comparison of relationship of farmer-labourer dyads with regard to one member dyads.

Dimensions	Difference in rank sums							
	D2	D3	D4	D5	D6	D7	D8	D9
D1	205.5*	33.5	406.5*	180.5*	184.5*	262*	180.5*	6
D2		172*	201*	25	21	56.5	25	199.5*
D3			373*	147*	151*	228.5*	147*	27.5
D4				226*	222*	144.5*	226*	400.5*
D5					4	81.5	-	174.5*
D6						77.5	4	178.5*
D7							81.5	256*
D8								174.5*

Fr = 247.19\*\*                      Critical ratio 107.33

\*\* Significant (P<0.01)

\* Significant difference.

D1 = Facilitation	D2 = Empathy	D3 = Equity
D4 = Tolerance	D5 = Guidance	D6 = Recognition
D7 = Economic	D8 = Social	D9 = Priority

member dyads, whereas, the dimensions 'facilitation' (D1) 'equity' (D3) and 'priority' (D9) differed significantly with six out of remaining eight dimensions. As a consequence of the conclusions drawn above, the hypothesis that there would be no difference in the dimension-wise relationship performance of farmer-labourer dyads in union membership categories was rejected.

The comparison of various district, labourer and union membership categories indicated a general trend between the categories with regard to the relative performance of the various dimensions of relationship as evidenced from the results of the rank order correlation and Kruskal Wallis test worked out. District categories was the only exception to this trend, with the farmer-labourer dyads of Alapuzha district showing a significantly different order of performance of relationship dimensions than the one observed in Thiruvananthapuram district. The difference in the intensity of labour union activities, adoption behavior of rice farmers and the variation in the paddy production system between these two districts discussed in-depth elsewhere in this chapter might have contributed towards the significant difference in the order of performance of various relationship dimensions in these two districts.

A general trend in the relative performance of various dimensions of farmer-labourer relationship could be observed from the analysis of total sample and the various district,

labourer and union membership categories. The dimensions namely 'tolerance' and 'economic' had invariably emerged as the most important ones which were performed excellently not only in the total sample, but also in the various categories compared. These two were followed by 'empathy' and 'recognition' dimensions. A mediocre performance was noticed in the case of the 'social' and 'guidance' dimensions. It was 'facilitation', 'equity' and 'priority' dimensions which were relegated to the last three positions and the performance of which were poor as compared to other dimensions of relationship.

The advent of modern production technologies in agriculture and their transfer to the user system has, of late transformed the hitherto subsistence farming into a commercial one. This inturn enabled the application of modern principles of management in the field of agriculture, wherein the farmer can be equated with a manager of an industrial unit and his relationship with the hired agricultural labourers to labour management. It may be noted here that of the various factors of production, labour is the only human factor, the management of which should be different from the rest. The importance of recognizing human factor in the present day management need no special emphasis, particularly after the historical Hawthorne experiment by Elton Mayo with the conclusion that the worker was the most important element in the business and no one

knew much about the worker. In this context, Mayo (1933) pointed out for the first time that employee was a very complex instrument having a complex personality interacting in a group situation and the workers were not isolated, unrelated individuals, they were social animals and should be treated as such. Rustomji (1982) also commented that management was not the direction of things, rather it was the development of people. Hence, in the present day management perspective, it is the behavioral concept of human factor which is of prime significance. The autocratic form of management is neither conducive nor responsible for employee effectiveness and performance.

The farmer-labourer relationship today depicts more or less a formal system of relationship with precise conditions of work and wage payment with no place for labour exploitation, as in the past. Further more, in a state like Kerala which witnessed sweeping changes in the cultivator-labourer relations than that of other regions of the country the humane approach towards labourers has attained greater significance. Only with recognizing the dignity of labour and extending sympathetic attitude towards them, one can get things done by the labourers without any friction. Hence, the understanding of human behavior at work, and the recognition of egalitarian relational norms by the paddy farmers of Kerala might be the reasons for the better performance in tolerance and economic dimensions of farmer-



labourer relationship.

The farmer-labourer relationship, though comparable to the manager-worker relationship of an industrial unit, there exists a noticeable difference between these two systems. The industrial system is represented by a single manager and a fixed number of workers who normally do not change and with inbuilt sub systems of communication, motivation, collective bargaining, grievance redressal, participative management etc. The agricultural system, in contrast is represented by several managers (farmers) and varying number of hired agricultural labourers depending upon the requirement for a particular operation and who at times change from one farmer to another. The subsystems here are loosely knit and at most of the times function outside the main system.

Taking into consideration the long term perspective of labour efficiency, it becomes imperative on the part of the industrial systems to have a sound facilitation mechanism for their workers to make them work effectively. However, such a kind of facilitation mechanism may not be of much significance in the present day agricultural system with several masters and ever changing labourers. Interestingly the farmers seem to be more concerned about the completion of day-to-day agricultural operations with the available labour force, rather than having a long term perspective on labour and their efficiency as like the industrial system. The analysis of the nature of items clustered under facilitation

also indicated that these items were not of immediate necessity for completion of work by the labourers which is of prime concern for the farmers, rather they represented the long term perspective of labour relations. Hence, the poor performance under facilitation dimension.

With the hired labourers completely replacing the attached labour system coupled with the shortage of labourers, the farmers are forced to employ the available labourers to accomplish their work and do not exercise any choice for a particular labourer. This inturn has slowly eroded the informal nature of farmer-labourer relationship, wherein sound personal relationship is developed between the two, labourers' taken into confidence by the farmers, often consulted to arrive at solutions to the problems of work etc.

Such informal relationship is a rare phenomenon now-a-days. These may be the reasons why there was poor performance with regard to priority and equity dimensions of farmer-labourer relationship

#### 4.3. SOCIO-ECONOMIC AND PSYCHOLOGICAL FACTORS OF FARMER-LABOURER DYADS

An analysis of the socio-economic and psychological factors of farmer-labourer dyads was undertaken by categorizing the variables as belonging to high and low groups using the concerned mean values. This was done with

respect of the total sample, district categories and labourer categories based on common variables, farmer-related variables and labourer-related variables. This analysis was found necessary so as to make use of this while interpreting the results to draw meaningful conclusions from the study.

#### 4.3.1. . Distribution and comparison of farmer-respondents and labourer-respondents based on common variables

The percentage distribution of farmer-respondents and labourer-respondents under low and high groups based on common variables with respect of the total sample, Thiruvananthapuram district and Alapuzha district are presented in Tables 35,36 and 37 respectively. The tables also contained the concerned mean scores as well as the results of the 't' test to compare the respondent categories.

It could be observed from the tables that the pattern of distribution followed the same trend in Thiruvananthapuram and Alapuzha districts as that of the total sample with regard to eight of the 11 common variables included in the study. Farmer respondents in general were under high age group, better educated, had higher income, possessed more exposure to media, better social participation, higher interpersonal trust and more gregarious than their counterparts ie. labourer-respondents, since majority of them belonged to high group with regard to these variables.

Table - 35 : Distribution and comparison of respondents based on common variables (total sample)

Variable	Farmer-respondents			Labourer-respondents			Mean Score	't' value
	Mean Score	Low(%)	High(%)	Mean Score	Low(%)	High(%)		
1. Age	49.65	32.67	67.33	55.61	68.67	31.33	43.68	0.47
2. Education	3.92	16.00	84.00	4.65	57.33	42.67	3.19	0.02
3. Farming/labour experience	24.02	52.00	48.00	23.18	52.00	48.00	24.86	0.01
4. Family income	12124.67	49.33	50.67	18651.20	94.00	6.00	5598.13	1.68
5. Exposure to media	11.48	12.67	87.33	14.22	62.67	37.33	8.73	0.04
6. Social participation	5.15	28.00	72.00	7.73	84.00	16.00	2.57	0.30
7. Participation in union activities	4.27	74.67	25.33	2.39	32.33	67.33	6.15	0.22
8. Awareness about labour welfare neasures	4.26	60.00	40.00	3.71	43.33	56.67	4.80	0.07
9. Interpersonal trust	37.21	48.00	52.00	37.71	54.00	46.00	36.71	0.05
10. Attitude towards labour unions	4.51	55.33	44.67	4.29	28.33	72.67	4.72	0.06
11. Gregariousness	34.58	39.33	60.67	38.89	68.67	31.33	30.27	0.30

Table -36 :Distribution and comparison of respondents based on common variables in Thiruvananthapuram district

Variable	Farmer-respondents		Mean Score	Labourer-respondents		Mean Score	't' value
	Low(%)	High(%)		Low(%)	High(%)		
1. Age	30.67	69.33	55.97	65.33	34.67	44.83	0.55
2. Education	14.67	85.33	4.60	68.00	32.00	2.59	0.29
3. Farming/labour experience	52.00	48.00	23.67	44.00	56.00	26.16	0.12
4. Family income	48.00	52.00	19176	89.33	10.67	7521.13	18.33**
5. Exposure to media	8.00	92.00	15.13	68.00	32.00	8.04	0.55
6. Social participation	28.00	72.00	7.59	77.33	22.67	3.04	0.37
7. Participation in union activities	86.67	13.33	1.37	46.67	53.33	4.81	0.28
8. Awareness about labour welfare measures	60.00	40.00	3.33	65.33	34.67	4.04	0.07
9. Interpersonal trust	49.33	50.67	36.84	68.00	32.00	35.07	0.12
10. Attitude towards labour unions	58.67	41.33	4.24	37.33	62.67	45.24	0.05
11. Gregariousness	50.67	49.33	37.05	77.33	22.67	28.03	0.45

\*\* Significant (P <0.01)

Table -37 :Distribution and comparison of respondents based on common variables in Alapuzha district

Variable	Farmer-respondents			Labourer-respondents			't' value
	Low(%)	High(%)	Mean Score	Low(%)	High(%)	Mean Score	
1. Age	34.67	65.33	55.25	72.00	28.00	42.53	0.60
2. Education	17.33	82.67	4.71	46.67	53.33	3.80	0.14
3. Farming/labour experience	53.33	46.67	22.69	60.00	40.00	23.56	0.04
4. Family income	53.33	46.67	18126.40	98.67	1.33	3674.93	22.91**
5. Exposure to media	17.33	82.67	13.31	57.33	42.67	9.41	0.32
6. Social participation	28.00	72.00	7.88	90.67	9.33	2.09	0.51
7. Participation in union activities	62.67	37.33	3.40	18.67	81.33	7.49	0.35
8. Awareness about labour welfare measures	60.00	40.00	4.09	33.33	66.67	5.56	0.14
9. Interpersonal trust	46.67	53.33	38.59	40.00	60.00	38.35	0.02
10. Attitude towards labour unions	54.67	45.33	4.34	18.67	81.33	4.92	0.12
11. Gregariousness	28.00	72.00	40.73	60.00	40.00	32.51	0.40

\*\* Significant (P <0.01)

Regarding the variables participation in union activities, awareness about labour welfare measures and attitude towards labour unions labourer-respondents were better placed with higher proportion falling under high group than the farmer-respondents. However, in the case of experience, majority of both the categories of respondents were under low group in the total sample.

A shift in this general trend described above was noticed in Thiruvananthapuram district in the case of three variables namely experience, awareness about labour welfare measures and gregariousness with labourer-respondents having more experience than farmer-respondents, both found to possess less awareness about labour welfare measures and were less gregarious. Similarly, with regard to the variables education, income and interpersonal trust, a differential distribution pattern as compared to the total sample was observed in Alapuzha district. While majority of the respondents of both the categories were higher educated and possessed better interpersonal trust, their annual income in general was less. Though there were differences between the mean values of common variables of farmer-respondents and labourer-respondents in the total sample and in the two study districts, they were not statistically significant, as revealed from the non-significant 't' values, indicating that both the categories of respondents were on par with respect of the common variables. The only exception to this was

family income in both the districts, wherein the farmer-respondents had significantly higher income than the labourer-respondents.

#### 4.3.2. Distribution and comparison of farmer-respondents based on farmer-related variables

The distribution pattern of farmer-respondents under low and high groups based on farmer-related variables in the total sample and in the two study districts with their mean scores and the 't' values to compare the respondents of the two districts are furnished in Tables 38 and 39 respectively.

It could be inferred from the data given in the tables that majority of the farmer-respondents were observed to be low adopters of improved technologies of paddy cultivation, hold rather not a good opinion about the labourers and a little rigid in dealing with the hired labourers. In contrast, a larger proportion of them were more efficient in labour use, had better management orientation, possessed more persuasive power and high ability to handle conflicts with labourers.

A differential pattern of distribution of farmer-respondents was noticed in the case of Thiruvananthapuram and Alapuzha districts with regard to farmer-related variables. In Thiruvananthapuram district, higher proportion of farmer-respondents belonged to high group in respect of the variables management orientation, persuasiveness, ability to



Table - 38 : Distribution of farmer-respondents based  
on farmer-related variables (total sample)

Variable	Mean Score	Distribution	
		Low(%)	High(%)
1. Labour use efficiency	0.057	60.00	40.00
2. Adoption quotient	53.45	53.33	46.67
3. Opinion about labourers	28.21	52.67	47.33
4. Management orientation	14.52	43.33	56.67
5. Persuasiveness	25.46	44.33	56.00
6. Ability to handle conflicts	26.79	40.67	59.33
7. Flexibility	25.26	55.33	44.67

Table - 39 : Distribution and comparison of farmer-respondents based on farmer-related variables in the two study districts.

Variable	<u>Thiruvananthapuram</u>			<u>Alapuzha</u>		Mean Score	't' value
	Low(%)	High(%)	Mean Score	Low(%)	High(%)		
1. Labour use efficiency	46.67	53.33	0.068	73.33	26.67	0.047	0.02
2. Adoption quotient	73.33	26.67	48.56	32.00	68.00	58.34	0.43
3. Opinion about labourers	54.66	45.33	27.89	44.00	56.00	28.53	0.04
4. Management orientation	36.00	64.00	14.93	50.67	49.33	14.11	0.08
5. Persuasiveness	41.33	58.67	25.64	46.67	53.33	25.28	0.03
6. Ability to handle conflicts	38.67	61.33	26.71	36.00	64.00	26.88	0.02
7. Flexibility	41.33	58.67	26.04	62.67	37.33	24.77	0.13

handle conflicts and flexibility, as against majority under low group in the case of adoption quotient and opinion about labourers. Regarding labourer use efficiency, larger proportion of farmers were under high group, indicating that they were less efficient in using the hired labour force. With regard to Alapuzha district, majority of the farmer-respondents were more efficient in labour use, high adopters of paddy production technology, possessed better opinion about the labourers, more persuasive in nature, and had high ability to handle conflicts, but however were less flexible with the hired agricultural labourers. In case of management orientation, almost equal proportion of farmers were under low and high group. The results of the 't' test indicated that the farmer-respondents of Thiruvananthapuram district were comparable and on par with those of Alapuzha district on the lines of the farmer-related variables, as the differences in the mean values of the respondents with regard to the variables under study in the two districts were not statistically significant.

#### 4.3.3. Distribution and comparison of labourer categories based on common and labourer-related variables.

The percentage distribution of labourer-respondents under low and high group based on common and labourer-related variables with respect of the total sample and the two study

districts are given in Tables from 40 to 43 along with the results of the 't' test to compare the labourer categories based on these variables. It is evident from Table 40 that majority of the labourer-respondents were under low group with respect to 11 of the 15 variables studied. The exceptions to this phenomenon were participation in union activities, awareness about labour welfare measures, attitude towards labour unions and orientation towards work which had majority of the respondents belonging to high group. The comparison of the male and female labourers in the total sample (Table 41) based on the variables revealed that the percentage distribution of both male and female labourers under low and high group followed the same pattern in 9 of the 15 variables, with maximum proportion coming under low group in the case of variables such as age, education, income, social participation, gregariousness and employment days and under high group with regard to participation in union activities, attitude towards labour unions and orientation towards work. However, a reversal in distribution trend was seen with regard to the remaining six variables, wherein majority of male labourers were under high group in case of education, interpersonal trust, awareness about labour welfare measures and participation in decision making with farmers, as against majority of female labourers under low group with regard to these variables. In case of opinion about farmers and experience, majority of male

Table - 40 : Distribution of labourer-respondents based on  
common and labourer-related variables (total sample)

Variable	Mean Score	Distribution	
		Low(%)	High(%)
1. Age	49.65	68.67	31.33
2. Education	3.92	57.33	42.67
3. Farming/labour experience	24.02	52.00	48.00
4. Family income	12124.67	94.00	6.00
5. Exposure to media	11.48	62.67	37.33
6. Social participation	5.15	84.00	16.00
7. Participation in union activities	4.27	32.67	67.33
8. Awareness about labour welfare measures	4.26	42.67	57.33
9. Interpersonal trust	37.21	54.00	46.00
10. Attitude towards labour unions	4.51	28.00	72.00
11. Gregariousness	34.58	69.33	30.67
12. Employment days	24.65	63.33	36.67
13. Orientation towards work	35.71	43.33	56.67
14. Opinion about farmers	21.49	51.33	48.67
15. Participation in decision making with farmers	27.51	58.67	41.33

Table - 41 : Distribution and comparison of labourer categories based on common and labourer-related variables (total sample)

Variable	Male		Mean Score	Female		Mean Score	't' value
	Low(%)	High(%)		Low(%)	High(%)		
1. Age	68.29	31.71	44.54	69.12	30.88	42.65	0.07
2. Education	46.34	53.66	3.59	70.59	29.41	2.72	0.08
3. Farming/labour experience	54.88	45.12	25.10	48.53	51.47	25.57	0.02
4. Family income	90.24	9.76	6672.93	98.53	1.47	2682.05	4.80**
5. Exposure to media	52.44	47.56	9.78	75.00	25.00	7.46	0.12
6. Social participation	79.27	20.73	3.17	89.71	10.29	1.84	0.09
7. Participation in union activities	34.15	65.15	5.50	30.88	69.12	6.12	0.04
8. Awareness about labour welfare measures	34.15	65.15	5.32	52.24	47.06	4.18	0.08
9. Interpersonal trust	41.46	58.54	38.63	69.12	30.88	34.38	0.22
10. Attitude towards labour unions	19.51	80.49	4.82	38.24	61.76	4.59	0.03
11. Gregariousness	57.32	42.68	33.89	83.82	16.18	25.90	0.30
12. Employment days	52.44	47.56	138.71	76.47	23.53	07.69	0.43
13. Orientation towards work	43.12	54.88	34.70	41.18	58.82	36.93	0.10
14. Opinion about farmers	53.66	46.34	21.33	48.53	51.47	21.68	0.02
15. Participation in decision making with farmers	36.59	63.41	32.40	85.29	14.71	21.60	0.42

\*\* Singificant (P<0.01)

Table -42 :Distribution and comparison of labourer categories based on common and labourer-related variables in Thiruvananthapuram district

Variable	Male		Mean Score	Female		Mean Score	't' value
	Low(%)	High(%)		Low(%)	High(%)		
1. Age	62.16	37.84	46.30	68.42	31.58	43.369	0.22
2. Education	54.05	45.95	3.16	81.58	18.42	2.03	0.19
3. Farming/labour experience	43.24	56.76	27.14	44.74	55.26	25.21	0.14
4. Family income	81.08	18.92	9365.41	97.37	2.63	5725.79	15.73**
5. Exposure to media	51.35	48.65	9.38	84.21	15.79	6.74	0.26
6. Social participation	67.57	32.43	3.78	86.84	13.16	2.32	0.20
7. Participation in union activities	48.65	51.35	4.59	44.74	55.26	5.03	0.05
8. Awareness about labour welfare measures	37.84	62.16	4.78	65.79	34.21	3.32	0.19
9. Interpersonal trust	54.05	45.95	37.46	81.58	18.42	32.74	0.49
10. Attitude towards labour unions	27.03	72.79	4.65	47.37	52.63	4.40	0.07
11. Gregariousness	67.57	32.43	31.62	92.11	7.89	24.53	0.57
12. Employment days	21.62	78.38	188.24	60.53	39.47	135.03	1.47
13. Orientation towards work	37.84	62.16	36.59	36.84	63.16	37.39	0.08
14. Opinion about farmers	54.05	45.95	21.73	42.11	57.89	22.47	0.11
15. Participation in decision making with farmers	29.73	70.27	34.16	89.47	10.53	21.47	1.03

\*\* Significant (P<0.01)

Table -43 :Distribution and comparison of labourer categories based on common and labourer-related variables in Alapuzha district

Variable	Male		Mean Score	Female		Mean Score	't' value
	Low(%)	High(%)		Low(%)	High(%)		
1. Age	73.33	26.67	43.09	70.00	30.00	41.70	0.09
2. Education	40.00	60.00	3.93	56.67	43.33	3.60	0.08
3. Farming/labour experience	64.44	35.56	23.92	53.33	46.67	23.77	0.01
4. Family income	97.78	2.22	4459.11	100.00	-	2498.67	10.43**
5. Exposure to media	53.33	46.67	10.11	63.33	36.67	8.37	0.20
6. Social participation	88.89	11.11	2.67	93.33	6.67	1.23	0.24
7. Participation in union activities	22.22	77.78	7.49	13.33	86.67	7.50	0.01
8. Awareness about labour welfare measures	31.11	68.89	5.76	36.67	63.33	5.27	0.07
9. Interpersonal trust	31.11	68.89	39.61	53.33	46.67	36.47	0.35
10. Attitude towards labour unions	13.33	86.67	4.95	26.67	73.33	4.84	0.04
11. Gregariousness	48.89	51.11	35.76	76.67	23.33	27.63	0.61
12. Employment days	77.78	22.22	97.98	96.67	3.33	73.07	0.92
13. Orientation towards work	51.11	48.89	33.13	46.67	53.33	36.33	0.28
14. Opinion about farmers	53.33	46.67	21.00	56.67	43.33	20.67	0.03
15. Participation in decision making with farmers	42.22	57.78	30.95	80.00	20.00	21.77	0.70

\*\* Significant (P<0.01)



labourers came under low group, whereas majority of their counterparts were under high group.

The distribution pattern of male and female labourers under high and low group exhibited almost a similar trend in the two study districts as that of the total sample, however with little variations in three or four cases in each districts. In Thiruvananthapuram district, the variation in distribution pattern was noticed in the case of employment days with majority of male labourers coming under high group, whereas majority of female labourers were under low group. Regarding education and interpersonal trust, majority of both male and female labourers were under low group, but in the case of experience majority of both were under high group. Likewise in Alapuzha district, majority of male labourers were more gregarious and less oriented towards work than their counterparts. Nevertheless, a higher proportion of both male and female labourers were found to have less experience, low opinion about farmers, however possessed greater awareness about labour welfare measures.

#### 4.4. RELATIONSHIP BETWEEN SOCIO-ECONOMIC AND PSYCHOLOGICAL FACTORS OF FARMER-LABOURER DYADS WITH THEIR RELATIONSHIP

Step-wise regression analysis and path analysis were employed under this study for establishing the relationship

between the socio-economic and psychological factors of farmer-labourer dyads with farmer-labourer relationship. While the former enabled to find out the best sub-set of variables out of many for predicting the variations in farmer-labourer relationship and also to determine the relative contribution of each variable in the regression model the latter was used to analyse the direct and indirect effects of variables on farmer-labourer relationship.

4.4.1. Predictive power and relative contribution of socio-economic and psychological factors in explaining the variation in farmer-labourer relationship of farmer-respondents.

The results of the step-wise regression analysis in respect of farmer-respondents are presented in Table 44. It could be inferred from the table that among the eighteen variables 'management orientation' of the farmer-respondents emerged as the most important variable which explained 40.16 per cent of variation in the farmer-labourer relationship. The predictive power increased with the inclusion of other variables in the successive steps of the regression analysis.

With the addition of the variable 'persuasiveness' in the second step, the percentage of variation explained was increased to 54.76 per cent. In steps three, four and five the variables gregariousness, education and ability to handle

Table - 44 : Step-wise regression analysis of independent variables influencing farmer-labourer relationship of farmer-respondents.

Step No	Variables entering	Total DF	F ratio	Percentage of variation explained (R <sup>2</sup> )
1.	Management orientation(X15)		99.34	40.16
2.	Management orientation(X15) Persuasiveness (X16)		88.97	54.76
3.	Management orientation(X15) Persuasiveness(X16) Gregariousness(X11)		89.61	64.81
4.	Management orientation(X15) Persuasiveness(X16) Gregariousness(X11) Education(X2)		72.01	66.52
5.	Management orientation(X15) Persuasiveness(X16) Gregariousness(X11) Education(X2) Ability to handle conflicts(X17)		60.59	67.78
6.	Management orientation(X15) Persuasiveness(X16) Gregariousness(X11) Education(X2) Ability to handle conflicts(X17) Labour use efficiency(X12)	149	57.57	68.39

conflicts got included in the regression model in the same order with the corresponding increase in the percentage of variation explained in farmer-labourer relationship to the tune of 64.81, 66.52 and 67.78 per cent respectively. The analysis was stopped with the step which gave the highest  $R^2$  value and the variables included in that step were all significant. In the present case step six gave the highest  $R^2$  value of 68.39 percent which contained the variable 'labour use efficiency' in addition to the five variables included in the preceding steps. All the six variables put together explained 68.39 percent of variation in the farmer-labourer relationship. The regression equation predicting the farmer-labourer relationship was as follows.

$$Y = 62.4661 + -30.8225X_{12} + 0.6050X_{17} + \\ 1.1903X_2 + 0.2861X_{11} + 0.7689X_{16} + 1.4929X_{15}$$

It is clear from the above equation that a unit change in the variables 'ability to handle conflicts', 'education', 'gregariousness', 'persuasiveness' and 'management orientation' would result in an increase of 0.6050, 1.1903, 0.2861, 0.7689 and 1.4929 units ceteris paribus in the farmer-labourer relationship of farmer-respondents. However, a unit change in the variable 'labour use efficiency' would lead to decrease in farmer-labourer relationship by 30.8225 units. Thus it was concluded from the step-wise regression

analysis that among the eighteen variables, six of them, namely 'management orientation', 'persuasiveness', 'gregariousness', 'education', 'ability to handle conflicts' and 'labour use efficiency' were the most important variables which significantly contributed to the farmer-labourer relationship of farmer-respondents.

As a result of above findings, the hypothesis that the variation in the farmer-labourer relationship would not be explained by the socio-economic and psychological factors included in the study was rejected. Subsequently the hypothesis that there would be no significant contribution of each socio-economic and psychological factors towards farmer-labourer relationship of respondents was rejected with respect of the above six variables and accepted in case of the rest twelve variables of farmer-respondents.

4.4.2. Direct and indirect effects of socio-economic and psychological factors on farmer-labourer relationship of farmer-respondents.

The results of the path analysis are given in Table 45. It is clear from this table that the variable 'management orientation' had the highest positive and direct effect (0.3956) on farmer-labourer relationship. There were positive and direct effects of 'gregariousness' (0.2788), 'persuasiveness' (0.2452) and 'ability to handle conflicts'

Table - 45 : Direct and indirect effects of common and farmer-related variables on farmer-labourer relationship of farmer respondents

Variable No.	Variable name	Direct effect	Total indirect effect	Substantial indirect effect channeled through			Total Correlation
				I	II	III	
X1	Age	-0.0995	-0.1268	-0.0739 X15	0.0392 X3	-0.0370 X11	-0.2263
X2	Education	0.0879	0.3561	0.1638 X11	0.0361 X11	0.0361 X1	0.4440
X3	Experience	0.0706	-0.1567	-0.0552 X1	-0.0510 X15	-0.0037 X2	-0.0861
X4	Family income	0.0512	0.1574	0.0776 X15	0.0501 X11	0.0270 X16	0.2086
X5	Exposure to media	0.0084	0.3347	0.1489 X15	0.0852 X11	0.0535 X16	0.3431
X6	Social participation	-0.0015	0.3957	0.1566 X11	0.1087 X11	0.0466 X16	0.3942
X7	Participation in union activities	-0.0593	0.1403	0.0648 X11	0.0350 X15	0.0260 X16	0.0810
X8	Awareness about labour welfare measures	-0.0008	0.3046	0.0955 X11	0.0604 X15	0.0440 X16	0.3038
X9	Interpersonal trust	0.0238	0.2163	0.0668 X11	0.0512 X15	0.0328 X16	0.2401
X10	Attitude towards labour unions	0.0219	0.2199	0.0798 X15	0.0654 X16	0.0432 X11	0.2418
X11	Gregariousness	0.2788	0.3115	0.1474 X15	0.0595 X16	0.0260 X2	0.5903
X12	Labour use efficiency	-0.0729	-0.1744	-0.0461 X11	-0.0384 X16	-0.0349 X15	-0.2473
X13	Adoption quotient	0.0768	0.1786	0.0851 X11	0.0401 X15	0.0298 X16	0.2554
X14	Opinion about labourers	0.0124	0.1763	0.0669 X16	0.0413 X11	0.0395 X17	0.1887
X15	Management orientation	0.3956	0.2382	0.1039 X11	0.0500 X16	0.0364 X2	0.6338
X16	Persuasiveness	0.2452	0.2580	0.0806 X15	0.0726 X17	0.0677 X11	0.5032
X17	Ability to handle conflicts	0.1447	0.1757	0.1230 X16	0.0373 X11	-0.0106 X7	0.3204
X18	Flexibility	-0.0352	0.0370	0.0471 X16	0.0236 X17	0.0148 X15	0.0018
Residue = 0.5462(55%)							

(0.1447) in that order of importance in terms of their direct effect on farmer-labourer relationship. The residue was around 0.55.

In addition, it could be noticed from the table that out of 54 substantial indirect effects, the variables 'gregariousness' and 'management orientation' had substantial indirect effects of as many as 15 each variables channeled through those variables. Moreover, the variable 'persuasiveness' had indirect effects of 14 variables channeled through this variable. Like wise, variables 'education' and 'ability to handle conflicts' had indirect effects of three each variables channeled through these variables.

The results of the step-wise regression analysis and path analysis indicated that the variables which had significant contribution in explaining the variation in farmer-labourer relationship also showed relatively higher direct effects. Hence, it was concluded that the five variables namely 'management orientation', 'gregariousness', 'persuasiveness', 'ability to handle conflicts' and 'education' were the most important variables influencing the farmer-labourer relationship of farmer-respondents.

4.4.3. Predictive power and relative contribution of socio-economic and psychological factors in explaining the variation in farmer-labourer relationship of labourer-respondents.

The results of the step-wise regression analysis with

regard to labourer-respondents are furnished in Table 46. It is evident from the table that among the fifteen variables 'participation in decision making with farmers' stood out as the most important variable in explaining 16.60 per cent of variation in the farmer-labourer relationship. With the addition of the variables 'employment days' and 'education' in the successive two steps, the predictive power had enhanced to 18.65 and 20.33 per cent respectively. The  $R^2$  value did not improve further in the steps that followed and hence the analysis was stopped with three steps. Thus the step-wise regression analysis indicated that the variables 'participation in decision making with farmers', 'employment days' and 'education' put together explained 20.33 per cent of variation in the farmer-labourer relationship of labourer-respondents. The regression equation obtained was

$$Y = 119.1539 + 0.8457X_2 + 0.0267X_{12} + 0.3505X_{15}$$

It is inferred from the above equation that a unit change in the variables 'education' 'employment days' and 'participation in decision making with farmers' would result in 0.8457, 0.0267 and 0.3505 units of increase in farmer-labourer relationship of labourer-respondents respectively. It is concluded from this, that the variables 'participation in decision making with farmers', 'education' and 'employment days' were the most important variables which significantly

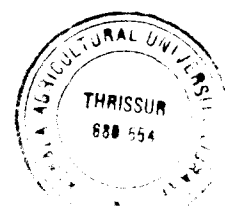




Table - 46 : Step-wise regression analysis of independent variables influencing farmer-labourer relationship of labourer-respondents.

Step No.	Variables entering	Total DF	F ratio	Percentage of variation explained.(R <sup>2</sup> )
1.	Participation in decision making with farmers(X15)		29.45	16.60
2.	Participation in decision making with farmers(X15) Employment days(X12)		16.84	18.65
3.	Participation in decision making with farmers(X15) Employment days(X12) Education(X2)	149	12.41	20.33

contributed to the farmer-labourer relationship of labourer-respondents. Hence, the hypothesis that there would be no significant contribution of each socio-economic and psychological factors towards farmer-labourer relationship of respondents was rejected in case of above three variables and accepted with respect of the remaining twelve variables of labourer-respondents.

4.4.4. Direct and indirect effects of socio-economic and psychological factors on farmer-labourer relationship of labourer-respondents.

The results of the path analysis are presented in Table 47. It is evident from this table that the variable 'participation in decision making with farmers' had the highest positive and direct effect (0.3813) on farmer-labourer relationship. In addition, the variables 'education' (0.2394), 'awareness about labour welfare measures' (0.2001) and 'family income' (0.1319) had positive and direct effect on farmer-labourer relationship. The residue was around 0.85.

It is also observed from the table that out of 45 substantial indirect effects, the variables 'education' and 'participation in decision making with farmers' had substantial indirect effects of as many as 11 and 10 variables channeled through these two variables respectively.

Table - 47 : Direct and indirect effects of common and labourer-related variables on farmer-labourer relationship of labourer respondents

Variable No.	Variable name	Direct effect	Total indirect effect	Substantial indirect effect channeled through			Total Correlation
				I	II	III	
X1	Age	0.0464	-0.1530	0.0861 X3	0.0815 X2	0.0745 X15	-0.1066
X2	Education	0.2394	-0.1070	-0.0668 X5	-0.0507 X11	0.0487 X15	0.1324
X3	Experience	0.0942	-0.0088	-0.0968 X2	0.0535 X15	0.0429 X11	0.0854
X4	Family income	0.1319	0.0988	0.0902 X15	0.0276 X10	0.0266 X12	0.2307
X5	Exposure to media	-0.1218	0.1659	0.1314 X2	0.0800 X15	0.0450 X8	0.0441
X6	Social participation	-0.0729	0.1320	0.0858 X15	0.0422 X4	0.0364 X8	0.0591
X7	Participation in union activities	-0.0354	-0.0212	0.0916 X8	-0.0714 X10	0.0299 X4	-0.0566
X8	Awareness about labour welfare measures	0.2001	-0.0710	0.0559 X2	-0.0490 X10	-0.0395 X11	0.1291
X9	Interpersonal trust	0.0557	0.0624	0.0625 X15	0.0456 X8	0.0452 X2	0.1181
X10	Attitude towards labour unions	-0.1454	0.0485	0.0674 X8	0.0522 X2	-0.0310 X11	-0.0969
X11	Gregariousness	-0.1022	0.1551	0.1187 X2	0.0897 X15	0.0773 X8	0.0529
X12	Employment days	0.0329	0.1716	0.1067 X4	-0.0653 X2	0.0590 X15	0.2045
X13	Orientation towards work	-0.0414	0.1002	-0.0695 X2	-0.0480 X8	0.0456 X3	0.0588
X14	Opinion about farmers	0.0985	0.0972	0.0794 X15	-0.0447 X2	0.0225 X5	0.1957
X15	Participation in decision making with farmers	0.3813	0.00259	0.0312 X4	0.0306 X2	-0.0256 X5	0.3839
Residue = 0.8499 (85%)							

The variable 'awareness about labour welfare measures' had indirect effects of seven variables routed through this, variables. Similarly the variables 'family income' and 'gregariousness' had indirect effects of 4 other variables channeled through these variables. There were three each substantial indirect effects channeled through 'exposure to media' and 'attitude towards labour unions', two through 'experience' and one through 'employment days'.

It is concluded from the results of the step-wise regression analysis and path analysis that the four variables namely 'participation in decision making with farmers', 'education', 'employment days' and 'awareness about labour welfare measures' were the most important variables influencing the farmer-labourer relationship of labourer-respondent.

4.4.5. Discussion on the reasons for the nature of relationship of independent variables with the farmer-labourer relationship.

4.4.5.1. Management orientation

This had emerged as the most important variable explaining about 40 per cent of the variation in the farmer-labourer relationship and having maximum direct effect on relationship with regard to the farmer-respondents. The

infusion of commercialisation had almost transformed Indian agriculture from its subsistence level during yester years to the present day market oriented agriculture. Under this circumstance, be it land capital or labour, unless they are managed efficiently by making use of modern management principles, the desired level of production is hard to be achieved. So farmer-labourer relationship in today's context is nothing but the management of labour to achieve maximum production. Here comes the significance of management orientation. Farmers' orientation towards modern management principles is likely to shape them into better managers which inturn may help to develop and maintain good relationship with the hired agricultural labourers. This may be the reason for management orientation to become the most significant variable in explaining the variation in farmer-labourer relationship. It is relevant to note here the observations of Anantharaman (1991) who reported a strong positive association of management orientation with the managerial efficiency of cassava farmers with labour management forming a part of it.

#### 4.4.5.2. Persuasiveness

This variable also showed a positive significant direct effect on farmer-labourer relationship. With farmers assuming the role of managers, their ability to communicate

the ideas of modern cultivation techniques to the hired labourers and persuading them to put in quality work is a sure key to success in farm enterprise. Persuasiveness of farmers is an indirect expression of their communication ability and the importance of communication in the present day management need no special mention. Hence, the farmers with high persuading ability are likely to influence the labourers better and develop good relationship with them than those who lack in this ability. This may be the reason why persuasiveness has emerged as the variable having significant positive relationship with farmer-labourer relationship. This finding is a confirmation of the one by Pareek and Rao (1981) who observed persuasiveness as one of the important critical attributes of a manager.

#### 4.4.5.3. Ability to handle conflicts

The present scenario of agricultural front is characterised by a bulk of farmers interested primarily in production increase and having rather poor opinion about labourers on one hand and a mass of highly unionised agricultural labourers who are well aware of their rights on the other. This has increased the scope of disputes and tensions between these two classes, as witnessed in various regions of our country. In this situation, those farmers who are capable of handling disputes and conflicts with their

hired agricultural labourers are having an edge over others who lack this skill in easing out the tensions with each other so as to smoothen their relationship and strengthen it further. Hence, it is quite possible that the farmers having greater ability to handle conflicts developed better relationship with their hired labourers. This finding is in conformity with the observations of Pareek and Rao (1981) who noted that the ability to handle conflicts is an important critical attribute of a manager.

#### 4.4.5.4. Gregariousness

The success of a farmer in accruing high profits from crop enterprise lies in his capacity to move friendly with his labourers and make them work effectively. In this regard, it may be noted that gregariousness had been identified by Guilford (1959) as an important characteristic in supervisory efficiency. Farmers as supervisors of hired labourers, their job definitely involves face to face contacts where skills in interacting with people are very important to be successful. Therefore, the success of farmers is essentially a function of their skill in interpersonal relationship. Being a manager of the farm, a farmer has to move with the labourers quite closely and develop good personal relationship with them so as to motivate them or to enhance their morale. So, it is only

reasonable to expect a farmer who is highly gregarious would be successful in having good relationship with his hired labourers. This is in conformity with the findings of Subramony (1979) who concluded gregariousness as the significant trait differentiating the successful supervisors from the unsuccessful ones.

#### 4.4.5.5. Labour use efficiency

This variable had significant but negative relationship with farmer-labourer relationship. The increase in the labour use for paddy production by the farmers is an indication of their inefficiency in managing the labour input. One who is more efficient uses less labour for paddy production, thereby making effective use of the hired labour force by maintaining better relationship with them. This may be the reason for getting significant negative relationship with regard to this variable.

#### 4.4.5.6. Education

Education was found to have significant positive relationship with farmer-labourer relationship of both farmer as well as labourer respondents. As education widens the horizon of knowledge of a person and his awareness about worldly affairs, it is quite possible for education to help



in understanding the complex human personality and the way how it works during interpersonal situations. Hence, it may be possible for an educated person to understand, appreciate, and move with others in a friendly way as compared to an illiterate. The importance of considering education of labourers by farmers to develop optimal human resource management policies has been aptly emphasised by Howard and McEvan (1989). So the importance of education in interpersonal relationship situations has been brought out clearly in this study. This draws support from the findings of Padmanabhan (1981) who found a positive relationship between education and efficiency of male labourers.

#### 4.4.5.7. Participation in decision making with farmers.

Participation in decision making with farmers stood out from the rest of the labourer related variables as the single major variable accounting for 17 per cent of variation in farmer-labourer relationship in the case of labourers. A bird's eye view of the various aspects of farmer-labourer relationship could reveal that getting proper and clear instructions from farmers by labourers, prompt wage payment, adopting humane approach towards labourers, diplomatic and tactful way of getting things by labourers etc. represent more or less routine aspects, as against labourers participation in decision making with farmers which is of

special in nature and should be considered separately. Unlike in the past when farmers used to have more of attached labourers and consult each and every farm operation with them, today farmers discuss about farm operations only with few handful of labourers with whom they have faith and confidence, that too on limited aspects. Hence a high participation in decision making on the part of the labourers is a very clear indication of their being in the good books of the farmers and also having a very cordial relationship with them. This may be the reason for this variable to have a strong positive relationship with farmer-labourer relationship. This is in line with the observations of Padmanabhan (1981) and Alex (1994) with labour efficiency and role perception/performance of labourers respectively.

#### 4.4.5.8. Employment days

This is another labourer-related variable found to have significant positive relationship with farmer-labourer relationship. As the employment days increases, it enhances the opportunity of the labourers to have more contact with the farmers and which inturn help in establishing better relationship with each other. This may be the reason for getting significant positive relationship between employment days and farmer-labourer relationship under the present study. Similar findings were noted by Padmanabhan (1981) and

Alex (1994) with labour efficiency and role perception/performance of labourers respectively.

#### 4.4.5.9. Age

Age was found to have no relationship with the farmer-labourer relationship of both the categories of respondents.

The reason for this may be as under. It is the basic psychological make up of a person, rather than mere advancement in his/her age that is of importance in interpersonal relationship situations. Similar findings were noted by Alexander (1974) and Subramony (1979) in the study of egalitarian relations between farmers and labourers and successfulness of supervisors in industry, respectively.

#### 4.4.5.10. Farming/labour experience

This variable also exhibited no relationship with farmer-labourer relationship of farmers and labourers. Experience in farming or as an agricultural labourer may be an important factor in making, the farmer/labourer well versed with various spheres of farming in carrying out different agricultural operations effectively, but this may not be directly contributing anything towards the betterment of relationship between the farmers and the labourers. This finding is in line with the findings of Fiedler (1970) who

found that there was no significant correlation between the number of years of supervisory experience and supervisory performance.

#### 4.4.5.11. Family Income

Income is only an indicator of the economic status of an individual and nothing to do with his/her relationship with other persons. This may be the reason why this variable was not found related with farmer-labourer relationship. Alexander (1974) too noted no association of income with role expectation of farmers and labourers.

#### 4.4.5.12. Exposure to media

The present media coverage is restricted to agriculture, animal husbandry, fisheries, rural development etc. and coverage on interpersonal relationship and management is practically nil. Hence, it is quite natural to expect this variable not to be related with farmer-labourer relationship. This is in conformity with the findings of Alexander (1974) and Anantharaman (1991) with regard to role expectation of farmers/labourer and managerial efficiency of cassava farmers, respectively.

#### 4.4.5.13. Social participation

Although, theoretically this variable appears to be

closely related to farmer-labourer relationship, in the present study it was observed to be non significant. Participation of a farmer/labourer in the activities of various social organisations may not be a guarantee for enhanced interpersonal relationship among the farmer-labourer dyads. This may be the reason for non-relationship of this variable. Anantharaman (1991) and Alex (1994) also observed similar kind of relationship in the case of managerial efficiency of cassava farmers and role perception/expectation of labourers, respectively.

#### 4.4.5.14. Participation in union activities

With the improvement in wage payment, working conditions etc., participation of farmer/labourer in various activities has been recognised as a legitimate right and this in no way found a hindrance to the working of labourers. It was remarked by many farmer-respondents at the time of interview that the labourers who actively participated in their union activities did not reflect their agitational mood once they came to work. This may be the probable reason for the observation non-relationship this variable with farmer-labourer relationship. This finding draws support from the findings of Alexander (1974) and Lukose (1982) who also reported similar kind of relationship with role expectation of farmers and labourers and their social relationship, respectively.

#### 4.4.5.15. Attitude towards labour unions

It was noted from the analysis of personal characteristics of the respondents of the study that the labourers were found to have uniformly a highly favourable attitude towards labour unions. On the other hand, the farmers though had less score on this variable, as compared to the labourers they too had a favourable attitude towards labour unions. As, almost all the respondents had favourable attitude towards labour unions without any variation amongst them, this variable did not show any influence on farmer-labourer relationship. Similar kind of finding was noticed in the studies conducted by Subramony (1979) on successfulness of industrial supervisors, Lukose (1982) on social relationship between farmers and labourers and Padmanabhan (1981) on labour efficiency.

#### 4.4.5.16. Awareness about labour welfare measures

This variable did not have any relationship with the farmer-labourer relationship of the respondents but had only substantial direct effect in case of labourer-respondents and the reason for this may be as follows. The two labour welfare measures considered under this study are of recent origin and only now efforts are being taken to enlist the labourers to become the members of these schemes. Owing to this, majority

of the respondents were found not fully aware of the various aspects of their welfare schemes, Hence, the present finding.

#### 4.4.5.17 Adoption Quotient

Adoption quotient is only a reflection of the farmers inclination to adopt scientific practices and his innovativeness and confined to the farmers themselves. It is not a variable influencing their personality with respect to their relationship with others. This may be the reason why adoption quotient did not exhibit any relationship with farmer-labourer relationship.

#### 4.4.5.18. Opinion about labourers

Under the changed conditions of farmer-labourer relationship irrespective of whether a farmer had good or bad opinion about the labourers, he has to have a good personal relationship with the hired labourers to get his things done by them. So his mental disposition regarding the labourers does not get reflected in his dealings with them. Hence, a non-relationship between this variable and farmer-labourer relationship.

#### 4.4.5.19. Flexibility

Under the present circumstances, the farmers need to be generally flexible in order to get things done by the hired

labourers. Though they may be rigid at times, the general flexible nature of farmers might be the reason why this variable did not influence the farmer-labourer relationship.

#### 4.4.5.20. Interpersonal trust

This common variable did not show any relationship with farmer-labourer relationship of both the farmer and the labourer-respondents. It could be attributed to the fact that interpersonal trust was measured in this study only in general terms and not with a particular farmer or labourer as the reference point. On the contrary, farmer-labourer relationship had this reference point. This could be the reason for the lack of relationship between these two variables.

#### 4.4.5.21 Orientation towards work

This variable had shown no relationship with farmer-labourer relationship of labourer-respondents. With alternative avenues of work available to labourers under present condition, their commitment to work might not have influenced their relationship with the farmers.

#### 4.4.5.22. Opinion about farmers

This labourer related variable too exhibited no relationship with farmer-labourer relationship. Labourers'



relationship with farmers is shaped by the way of labourers view their masters. If the labourers have good opinion about farmers, it results in developing and maintaining good relationship with each other. Since, majority of the labourers did not have good opinion about the farmers in general the variable opinion about farmers might have influenced their mutual relationship.

#### 4.5 FARMER-LABOURER RELATIONSHIP-A BIRD'S EYE VIEW

While formulating the present study, in the absence of adequate literature on farmer-labourer relationship, it was conceptualised on the basis of studies related to personnel management, industrial relations, human resource development and labour productivity. As a result, the theoretical dimensions of relationship namely communication, motivation, human relations, management, work, economic and social were more of management in orientation. On the contrary, the interpersonal dyadic nature of farmer-labourer relationship investigated under this study necessitated to have a fresh look at the farmer-labourer relationship especially while delineating the empirical dimensions of relationship.

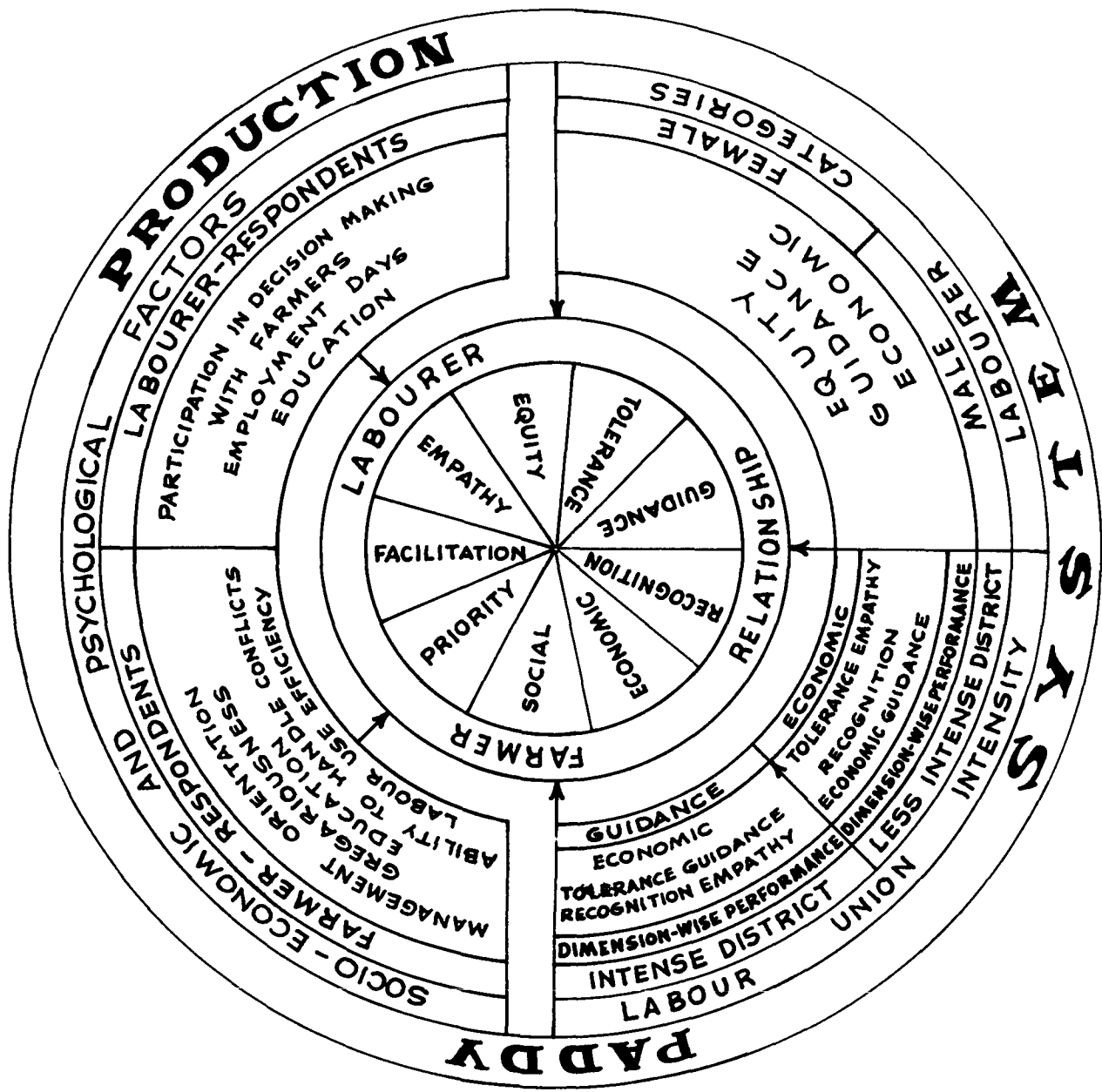
This was warranted, because of the vast differences existing between the management-worker relationship in an industrial system and the farmer-labourer relationship under agriculture system. Unlike industrial system which has

management represented by an invisible group of personnel, inadequate face to face contact with management and workers, highly organised unions, inbuilt systems of communication, grievance redressal mechanism, motivation, long term perspective on labour efficiency, participative management etc., the agriculture system is characterised by the face to face contact with farmer and labourers during work situation, more familiarity with each other, several masters (farmers) and a group of labourers who often change, more concern about the completion of day-to-day operations, loosely knit systems of communication, motivation etc., and not so well organised unions. Accordingly, the farmer-labourer relationship has been theorised as having facilitation, empathy, equity tolerance, recognition, guidance, economic, social and priority aspects encompassed in it.

The essence of the findings on the farmer-labourer relationship is depicted in a nutshell in the diagrammatic representation of the empirical model (Fig.8)

There are four concentric circles in the model. The dimensions of farmer-labourer relationship derived empirically are given in the innermost circle. They are 'facilitation', 'empathy', 'guidance', 'recognition', 'economic', 'social' and 'priority'. The second circle represents the dependent variable of the study, the farmer-labourer relationship and is surrounded by the third circle which is partitioned into four segments. These segments

**Fig. 8 EMPIRICAL MODEL OF THE STUDY**



indicate the socio-economic and psychological factors of farmer-respondents, labourer-respondents, the intensity of labour union activity of less intense and intense union activity and the labourer-categories of male and female labourers. The above segments are connected to the farmer-labourer relationship by arrows, indicating that these variables influence farmer-labourer relationship.

The socio-economic and psychological factors of farmer-respondents influencing farmer-labourer relationship are education, gregariousness, labour use efficiency, management orientation, persuasiveness and ability to handle conflicts.

The factors which influence farmer-labourer relationship in case of labourer-respondents are education, employment days and participation in decision making with farmers.

The segment intensity of labour union activity is divided into two parts as the district having intense union activity and less intense union activity with arrows connecting to the nine relationship dimensions, revealing the influence of the intensity of union activity on the performance of farmer-labourer dyads in these dimensions. 'Economic' and 'guidance' are the two dimensions in which the farmer-labourer dyads of intense union activity district performed significantly better than those of less intense union activity district.

The dimension-wise order of performance (top five) of intense and less intense union activity districts is also

represented in this segment. The dimension-wise order of performance of intense union activity district was in the order of 'economic', 'tolerance', 'guidance', 'recognition' and 'empathy' and it was in the order of 'tolerance', 'empathy', 'recognition', 'economic' and 'guidance' in case of less intense union activity district.

The segment labourer category is again divided in to male and female labourers and are connected to farmer-labourer relationship by arrows, as they influence the relationship. The three dimensions in which male labourers performed significantly better than female labourers are 'equity', 'economic' and 'guidance'.

# SUMMARY

## 5. SUMMARY

Agriculture is the backbone of Indian economy and the progress of our nation greatly relies on the advancements in this sector. The achievements in agriculture focus mainly on production increase in different crops which in turn depends upon the various factors of production such as land, labour, capital and management and their inter relationships. Of the various production factors, labour is the only human factor and to be treated altogether separately from the rest. Thus, the management of labour has a definite say in agricultural production. In Indian agriculture characterised by subdivision and fragmentation of operational holdings with limited scope for mechanisation, the role of agricultural labourers in crop production cannot be overlooked. Here comes the significance of farmer-labourer relationship in the field of agriculture. This is more so important in a crop like paddy which requires maximum amount of labourers for its production as compared to other crops and also in a state like Kerala which always experiences shortage of rice production to meet consumption demands.

Farmer-labourer relationship, which was once exploitative, feudalistic in nature and bound by traditional relational norms had undergone radical changes during the past three to four decades. For this credit goes to labour union activities and land reform measures. The result was

improvement in working conditions, wage payment, egalitarian relationship etc. However, the more informal, friendly relationship between farmers and labourers of the past, it is feared had been replaced by the present formal, impersonal relationship between the two. It is believed that the multitude of struggles witnessed in the agricultural sector in the sixties and seventies in various parts of our country had caused bitterness amongst both farmers and labourers and their relationship strained. This necessitates the reassessment of farmer-labourer relationship in the present day context, so as to facilitate the planners to frame suitable labour relations policies in agriculture. Past studies on agrarian relations mostly focused attention at macrolevel relationship and studies on farmer-labourer relationship at interpersonal level are very scanty. Hence, considering the importance of farmer-labourer relationship in increasing the agricultural production, the present study was taken up with the following objectives.

#### 5.1. OBJECTIVES

1. To develop and standardise a scale to measure farmer-labourer relationship in paddy production systems.
2. To analyse the farmer-labourer relationship existing in two different paddy production systems in Kerala.
3. To delineate the important dimensions of farmer-labourer relationship.



4. To isolate the socio-economic and psychological factors of farmers and labourers influencing farmer-labourer relationship.

#### 5.2. METHODOLOGY

The study was conducted in two districts of Kerala state, selected based on the intensity of labour union activities and difference in paddy production system as selection criteria. The selected districts were Thiruvananthapuram (less intense union activity) and Alapuzha (intense union activity). The dyadic approach was adopted in the conduct of the study. Altogether 150 farmer-labourer dyads were selected from the two study districts at the rate of 75 from each district following stratified proportionate random sampling procedure in Thiruvananthapuram district and purposive sampling in Alapuzha district.

Farmer-labourer relationship, the dependent variable of the study was measured with the help of a scale developed for the study. The item generation activity based on literature review and expert discussion resulted in 148 items reflecting various aspects of farmer-labourer relationship. These items were subjected to relevancy rating by judges and 64 items were retained after judges rating. The response to these items was obtained using appropriate bipolar adjectives to each of the items, as done in case of semantic differential

technique. Item analysis was performed on the 64 selected items based on the responses of 60 farmer-labourer dyads to these items, on a five point continuum of bipolar adjectives with scores of 5,4,3,2 and 1. Thirty three items which had shown significant discrimination index, dyadic agreement of items and item-total score correlation were selected for inclusion in the final scale. The scale was standardised by subjecting to various tests of validity and reliability. The dimensions of the scale were identified through cluster analysis.

Eleven common variables (socio-economic and psychological factors applicable to both farmer and labourer respondents) namely age, education, farming/labour experience, family income, exposure to media, social participation, participation in union activities, awareness about labour welfare measures, interpersonal trust, attitude towards labour unions and gregariousness, seven farmer-related variables namely labour use efficiency, adoption quotient, opinion about labourers, management orientation, persuasiveness, ability to handle conflicts and flexibility and four labourer-related variables namely employment days, orientation towards work, opinion about farmers and participation in decision making with farmers were selected based on relevancy rating by judges to find out the influence of these variables on farmer-labourer relationship. While a new scale was developed to measure the attitude of

farmers/labourers towards labour unions, already available scales/schedules were made use of either as such or with slight modifications to measure rest of the variables.

The data were collected using a pretested and structured interview schedule during September 1993 to February 1994. Mean, percentage, analysis of variance, percentage mean score, rank order correlation, Kruskal-Wallis test, Friedman test, step-wise regression and path coefficient analysis were the statistical tools used to analyse the collected data in this study.

The salient findings of the study are summarised as follows.

### 5.3. FINDINGS

5.3.1. Cluster analysis of the 33 items included in the scale resulted in the formation of nine different dimensions

5.3.2. The dimensions of the scale identified through cluster analysis were labeled as 'facilitation', 'empathy', 'equity', 'tolerance', 'guidance', 'recognition', 'economic', 'social' and 'priority'.

5.3.3. The analysis of the overall relationship of farmer-labourer dyads indicated that majority of the dyads (56.67 per cent) had high relationship.

5.3.4. Dimension-wise analysis of relationship showed that

more than half the proportion of dyads were having high relationship in the dimensions 'facilitation', 'equity', 'tolerance', 'guidance', 'social' and 'priority', whereas majority had low relationship with respect of 'empathy' and 'recognition'. The dyads were observed to have neither high nor low relationship in case of economic dimension.

5.3.5. Majority of the dyads of both the study districts of Alapuzha and Thiruvananthapuram had high overall relationship and also had high relationship in all the dimensions excepting 'empathy' and 'recognition'. However, in the case of Thiruvananthapuram district a high proportion of dyads were under low group, with regard to 'tolerance' and 'economic' dimensions.

5.3.6. The labourer category-wise analysis revealed that majority of male labourer dyads belonged to high group in the overall relationship and also in all the dimensions excepting 'recognition'. The distribution pattern of female labourer dyads indicated that majority had low relationship at the overall level and in most of the dimensions with 'tolerance' and 'social' being the exceptions.

5.3.7. The analysis of union membership categories indicated that all the three categories exhibited high relationship in 'equity', 'guidance' and

'social' dimensions. While member dyads had high relationship in 'economic' and 'priority' dimensions in addition to above, it was 'tolerance' in the case of one member dyads and 'facilitation', 'tolerance', 'recognition' and 'priority' dimensions with regard to non-member dyads.

- 5.3.8. There was significant difference between the farmer-labourer dyads of Alapuzha and Thiruvananthapuram districts with respect to 'guidance' and 'economic' dimensions.
- 5.3.9. There was significant difference between male and female labourer dyads in overall relationship and in relationship dimensions 'equity', 'economic' and 'guidance'.
- 5.3.10. Significant difference only in the case of 'economic' dimension was noticed with regard to union membership categories.
- 5.3.11. The dimension-wise performance of farmer-labourer relationship as a whole was in the order of 'tolerance', 'economic', 'empathy', 'recognition', 'social', 'guidance', 'priority', 'facilitation' and 'equity'.
- 5.3.12. The rank order correlation worked out between the study districts indicated that the dimension-wise relationship performance in Alapuzha district differed significantly from that of Thiruvananthapuram district.

- 5.3.13. The dimension-wise relationship performance in Alapuzha district was in the order of 'economic', 'tolerance', 'guidance', 'social', 'recognition', 'empathy', 'equity', 'priority' and 'facilitation', whereas it was in the order of 'tolerance', 'empathy', 'recognition', 'social', 'economic', 'priority', 'facilitation' and 'equity' in the case of Thiruvananthapuram district.
- 5.3.14. There was conformity in the dimension-wise relationship performance of male and female labourer dyads in both the study districts as indicated by the significant rank order correlation coefficient.
- 5.3.15. The three union membership categories were in agreement with respect of dimension-wise relationship performance in the two study districts, as revealed from the results of the Kruskal-Wallis test.
- 5.3.16. The Friedman test value showed that the dimension 'tolerance' differed significantly with all the remaining dimensions at the overall level.
- 5.3.17. The Friedman test indicated that the dimensions 'tolerance' and 'guidance' differed significantly with 7 out of 8 remaining dimensions in Thiruvananthapuram district and 6 out of 8 dimensions in Alapuzha district.

- 5.3.18. The Friedman test showed that the dimension 'tolerance' differed significantly with 7 out of 8 dimensions in both the labourer categories, with 6 other dimensions in member dyad category and with all other dimensions in the rest two union membership categories.
- 5.3.19. The analysis of independent variables (common variables) of the dyads indicated that the farmer-respondents in general possessed better education, higher income, more exposure to media, better social participation, higher interpersonal trust and more gregariousness than the labourer-respondents at the overall level. In contrast, the labourer-respondents had more participation in union activities, higher awareness about labour welfare measures and higher attitude towards labour unions than the farmer-respondents.
- 5.3.20. The analysis of farmer-related variables showed that a larger proportion of the farmer-respondents were more efficient in labour use, had better management orientation, possessed more persuasive power and high ability to handle conflicts with labourers at the overall level.
- 5.3.21. The analysis of the labourer-related variables indicated that majority of the labourer-respondents had high orientation towards work at the overall level.

- 5.3.22. The male labourers had better participation in decision making with farmers, whereas female labourers had better opinion about farmers.
- 5.3.23. The results of the test of significance indicated that the farmer-respondents had significantly higher income than the labourer-respondents.
- 5.3.24. The step-wise regression analysis revealed that the variables included in the study put together contributed significantly to the farmer-labourer relationship and explained 68 per cent of variation in relationship in case of farmer-respondents, and 20 per cent in the case of labourer-respondents.
- 5.3.25. The variables namely education, management orientation, ability to handle conflicts, persuasiveness, and gregariousness had significant contribution and direct effect on farmer-labourer relationship of farmer-respondents. However, the variable labour use efficiency had significant negative effect on relationship.
- 5.3.26. Participation in decision making with farmers, education and employment days were the variables found to have significant relationship with farmer-labourer relationship of labourer-respondents.



#### 5.4. IMPLICATIONS OF THE STUDY

- 5.4.1. The farmer-labourer relationship scale developed in this study can be made use of for assessing the relationship between farmers and labourers engaged in any crop cultivation, as the items of the scale are general in nature and can be applicable to any group of farmers and labourers. Care has been taken to construct the scale in an easy understandable way so as to facilitate its use by any researcher, record the response and compute the relationship score with ease.
- 5.4.2. The relationship scale having clear cut empirically derived dimensions can be used to measure the farmer-labourer relationship on these dimensions.
- 5.4.3. The empirically derived relationship dimensions can be the foundation based on which necessary relationship improvement programmes can be contemplated.
- 5.4.4. The study had pointed out that the farmer-labourer dyads had poor performance in 'facilitation' and 'equity' dimensions. Hence, greater attention is to be given to these two dimensions while organising group meetings, management trainings etc. for farmers and labourers.
- 5.4.5. It was revealed from the study that the

relationship with male labourers was significantly superior than with women labourers. Therefore, the farmers may be encouraged to give equal importance to women as they also play significant role in crop production.

5.4.6. The study has come out with the fact that education, gregariousness, labour use efficiency, persuasiveness and ability to handle conflicts were the most important variables of farmer-respondents in influencing the farmer-labourer relationship. Hence, special emphasis is to be laid out on these variables while planning farmer development programmes.

5.4.7. It was observed from the results of the study that the variables education, employment days and participation in decision making with farmers influence farmer-labourer relationship of labourer-respondents. This calls for giving special attention to the development of these labourer-related variables in the labours' training programmes.

5.4.8. The study revealed that a vast majority of the farmers and the labourers have associated with their respective unions or associations. Yet, their participation in union activities did not hamper the relationship between the two exploring

the myth that these unions are responsible for the unrest in the agricultural sector. The Government, therefore, must consider this positive trend and chalk out strategies to utilize the unions also in the agricultural development process. Similarly, these unions also must educate their members about the need to develop harmonious farmer-labourer relationship for sustenance.

#### 5.5. SUGGESTED LINES OF FUTURE RESEARCH

5.5.1. The present study has been carried out to assess farmer-labourer relationship in rice production systems and it is believed that the findings of the study can be applicable to similar such systems involving annual/seasonal crops. However, owing to the differences existing between annual and perennial plantation crops, it is suggested that studies of similar kind may be undertaken in the perennial plantation crops sector.

5.5.2. The present study was conducted in the state of Kerala, where in radical changes had taken place in agrarian relations during the past. As regional differences do exist in agrarian relations even today, studies may be undertaken in future to analyse the quality of farmer-labourer relationship

in such regions which are different from that of Kerala.

- 5.5.3. Because of the sexual discrimination of labourers, as brought out explicitly under this study, there is a need to analyse farmer-labourer relationship with respect of male and female farmers and male and female labourers separately.
- 5.5.4. The study had pointed out that 'facilitation' dimension of relationship was not performed better as compared to other dimensions. Considering the importance of facilitation in human resource management, an in depth study on the facilitation aspect of farmer-labourer relationship may be thought of in future.
- 5.5.5. The variation in the farmer-labourer relationship of labourer-respondents was explained only to a limited extent by the variables included under this study. Hence, the study of farmer-labourer relationship with respect of labourer respondents requires detailed investigation in the coming years.

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\* Originals not seen.



# APPENDICES

# APPENDICES

APPENDIX - I

KERALA AGRICULTURAL UNIVERSITY

G.T.NAIR  
Professor & Head

DEPARTMENT OF AGRICULTURAL EXTENSION  
COLLEGE OF AGRICULTURE  
VELLAYANI - 695 522.

Dear Sir/Madam,

Shri.S.RAMANATHAN, Ph.D. Scholar of this department under my supervision has taken up the research problem "Farmer-Labourer relationship in rice production systems - A case Study". In this connection he has collected a list of socio-personal and psychological variables which are likely to influence the relationship and are given in the Annexure enclosed herewith. The variables are grouped as follows.

- A) Variables which are applicable to both the farmers and the labourers (Common variables)
- B) Farmer-related variables and
- C) Labourer-related variables

Considering your vast experience in the field of agricultural extension, you are kindly requested to rate the variables with regard to the importance of each variable in influencing the farmer-labourer relationship. Kindly record your judgement in the three point continuum of "most important", "important" and "least important" by putting a ( ) mark in the appropriate column. If you feel any more important variable has been left out, kindly add the same with your judgement. Please send your judgement to the scholar, in the self addressed stamped envelope enclosed along with this communication. Expecting your co-operation.

Thanking you in advance,

With best regards.

Yours sincerely,

(G.T.NAIR)

**APPENDIX - II**

Independent variables with their mean importance score and co-efficient of variation.

Sl. No.	Variables	Mean	C.V.
<b>A. COMMON VARIABLES</b>			
*1.	Age	2.4146	26.15
*2.	Education	2.6097	24.05
3.	Caste	2.2439	36.99
*4.	Farming/labour experience	2.5365	23.49
*5.	Family income	2.3414	29.61
6.	Farm size	2.2682	35.58
*7.	Exposure to media	2.4390	30.47
*8.	Social participation	2.5853	19.29
*9.	Participation in union activities	2.3902	29.40
10.	Political affiliation	1.9756	39.99
11.	Incidence of disputes/strikes	2.1463	32.21
12.	Mechanism of settling disputes/strikes	2.1951	32.56
13.	Family labour availability	2.2926	34.13
*14.	Awareness about labour welfare measures	2.4145	29.25
*15.	Interpersonal trust	2.4390	29.06
*16.	Attitude towards labour unions	2.3902	29.40
17.	Attitude towards mechanization	2.0975	31.63
18.	Attitude towards personal influence	2.2195	34.18
19.	Self concept	2.1463	33.86
20.	Ideological orientation	2.0975	33.38

Sl. No.	Variables	Mean	C.V.
21.	Social sensibility	2.0975	35.04
*22.	Gregariousness	2.3658	27.97
23.	Thoughtfulness	2.3414	32.54
24.	Maladjustment	2.1707	35.54
25.	Level of indebtedness	2.1707	34.01

Grand Mean = 2.2955

Grand C.V. = 31.19

\* Variables selected

Sl. No.	Variables	Mean	C.V.
<b>B. FARMER-RELATED VARIABLES</b>			
1.	Area under paddy	2.4634	25.83
2.	Area under high yielding varieties of paddy	2.2439	35.63
3.	Level of mechanization	2.4634	22.41
*4.	Labour use efficiency	2.7804	17.08
5.	Economic performance	2.4878	25.62
6.	Productivity	2.4390	29.06
7.	Yield index	2.2682	32.73
8.	Marketed surplus	2.0487	36.12
*9.	Adoption quotient	2.6341	22.06
10.	Involvement in group farming activities	2.5365	25.68
11.	Opinion on paddy cultivation	2.3170	32.64
12.	Cropping intensity	2.4634	25.83
*13.	Opinion about labourers	2.9268	9.01
14.	Risk orientation	2.2926	32.71
15.	Scientific orientation	2.4624	22.41
*16.	Management orientation	2.7560	19.51

Sl. No.	Variables	Mean	C.V.
17.	Orientation towards competition	2.5121	26.88
*18.	Persuasiveness	2.4878	22.24
*19.	Ability to handle conflicts	2.6585	23.20
20.	Openness	2.5121	26.88
21.	Ability to motivate	2.4634	25.87
22.	Perceptiveness	2.4146	24.46
23.	Investment in subordinates	2.3658	27.97
24.	Firmness and fairness	2.4634	25.83
*25.	Flesibility/Adaptability	2.7073	20.64

**Grand Mean = 2.4867**

**Grand C.V. = 25.53**

**\* Variables selected**

Sl. No.	Variables	Mean	C.V.
<b>C. LABOURER-RELATED VARIABLES</b>			
*1.	Employment days	2.7804	17.08
2.	Level of living	2.3414	28.02
*3.	Orientation towards work	2.7804	17.08
*4.	Opinion about farmers	2.8048	16.38
5.	Level of aspiration	2.3658	27.97
6.	Achievement motivation	2.6097	22.47
*7.	Participation in decision making with farmers	2.7073	22.23
8.	Feeling of responsibility in increasing agricultural production	2.6097	24.05
9.	Morale	2.6341	23.64
10.	Quality of work life	2.5609	24.77

**Grand Mean = 2.6194**

**Grand C.V. = 22.37**

**\* Variables selected**



APPENDIX - III

KERALA AGRICULTURAL UNIVERSITY

Dr.G.T. NAIR  
Professor & Head

DEPARTMENT OF AGRICULTURAL EXTENSION  
COLLEGE OF AGRICULTURE  
VELLAYANI - 695 522.

Dear Sir/Madam,

Shri.S.RAMANATHAN, Ph.D. Scholar of this department has taken up the problem "Farmer-Labourer relationship in rice production systems - A case study" under my guidance. He is in the process of developing a scale to measure the Farmer-labourer relationship and in this regard he has collected a list of items for inclusion in the scale, grouped them under seven dimensions and the same is given in the enclosed Appendix. These items reflect the most favourable relationship existing between a farmer and a hired agricultural labourer. Some of the items, though written viewing from farmers' point of view, they are mutually applicable to both the farmers and the labourers. Considering your rich experience as extension research worker/field extension personnel you have been selected as one of the judges to rate the items. Hence you are kindly requested to do the following.

1. Read each of the statements given in the Appendix and record your judgement regarding the relevancy of each item for inclusion in the 'Farmer-labourer relationship scale', in the three point continuum of "most relevant", "relevant" and "least relevant" by putting a ( ) mark in the appropriate column.
2. Feel free to add anything you consider appropriate, besides the items given in the Appendix and record your judgement.

Kindly return the enclosure with your judgement directly to the scholar in the self addressed, stamped envelope provided for this purpose at the earliest. Expecting your active co-operation in this endeavour.

Thanking you in advance,

With best regards.

Yours sincerely,

(G.T.NAIR)

**APPENDIX - IV**

Items generated with mean relevancy score and co-efficient of variation based on judges' relevancy rating.

Sl. No.	Items	Mean	C.V.
<b>A. ECONOMIC DIMENSION</b>			
*1.	Payment/receipt of wages promptly	2.8108	14.03
2.	Payment/receipt of wages with pleasure	2.1351	32.27
*3.	Payment/receipt of wages immediately after the work	2.6081	21.82
*4.	Deciding the wage rate jointly by farmers and labourers	2.3648	29.34
*5.	Increasing wage rate at appropriate occasions through joint decision by farmers and labourers	2.3918	29.21
6.	Giving/accepting a higher wage in case a bumper yield than expected is obtained	1.8918	37.70
7.	Giving/accepting a lesser wage in case the yield falls short of expectation	1.4594	44.20
8.	Payment/receipt of increased wage at appropriate occasions before it is demanded	2.0945	33.69
9.	Payment/receipt of full wages even if work is stopped for a while due to unforeseen circumstances.	2.0945	35.49
*10.	Giving/accepting extra wage for doing work more than the fixed hours	2.4594	25.35
11.	Extending/getting loan for meeting inevitable expenses at nominal interest rate by farmers/labourers	2.0135	36.29
*12.	Payment/receipt of wages in cash/kind /both as desired by labourers	2.2702	30.32

Sl. No.	Items	Mean	C.V.
13.	Giving liberal contributions to labour organisations by farmers	1.4459	39.89
14.	Giving contributions to labour welfare schemes promptly	2.0000	33.10
15.	Not encouraging labourers to borrow money from farmers time and again	1.9189	43.78
<b>B. WORK DIMENSION</b>			
1.	Having fixed time of work	2.4594	27.90
2.	Fixing the time of work through mutual consultation	2.3378	32.66
3.	Observing the hours of work carefully	2.1351	34.95
4.	Fixing agricultural operations taking the convenience of labourers	1.9054	44.44
5.	Preferring labourers irrespective of their political ideology for work	2.1216	33.96
*6.	Recruiting labourers who are most familiar in doing particular agricultural operation	2.7432	19.14
*7.	Giving/getting priority to the particular labourer while selecting work by the particular farmer	2.2702	30.32
8.	Giving/getting priority to the particular farmer to work with by the particular labourer	2.0270	35.57
*9.	Supervising/being supervised personally at work	2.4324	24.61
10.	Demonstrating new cultivation operations to the labourers	2.2702	33.65
11.	Ensuring that the labourers come for work in time	2.5270	23.82

Sl. No.	Items	Mean	C.V.
12.	Engaging the family members of labourers in completing the work	1.7972	40.12
13.	Giving/getting due regards for women labourers	2.1216	29.14
14.	Giving/getting consideration for aged labourers	1.9864	30.61
15.	Giving/getting consideration for pregnant labourers	2.0675	29.23
16.	Giving/getting consideration for lactating labourers	2.0270	31.60
17.	Giving/getting consideration for work drudgery	1.9729	33.53
18.	Giving/getting adequate time for		
<b>C. COMMUNICATION DIMENSION</b>			
*1.	Giving/getting information on cultivation operations to be performed well in advance to/by the labourers	2.3513	30.22
2.	Telling the labourers/being told the aim of operation they perform	2.2297	34.46
*3.	Giving/getting proper instructions to labourers on scientific practices	2.4864	25.99
*4.	Giving/getting adequate guidance to labourers as and when required during work situation	2.5405	23.66
5.	Discussing the technology with the labourers before adopting the same	2.1621	38.30
*6.	Discussing the problems of work with the labourers	2.2837	29.46
*7.	Permitting the labourers to express their views about the work freely	2.3513	29.39

Sl. No.	Items	Mean	C.V.
*8.	Encouraging the labourers to give suggesstions regarding work	2.3513	27.65
9.	Sharing the latest agricultural information known to each other to one another without inhibition	2.2432	34.46
10.	Be open in telling the things to each other	2.2297	35.25
*11.	Addressing each other respectfully	2.3918	27.52
*12.	Giving/getting instructions regarding work to the labourers in an easy, understandable way	2.5540	22.58
*13.	Avoid using degrading words while taking to each other during work situation	2.5945	22.03
*14.	Avoid criticising the labourers before others for not doing the work properly	2.3648	30.17
15.	Speaking out one's own mistake before criticising each other during work situation	2.0810	35.35
16.	Encouraging the labourers to talk about their personal problems	2.0945	32.74
*17.	Giving/getting patient listening to the problems of the labourers	2.3513	26.74
*18.	Avoiding unpleasant arguements with each other during work	2.4459	25.45
19.	Advising the labourers/getting advised to stop bad practices like drinking, smoking etc. which affect their health	2.1486	35.87
*20.	Encouraging team work amongst the labourers	2.5945	23.80
<b>D. MANAGEMENT DIMENSION</b>			
*1.	Building rapport with the labourers engaged in field work	2.4189	26.51
2.	Working along with the labourers	2.1621	35.93

S1. No.	Items	Mean	C.V.
*3.	Ensuring that the labourers do the work as instructed, even in the absence of the farmers	2.5945	21.08
*4.	Ensuring that the labourers recruited work as a group in cohesion	2.2972	28.58
*5.	Ensuring that the labourers do not waste time in discussing their political differences during work situation	2.5000	26.69
*6.	Be flexible in the working hours at times, giving importance to the completion of work	2.4459	25.45
*7.	Persuading the labourers to put in quality work	2.5270	22.90
*8.	Avoiding continuous pestering of labourers for doing the work	2.2567	29.39
*9.	Providing a pleasant and congenial working atmosphere to the labourers	2.5135	23.96
*10.	Providing drinking water at the place of work	2.4594	26.23
*11.	Using personal touch rather than authority in getting the work done by the labourers	2.5675	23.32
*12.	Giving individual recognition to the labourers by remembering each of their names	2.5810	21.28
*13.	Attending to the labourers immediately when they get indisposed during work	2.5810	21.28
14.	Not victimising the labourers for participating in union activities	2.1486	30.51
*15.	Be impartial in dealing with the labourers during work situation	2.4864	25.12
16.	Promoting honesty among the labourers	2.2837	31.19
*17.	Be able to get the work done by the labourers tactfully and diplomatically	2.5270	26.38

Sl. No.	Items	Mean	C.V.
*18.	Encouraging the labourers to become close & friendly during work situation	2.2837	29.46
*19.	Arriving at the solutions to the problems of work jointly by farmers and labourers	2.3513	28.54
*20.	Mechanising cultivation in such a way that it does not affect the interest of the labourers	2.3513	29.39
21.	Finding out and adopting suitable agricultural technologies so as to provide maximum days of employment to labourers	2.0540	39.39
22.	Ensuring that the labourers are not jealous of the farmers getting bumper yields	1.9189	42.92
<b>E. MOTIVATION DIMENSION</b>			
1.	Providing continuous work to the labourers as far as possible	2.2567	35.22
*2.	Appreciating the good work done by the labourers	2.7162	16.71
3.	Providing one time meal to the labourers	1.8513	36.52
4.	Giving/getting priority for work to the family members of labourers	2.0945	33.69
5.	Giving/getting extra work to labourers for part payment at times of work shortage	2.0000	28.67
*6.	Implementing the suggestions of labourers regarding agricultural operations, if found appropriate	2.2972	24.68
7.	Promising the labourers of cash/kind incentive for higher returns	2.0270	36.49
8.	Giving/getting bonus to the labourers in the event of obtaining higher returns	2.1351	37.44

Sl. No.	Items	Mean	C.V.
*9.	Giving/getting due recognition to labourers for high profits accrued in the cultivation	2.3108	27.67
*10.	Providing oppurtunities for the progress of the labourers	2.2972	26.70
11.	Giving/getting planting materials to the labourers	2.0270	36.49
*12.	Providing oppurtunities for labourers to get trained in skilled operations like planting, plant protection etc.	2.3918	24.78
13.	Giving/getting small amount of money/ refreshment to labourers when required	2.1756	30.77
14.	Giving/getting some quantity of paddy free of cost to labourers at the time of harvest	2.0675	35.20
*15.	Reassuring and comforting the labourers when they are feeling low	2.2432	29.34
*16.	Be prompt in taking care of the complaints of labourers	2.3378	25.80
*17.	Extending all possible help to labourers in availing various beneficial schemes being operated by different development departments	2.4594	25.35
*18.	Identifying particular labourers for special works and encouraging them to specialise in such works	2.5405	23.66
*19.	Motivating farmers to join Agricultural Labourers' Welfare Fund scheme by the labourers	2.2567	30.30
<b>F. HUMAN RELATIONS DIMENSION</b>			
*1.	Be have a feeling of 'ours work' in the minds of the labourers	2.5405	27.01
2.	Be have a feeling of 'working with pleasure' instead of 'working for the sake of work' in the minds of the labourers	2.4324	30.49



Sl. No.	Items	Mean	C.V.
*3.	Empathising with farmers by labourers for the difficulties under taken by them in the cultivation	2.2972	27.65
*4.	Be have emotional control in dealing with the labourers	2.3783	28.44
*5.	Tolerating the differences of opinion of each other during work situation	2.2567	29.39
*6.	Exhibiting an open faith and trust in each other	2.5270	23.82
*7.	Respecting the feelings of each other during work situation	2.3783	25.76
8.	Accepting or assuming blame when things go wrong in work situation	2.0675	35.20
9.	Not showing impatience or intolerance of labourers' mistakes/ weaknesses	2.0675	29.23
*10.	Avoid misinterpreting minor comments by each other as unfavourable towards one another	2.2432	28.40
11.	Avoid using a sarcastic or biting type of humour about each other during work situation	2.1891	32.68
12.	Avoid acting business like and impersonal with each other	2.1891	31.79
*13.	Responding to labourers' faults in a helpful accepting manner	2.3378	26.75
14.	Expressing affection towards each other openly and directly through work, gestures and contact	2.2432	32.00
*15.	Considering the feelings and needs of each other before speaking or acting	2.4189	25.61

Sl. No.	Items	Mean	C.V.
16.	Be have a feeling that the labourers in the neighbourhood should not starve	2.1351	34.95
*17.	Be have a feeling that without labourers it is not possible to do paddy cultivation	2.3648	29.34
18.	Be have a feeling that farmers are concerned for labourers in the minds of the labourers	2.2297	29.27
19.	Recognising the efforts taken by farmers in getting bumper yields by labourers	2.2972	31.18
*20.	Developing a feeling of team work in the minds of the labourers	2.5405	25.39
*21.	Be have confidence on farmers in getting timely help by the labourers	2.4729	24.34
*22.	Be have confidence in the loyalty of labourers by the farmers	2.3513	24.82
*23.	Be grateful to the farmers for the help rendered to the labourers	2.2972	26.70
24.	Recognising the right of labourers to participate in union activities	1.9729	35.57
*25.	Settling misunderstandings with each other through mutual consensus rather than through third party intervention	2.4594	27.08
*26.	Enhancing the morale of labourers by the farmers	2.2837	25.65
27.	Encouraging individuality amongst the labourers by the farmers	2.1081	36.46

Sl. No.	Items	Mean	C.V.
<b>G. SOCIAL DIMENSION</b>			
1.	Presenting gifts to each other on festive/ ceremonial occasions	2.2027	30.04
2.	Rendering free service to each other on ceremonial occasions	2.1756	32.60
3.	Taking as much care in the welfare of each other as they take for their own family members	2.0945	31.78
*4.	Be concerned for each other when becoming seriously ill.	2.4864	22.32
*5.	Showing the sign of respect when meeting each other outside work hours	2.2702	26.59
*6.	Maintaining direct contact with each other without any intermediaries	2.3783	24.80
7.	Allowing the family members of each other to mingle freely	1.8783	38.36
*8.	Rendering/ getting help to labourers when they are at serious sickness	2.3648	26.72
9.	Rendering/ getting help to labourers for children's education	2.1351	32.27
10.	Imparting primary education to labourer's children by farmers/ their family members	1.8513	40.66
11.	Rendering/ getting help to labourers for building house	1.9324	36.67
12.	Eating together at a village tea shop	1.6756	44.30
13.	Visiting the house of each other during ceremonial occasions	2.1756	28.83
14.	Asking the labourers not to wash the vessel after eating	1.4459	47.40

S1. No.	Items	Mean	C.V.
15.	Providing food to the labourers inside the house	1.8243	40.94
16.	Behaving like equals outside the work hours	1.9594	39.11
17.	Mingling with each other freely outside work hours without inhibition	1.9054	40.90
*18.	Supporting the labourers when they have genuine problem with others	2.3783	23.81
19.	Entrusting labourers the work of selling some farm produce at times in the nearby markets	1.7567	36.26
20.	Entrusting labourers the work of purchasing some farm inputs at times	1.8243	36.70
21.	Obliging and cooperating when asked by farmers to perform little services or favours	2.0000	32.05
22.	Cooperating together in common activities of the village like temple festival, laying of village road etc.	2.1351	29.34
23.	Telling about the goodness of each other to other persons in the village	2.1351	34.95
24.	Mingling with each other freely without caste considerations	2.1621	32.50
25.	Be have no superiority complex in dealing with the labourers	2.2162	30.13
26.	Giving political/ organisational/ religious freedom to the labourers	2.1756	32.60
27.	Showing affection towards each others children	2.0945	31.78

Grand Mean = 2.2352

Grand C.V. = 30.48

\* Selected items

APPENDIX - V

Item analysis-item discrimination, dyadic agreement and item-total score correlation of relationship items

Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
1.	Time of work for the labourers fixed - varying	NS 0.4173	NS 1.9161	NS -0.1111	NS -0.0113	NS -0.0703
2.	Labourers coming for work in time ensured - neglected	NS 1.0396	NS 0.0211	NS 0.0458	NS 0.1292	NS 0.1074
3. φ	Priority for the particular labourer while selecting for work heeded - avoided	** 45.7693	NS 0.7664	** 0.4901	** 0.5534	** 0.6779
4. φ	Rapport with the labourers engaged in field work excellent - worst	** 102.2195	NS 0.3154	** 0.6307	** 0.7933	** 0.8123
5. φ	Timing of information to labourers on cultivation operations to be performed well in advance - very much delayed	** 72.3831	0	** 0.6233	** 0.6906	** 0.7606
6. φ	Propriety of instructions to labourers on scientific practices proper - improper	** 52.6209	NS 0.9910	** 0.5676	** 0.5963	** 0.6970
7. φ	Clarity of instructions regarding work given to labourers clear - hazy	** 61.9280	NS 0.0237	** 0.6432	** 0.6007	** 0.7415
8. φ	Guidance to the labourers as and when required during work situation adequate - inadequate	** 67.4865	NS 0.1868	** 0.6348	** 0.5737	** 0.7444
9. φ	Nagging of labourers for doing work avoided - attempted	** 36.8913	NS 1.5890	** 0.3834	** 0.7205	** 0.6635
10. φ	Wastage of working time by discussing unnecessary matters by labourers avoided - allowed	** 15.4154	NS 0.3145	** 0.3181	** 0.3883	** 0.4919

Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
11.	Accord importance to completion of work irrespective of working hours accorded - denied	** 40.3829	* 5.7410	** 0.3599	** 0.6605	** 0.5946
12. φ	Labourers' doing the work as instructed even in the absence of farmers ensured - neglected	** 61.8261	NS 0.449	** 0.4274	** 0.7888	** 0.7047
13.	Provision of drinking water at the place of work existent - non-existent	NS 0.3540	NS 2.6781	NS 0.0836	NS 0.1676	NS 0.0907
14. φ	Team sprit amongst labourers encouraged - discouraged	** 48.4310	NS 0.8448	** 0.6116	** 0.6319	** 0.6831
15. φ	Treatment of labourers during work situation impartial - partial	** 86.8699	NS 3.1844	** 0.6284	** 0.6587	** 0.7814
16.	Care of indisposed labourers during work situation immediate - delayed	** 36.6278	* 4.0693	** 0.4030	** 0.6461	** 0.6893
17. φ	Address each other respectfully existent - non-existent	** 33.7425	NS 0.6159	** 0.5407	** 0.6430	** 0.6883
18.	Supervising personally the labourers at work existent - non-existent	NS 1.3090	NS 0.5301	NS 0.1423	NS 0.0979	NS 0.1034
19.	Friendly relationship with each other during work situation encouraged - discouraged	** 80.8894	** 9.6921	** 0.7255	** 0.6753	** 0.8118
20. φ	Use of personal touch rather than authority in getting the work done by labourers preponderant - absent	** 50.8651	NS 1.8652	** 0.3511	** 0.7703	** 0.6540
21. φ	Tactfull and diplomatic way of getting the work done by labourers preponderant - absent	** 37.1073	NS 0.4579	** 0.4159	** 0.6488	** 0.6215
22.	Emotional control in dealing with labourers during work situation prevalent - absent	** 94.4990	* 4.6664	** 0.6257	** 0.7977	** 0.8065

Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
23.	Open faith and trust in labourers exhibited - masked	** 82.4445	* 4.1872	** 0.5068	** 0.7429	** 0.7103
24. φ	Consideration of each others feeling before speaking or acting recognised - ignored	** 46.8059	NS 0.2387	** 0.4902	** 0.7586	** 0.7491
25. φ	Differences of opinion with each other during work situation tolerated - precipitated	** 24.9932	NS 1.8591	** 0.3885	** 0.6573	** 0.5567
26. φ	Minor comments by each other during work situation slighted - valued	** 44.2539	0	** 0.5232	** 0.6912	** 0.6970
27. φ	Response of farmers to labourers' faults slighted - magnified	** 11.4643	NS 2.6222	** 0.5438	** 0.5388	** 0.4987
28.	Expressionn of views about work by labourers free - restricted	** 92.4513	NS 0.9043	NS 0.1723	** 0.7689	** 0.8021
29. φ	Discussion of problems of work with labourers existent - non-existent	** 71.0667	NS 2.0256	** 0.5855	** 0.6894	** 0.7353
30. φ	Solutions to the problems of work arrived at jointly - unilaterally	** 80.2867	NS 0.2006	** 0.5471	** 0.7264	** 0.7403
31. φ	Labourer's suggestions regarding work encouraged - discouraged	** 42.9848	NS 0.4476	** 0.5085	** 0.6439	** 0.6816
32.	Use of degrading words while talking to each other. absent-preponderant	** 75.3079	** 6.6990	** 0.4650	** 0.8232	** 0.7938
33.	Unpleasant arguements during work situation. avioded - attempted	** 81.9854	** 5.7712	** 0.5244	** 0.8034	** 0.7921
34. φ	Ridicule labourers before others for not doing the work properly avioded - attempted	** 60.7406	NS 2.2753	** 0.5446	** 0.7024	** 0.6850
35.	Time given for rest and eating to labourers. adequate - inadequate	** 46.9760	** 7.7206	** 0.4574	** 0.6308	** 0.7039

Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
23.	Open faith and trust in labourers exhibited - masked	** 82.4445	* 4.1872	** 0.5068	** 0.7429	** 0.7103
24. φ	Consideration of each others feeling before speaking or acting recognised - ignored	** 46.8059	NS 0.2387	** 0.4902	** 0.7586	** 0.7491
25. φ	Differences of opinion with each other during work situation tolerated - precipitated	** 24.9932	NS 1.8591	** 0.3885	** 0.6573	** 0.5567
26. φ	Minor comments by each other during work situation slighted - valued	** 44.2539	0	** 0.5232	** 0.6912	** 0.6970
27. φ	Response of farmers to labourers' faults slighted - magnified	** 11.4643	NS 2.6222	** 0.5438	** 0.5388	** 0.4987
28.	Expressionn of views about work by labourers free - restricted	** 92.4513	NS 0.9043	NS 0.1723	** 0.7689	** 0.8021
29. φ	Discussion of problems of work with labourers existent - non-existent	** 71.0667	NS 2.0256	** 0.5855	** 0.6894	** 0.7353
30. φ	Solutions to the problems of work arrived at jointly - unilaterally	** 80.2867	NS 0.2006	** 0.5471	** 0.7264	** 0.7403
31. φ	Labourer's suggestions regarding work encouraged - discouraged	** 42.9848	NS 0.4476	** 0.5085	** 0.6439	** 0.6816
32.	Use of degrading words while talking to each other. absent-preponderant	** 75.3079	** 6.6990	** 0.4650	** 0.8232	** 0.7938
33.	Unpleasant arguements during work situation. avioded - attempted	** 81.9854	** 5.7712	** 0.5244	** 0.8034	** 0.7921
34. φ	Ridicule labourers before others for not doing the work properly avioded - attempted	** 60.7406	NS 2.2753	** 0.5446	** 0.7024	** 0.6850
35.	Time given for rest and eating to labourers. adequate - inadequate	** 46.9760	** 7.7206	** 0.4574	** 0.6508	** 0.7059



Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
36.	Good work of labourers appreciated - ridiculed	** 77.5730	* 5.6228	** 0.6296	** 0.6993	** 0.7880
37.	Labourers suggestion on agricultural operations. implemented - discarded	** 43.7574	** 23.7575	** 0.3564	** 0.6495	** 0.6669
38.	Heed to the problem of labourers patient - impatient	** 81.1497	NS 1.5092	** 0.5429	** 0.7796	** 0.7430
39.	Consoling the labourers when feeling low preponderant - absent	** 84.6916	* 6.9136	** 0.6225	** 0.7211	** 0.7917
40.	Propmptness in taking care of complaints of labourers prompt - indifferent	** 60.1560	NS 0.1788	** 0.4772	** 0.6576	** 0.7168
41.	Deciding the wage rate jointly - unilaterally	NS 3.8461	* 4.8041	NS 0.1668	* 0.2933	* 0.2662
42.	Payment of wages immediate - delayed	NS 0.4101	Ns 1.6466	NS 0.2170	NS 0.1007	NS 0.0973
43.	Payment of extra wages for extra work paid - refused	* 4.9218	NS 2.6467	* 0.2886	* 0.2567	* 0.2641
44.	Payment of wages in cash/kind or both as desired by labourers accorded -denied	** 56.2312	* 6.7795	** 0.6324	** 0.5795	** 0.6938
45.	Increasing the wage rate at appropriate occasions jointly-unilaterally	NS 2.0902	* 5.4541	NS 0.1126	* 0.2769	NS 0.2083
46.	Feeling of commitment to work by labourers strong - weak	** 102.1011	** 37.4042	** 0.6193	** 0.8548	** 0.9292
47.	Farmers difficulties in cultivation empathised by labourers. verymuch - not at all	** 80.5735	** 34.4964	** 0.5627	** 0.7957	** 0.7719
48.	Confidence of labourers in getting timely help from farmers. existent - non-existent	** 190.2681	** 7.6105	** 0.6489	** 0.8812	** 0.8562

Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
49.	Gratefulness of labourers to farmers for the help rendered prevalent - absent	** 85.1432	** 8.5908	** 0.5575	** 0.8468	** 0.7829
50.	Motivation of farmers to join Agricultural Labourers Welfare schemes. attempted - avoided	** 13.4615	* 5.8131	** 0.4136	NS 0.1948	** 0.4868
51. φ	Labourers contribution towards high profits accrued in cultivation. recognised - ignored	** 76.3269	NS 2.3271	** 0.5705	** 0.7772	** 0.7936
52. φ	Opportunities for the progress of labourers. facilitated - blocked	** 157.9900	NS 1.3059	** 0.6466	** 0.8457	** 0.8124
53. φ	Opportunities for labourers to get trained in skilled operations like planting, plant protection etc. facilitated - blocked	** 151.8020	NS 0.8455	** 0.6494	** 0.8548	** 0.8208
54.	Encouragement to labourers in specialised works. heeded - avoided	NS 0.2539	NS 0.0634	NS 0.0577	NS 0.0690	NS 0.0078
55. φ	Facilitation of labourers in availing various beneficial schemes being operated by different departments. facilitated - blocked	** 171.2964	NS 1.6650	** 0.6885	** 0.8666	** 0.8475
56. φ	Feeling of indispensibility of labourers in cultivation. existent - non-existent	** 33.5600	NS 1.7860	** 0.4534	** 0.5879	** 0.6205
57.	Confidence of farmers in the loyalty of labourers. existent - non-existent	** 125.8692	** 17.8275	** 0.5645	** 0.8950	** 0.8273
58. φ	Enhancement of the morale of labourers attempted - avoided	** 62.4809	NS 0.0194	** 0.6223	** 0.7044	** 0.7715
59.	Help rendered during serious sickness to labourers rendered - refused	** 137.1436	** 16.0847	** 0.6572	** 0.8166	** 0.8096
60.	Support to labourers when they have genuine problem with others abundant - restricted	** 104.6917	* 5.2168	** 0.4136	** 0.7689	** 0.7883
61.	Contact with each other direct - indirect					

Sl. No.	ITEM	ANOVA F VALUE		ITEM - TOTAL CORRELATION		
		Between groups	Between classes	Farmers	Labourers	Combined
62. φ	Concern for each other when becoming seriously ill prevalent - absent	** 42.6500	NS 2.9541	** 0.4498	** 0.6267	** 0.6680
63.	Settling of misunderstandings with each other through mutual consensus prevalent - absent	** 105.3488	** 7.8358	** 0.5749	** 0.7402	** 0.7253
64. φ	Protection of labourers interests while mechanising cultivation existent - nonexistent	** 17.9543	NS 1.4282	* 0.2901	** 0.6658	** 0.5107
NS ..... Not Significant * ..... Significant (P ≤ 0.05) ** ..... Significant (P ≤ 0.01) φ Items selected for inclusion in the scale						

APPENDIX - VI

EUCLIDEAN DISTANCE MATRIX OF 33 ITEMS OF FARMER - LABOURER RELATIONSHIP SCALE

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1	28.5 (31)	30 (27)	15.75 (15)	34.75 (16)	18 (2)	34.25 (27)	33.25 (26)	41.25 (23)	30.25 (28)	17.5 (17)	11.25 (17)	33.5 (23)	4.25 (14)	4.25 (13)	34.75 (4)	17.75 (17)	9 (23)	16.5 (28)	5 (20)	5 (19)	17.75 (27)	36 (23)	9 (17)	8.75 (31)	35.75 (5)	17.5 (28)	0.5 (27)	0.5 (17)	1.25 (24)	21.5 (39)	8.75 (24)	39 (26)	28.25 (26)
2	28.75 (24)	30.5 (28)	15.75 (28)	40.5 (6)	20.25 (17)	38.25 (26)	33.75 (28)	46.75 (28)	31.75 (30)	18 (27)	15.25 (923)	36 (30)	31.25 (27)	34.5 (13)	35.25 (5)	18 (11)	11.25 (29)	16.75 (31)	61 (31)	70 (28)	17.75 (16)	15.25 (11)	21.35 (3)	36.25 (16)	18.25 (29)	1.75 (29)	1.25 (29)	1.75 (23)	24 (27)	18.75 (23)	40.25 (18)	28.75 (10)	
3	39 (3)	32.75 (21)	16.5 (12)	41 (23)	21.75 (4)	40.5 (15)	36.75 (17)	47.75 (27)	32.25 (17)	28.75 (29)	25.5 (5)	38.5 (22)	31.25 (15)	36 (16)	34 (23)	18.75 (16)	17.75 (27)	18 (1)	62.5 (28)	70.25 (29)	19 (12)	38.5 (16)	21.5 (28)	36.5 (23)	19 (27)	15.75 (3)	15.75 (3)	16.5 (3)	29.75 (5)	20.25 (28)	40.75 (28)	29.75 (28)	
4	43.25 (18)	34.25 (29)	19.25 (18)	41.25 (5)	25.5 (11)	40.5 (21)	37 (13)	48.5 (29)	35 (16)	24.25 (21)	27.5 (16)	41 (4)	29 (29)	36 (28)	36.75 (7)	27.5 (11)	20.25 (31)	18.75 (24)	70.25 (29)	72.25 (18)	23.5 (3)	39 (13)	21.5 (25)	23 (18)	37 (17)	17.5 (3)	16.5 (21)	16.75 (18)	31.25 (11)	21 (3)	41.25 (28)	30.75 (27)	
5	43.75 (28)	34.25 (6)	21 (31)	42 (23)	29.75 (30)	43.25 (10)	37 (29)	49 (21)	49 (5)	27.25 (31)	31.25 (30)	9 (9)	15 (15)	7 (7)	38.5 (30)	35 (32)	23 (23)	71.5 (3)	28 (28)	27 (27)	72.25 (18)	39.75 (30)	23.75 (30)	23 (30)	23.25 (30)	18 (10)	17.5 (10)	18.25 (9)	31.75 (27)	42.75 (15)	32 (29)		
6	45 (21)	36.5 (10)	21.25 (24)	42.25 (16)	35.75 (25)	46.5 (33)	38.25 (14)	49.75 (10)	39.25 (25)	27.5 (18)	40.5 (9)	15 (15)	7 (7)	39 (29)	37 (28)	39 (9)	23.75 (24)	37 (24)	23.75 (11)	70.25 (29)	72.25 (14)	23.5 (3)	39 (13)	21.5 (25)	23 (18)	37 (17)	17.5 (3)	16.5 (21)	16.75 (18)	31.25 (11)	21 (3)	41.25 (28)	30.75 (27)
7	45.25 (27)	38 (26)	23.5 (21)	45.75 (14)	37.5 (9)	47.25 (27)	41 (3)	49.75 (15)	40.5 (11)	27.5 (26)	47.25 (12)	15 (15)	7 (7)	39 (29)	37 (28)	39 (9)	23.75 (24)	37 (24)	23.75 (11)	70.25 (29)	72.25 (14)	23.5 (3)	39 (13)	21.5 (25)	23 (18)	37 (17)	17.5 (3)	16.5 (21)	16.75 (18)	31.25 (11)	21 (3)	41.25 (28)	30.75 (27)
8	46.5 (29)	38.75 (33)	26.75 (26)	46.5 (22)	41.25 (4)	47.75 (28)	44.25 (18)	54.75 (12)	41.25 (24)	50.25 (4)	44.75 (5)	15 (15)	7 (7)	39 (29)	37 (28)	39 (9)	23.75 (24)	37 (24)	23.75 (11)	70.25 (29)	72.25 (14)	23.5 (3)	39 (13)	21.5 (25)	23 (18)	37 (17)	17.5 (3)	16.5 (21)	16.75 (18)	31.25 (11)	21 (3)	41.25 (28)	30.75 (27)
9	47.25 (10)	42.25 (31)	32.75 (10)	46.5 (30)	44.75 (12)	49 (29)	48.5 (22)	57 (32)	41.25 (22)	50.75 (25)	45 (13)	15 (15)	7 (7)	39 (29)	37 (28)	39 (9)	23.75 (24)	37 (24)	23.75 (11)	70.25 (29)	72.25 (14)	23.5 (3)	39 (13)	21.5 (25)	23 (18)	37 (17)	17.5 (3)	16.5 (21)	16.75 (18)	31.25 (11)	21 (3)	41.25 (28)	30.75 (27)
10	55 (33)	44.25 (13)	33 (33)	47 (13)	47.75 (22)	52 (13)	51.5 (21)	58 (3)	48.25 (4)	54.75 (3)	54.75 (22)	17 (17)	26 (26)	12 (12)	42.75 (4)	42.25 (12)	47.25 (4)	49 (33)	41.75 (10)	79.75 (10)	82.75 (2)	32.75 (17)	45 (4)	42 (4)	37 (26)	51 (13)	38 (2)	29.75 (33)	32 (4)	46.5 (33)	53.5 (12)	39.25 (24)	
11	56.25 (26)	45.75 (3)	39 (11)	48 (25)	53.75 (14)	51.75 (10)	58 (4)	49 (14)	36.5 (2)	71 (15)	47.75 (4)	43.25 (10)	46 (4)	45.5 (15)	55.5 (14)	67.75 (1)	43.25 (1)	84.25 (18)	86.75 (33)	36.5 (33)	46.5 (4)	54.75 (33)	39.25 (12)	32.25 (16)	32.25 (16)	30.75 (33)	30.5 (2)	57.25 (14)	30.5 (2)	55.5 (14)	41.75 (18)		
12	56.75 (2)	46 (14)	41 (7)	48.25 (9)	62 (15)	54 (12)	58 (13)	51.75 (6)	43.25 (16)	78 (14)	47.75 (11)	44.25 (2)	46 (10)	45.5 (10)	55.5 (15)	68.25 (2)	46 (26)	84.75 (18)	92.75 (13)	40 (13)	47 (32)	58.75 (6)	39.25 (14)	32.25 (14)	32.25 (14)	30.75 (7)	31.25 (15)	34.25 (3)	60 (2)	42.25 (13)	56 (2)	46.5 (18)	
13	62.5 (19)	46 (18)	45.75 (21)	49 (17)	63.25 (13)	54.75 (18)	56.25 (32)	59.5 (15)	55.5 (13)	83.75 (13)	53.25 (26)	45 (12)	46.25 (21)	47.25 (21)	59.75 (13)	72 (13)	47.25 (33)	98 (33)	99 (6)	40.5 (5)	47.75 (13)	60 (6)	40.5 (65)	47.75 (65)	60 (8)	7 (32)	68.5 (13)	34.5 (14)	36 (14)	38.75 (14)	65.5 (8)	60 (6)	55 (1)
14	73 (15)	47.5 (13)	47.5 (11)	50.25 (32)	68.25 (3)	55 (13)	57.25 (32)	60 (1)	70.75 (15)	91.75 (32)	53.5 (32)	47 (4)	49 (9)	47.5 (2)	71.75 (32)	76.5 (15)	53 (2)	102.25 (15)	104.25 (2)	45 (2)	53.75 (2)	68.5 (32)	74.5 (7)	41.5 (6)	38 (15)	21.5 (15)	23.25 (6)	21.5 (15)	23.25 (6)	41.5 (6)	28.5 (6)	48.5 (2)	38.5 (14)
15	75 (20)	48.5 (24)	51.25 (14)	53.25 (2)	85.75 (7)	58 (8)	59 (33)	60.5 (33)	71.25 (1)	101.25 (1)	47.25 (8)	49 (8)	51.25 (10)	50 (7)	77.75 (8)	99.5 (6)	54.75 (6)	115.5 (6)	116.5 (6)	46.25 (14)	54.75 (11)	88.5 (7)	70.75 (7)	74.5 (75)	41.5 (4)	38 (15)	41.25 (15)	43 (32)	85.5 (32)	69 (7)	60.5 (33)	59 (7)	
16	79.5 (6)	53.25 (4)	53.25 (15)	57.25 (26)	85.75 (8)	62 (12)	59.5 (22)	61.75 (22)	82.5 (14)	103.25 (7)	57 (25)	49 (33)	52.25 (25)	53 (18)	91.25 (6)	106.5 (14)	55 (13)	121.5 (13)	122 (7)	51.5 (7)	60.25 (26)	89.25 (15)	75 (8)	81 (8)	45.75 (8)	47.25 (8)	46.5 (8)	48.5 (8)	90.25 (2)	70 (20)	60.5 (30)	60.5 (32)	
17	79.5 (7)	53.75 (22)	55 (6)	58 (8)	90.75 (23)	63.5 (12)	61.75 (7)	63 (8)	82.75 (26)	108.75 (7)	105 (26)	62 (6)	51 (25)	54.75 (6)	53.25 (3)	93.5 (26)	107.25 (7)	56.25 (32)	122 (7)	121.5 (7)	51.5 (26)	60.25 (15)	89.25 (8)	75 (8)	81 (8)	45.75 (8)	47.25 (8)	46.5 (8)	48.5 (8)	90.25 (2)	70 (20)	60.5 (30)	60.5 (32)
18	84.5 (13)	56.75 (1)	55.5 (32)	65 (26)	92 (32)	67.5 (8)	65 (7)	84.5 (27)	51.75 (7)	108.75 (6)	106 (7)	62 (6)	51 (25)	54.75 (6)	53.25 (3)	93.5 (26)	107.25 (7)	56.25 (32)	122 (7)	121.5 (7)	51.5 (26)	60.25 (15)	89.25 (8)	75 (8)	81 (8)	45.75 (8)	47.25 (8)	46.5 (8)	48.5 (8)	90.25 (2)	70 (20)	60.5 (30)	60.5 (32)
19	90.75 (14)	57.25 (7)	58 (8)	61.75 (27)	97 (31)	68.5 (4)	67 (31)	85.75 (6)	65 (3)	112 (2)	112 (2)	63 (8)	51.75 (18)	55 (6)	94.5 (2)	110.75 (32)	66.75 (7)	127 (7)	123 (7)	56 (32)	89.75 (27)	89.75 (26)	76.25 (20)	86.75 (12)	55.25 (12)	47.75 (6)	47.75 (6)	49 (6)	92.25 (15)	77.25 (18)	66.75 (15)	62.75 (15)	
20	91.25 (15)	60.25 (32)	60.25 (28)	77 (27)	101.5 (24)	70.75 (31)	65.25 (14)	65.25 (8)	86 (4)	115 (27)	115 (27)	65.25 (6)	55.5 (23)	54.75 (23)	100 (27)	115.75 (4)	76.75 (14)	133.25 (22)	129.25 (14)	61.5 (22)	61.5 (21)	95.25 (27)	79 (14)	87.5 (33)	56.25 (33)	60.25 (22)	62.25 (22)	65 (22)	102.25 (14)	78.75 (6)	67.5 (4)	69 (4)	
21	95 (32)	61.25 (12)	79 (10)	65.25 (28)	104 (7)	73 (6)	65.75 (24)	86 (2)	71.75 (28)	117 (28)	117 (28)	65.25 (16)	59.75 (5)	56 (9)	102 (28)	117.75 (22)	77.75 (15)	149.25 (14)	149.25 (14)	70 (28)	62.25 (29)	97 (4)	83.25 (28)	87.5 (4)	57.25 (4)	61.75 (4)	63.75 (4)	65.5 (4)	104.25 (28)	84 (32)	68.25 (5)	77 (22)	
22	122 (4)	61.75 (8)	79.5 (20)	65.5 (29)	104.75 (25)	74.5 (16)	77.75 (9)	71.25 (29)	88.75 (19)	117.75 (29)	117.75 (29)	66 (29)	60 (8)	56.75 (5)	62 (10)	102.5 (28)	117.75 (19)	84.25 (22)	170 (22)	164.5 (19)	73.5 (6)	97.25 (28)	89.25 (4)	75 (8)	81 (8)	45.75 (8)	47.25 (8)	46.5 (8)	48.5 (8)	90.25 (2)	70 (20)	60.5 (30)	60.5 (32)
23	122.5 (12)	75.75 (25)	80 (22)	67 (21)	109.25 (1)	79.5 (1)	73 (1)	94 (10)	81.25 (12)	125.25 (21)	125.25 (21)	78.5 (21)	60 (23)	57.25 (30)	62.75 (21)	104.75 (4)	129.25 (4)	92.75 (4)	184 (20)	181 (20)	78 (29)	104.5 (21)	114.25 (21)	104.25 (21)	122.25 (21)	89.5 (21)	82.5 (20)	73.25 (19)	70.75 (19)	74 (20)	110.5 (4)	118 (25)	70.75 (25)
24	133 (22)	86 (12)	84.5 (33)	69 (10)	111 (30)	85 (9)	82.75 (16)	77.75 (21)	96.25 (20)	134 (10)	134 (10)	79 (33)	60 (31)	57.25 (33)	62.75 (21)	104.75 (4)	129.25 (4)	92.75 (4)	184 (20)	181 (20)	78 (29)	104.5 (21)	114.25 (21)	104.25 (21)	122.25 (21)	89.5 (21)	82.5 (20)	73.25 (19)	70.75 (19)	74 (20)	110.5 (4)	118 (25)	70.75 (25)
25	160.5 (25)	89.25 (23)	109.5 (25)	70 (33)	116.25 (9)	85.75 (23)	85.5 (25)	103.25 (33)	89.25 (25)	138.25 (33)	138.25 (33)	81.25 (10)	63.25 (5)	65.25 (8)	64.25 (25)	116 (1																	

## APPENDIX - VII

Attitude statements with their scale value and Q value

Sl. No.	Statements	Scale value	Q value
*1.	Labourers get reasonable wages because of labour unions	5.833	1.796
*2.	Labour unions play a great role in the prosperity of the labourers	5.642	2.090
*3.	Union members are looked down by the farmers	2.373	2.187
4.	Labour unions function as a means for the livelihood of few individuals	2.834	4.030
*5.	Labour unions discourage labourers to do the quantum of work as prescribed by the farmers	3.332	2.280
*6.	It is the unions that come to the rescue of labourers during needy hours	6.072	1.562
*7.	There is peace in the village because of labour union activities	4.500	2.161
8.	The morale of labourers is reduced due to labour union activities	2.318	2.851
9.	It is better not to become a member of the labour union	2.698	2.961
10.	Labour unions are the only way to stop labour exploitation by the farmers	6.655	3.325
*11.	Labour unions are a must to get prompt payment of wages	4.500	2.279
12.	It is a prestige to be a member of the labour union	5.504	2.784
*13.	Peace in the village has been disturbed due to labour union activities	2.371	1.710
*14.	There is no need for labour unions for the betterment of labourers	2.297	2.115

Sl. No.	Statements	Scale value	Q value
*15.	In the absence of labour unions, labourers get more help from the farmers	2.833	2.247
16.	Working hours of labourers is higher in the absence of labour unions	4.626	3.113
*17.	Labour unions ensure continuous employment to the labourers	5.278	1.532
*18.	The interest of the labourers is protected through labour unions	6.167	1.763
19.	Labour unions are there to aggravate the problems of labourers with the farmers	2.297	2.458
*20.	Labour unions take away major portion of labourers wages	2.250	2.237
*21.	When government is taking all favourable measures to labourers, there is no necessity of labour unions	2.248	2.232
*22.	The economic status of the labourers could be improved only because of labour union activities	5.500	1.572
23.	It is the labour unions that protect the labourers and their families from starvation	5.668	3.831
24.	Every labourer should become a member of the labour union	5.335	2.474
25.	Labour unions encourage labourers to disrespect the farmers	2.833	2.447
26.	Labour unions function to exploit the labourers	2.358	3.556
*27.	Labour unions undergo various sufferings for the welfare of the labourers	5.702	1.448
28.	Labour unions are the only way for settlement of disputes between the labourers and the farmers	5.833	2.467

Sl. No.	Statements	Scale value	Q value
29.	Labourers are not getting due consideration by the farmers, in the absence of labour unions	5.302	3.414
30.	In the absence of labour unions, labourers are deprived of wage increase at appropriate occasions	5.500	2.533
31.	Labour unions are working against the interest of the labourers	2.000	2.467
32.	Disputes between labourers and farmers are the outcome of labour unions interference	2.500	2.556
33.	Labour unions encourage labourers to go in for strike for their own benefits	2.226	2.871
*34.	A congenial working atmosphere to the labourers is made available by labour union activities	5.126	1.787
35.	Work of the labourers is frequently disturbed by labour union activities	2.698	2.731
*36.	Non-union members are preferred over union members for work by the farmers	3.722	1.416
37.	There should be a ban on the labour union activities	2.247	2.802
38.	Labour unions function only to show the strength of various political parties	3.169	3.079
39.	Labour union activities result in strained relationship between the farmers and the labourers	3.000	3.127
*40.	Labour unions restrict the freedom of labourers in selecting the farmer of their choice to work with	2.786	1.953
*41.	Labour unions extend necessary help to maintain the labourers and their families during strike period	5.167	1.362
42.	Labour unions compel the labourers to go on strike for petty issues	2.250	3.437

Sl. No.	Statements	Scale value	Q value
43.	Giving regular subscription to labour unions is a wasteful expenditure	2.995	3.125
44.	Conflicts among labourers occur because of labour unions	2.302	2.725
*45.	Labourers lose getting fringe benefits from the farmers by becoming members of labour unions	2.642	1.491
46.	Membership in labour unions gives license to labourers to do anything against the farmers	2.995	2.993
47.	A labourer should be prepared to undergo various sufferings for following labour unions instructions	3.998	2.915
48.	Collection of money from the labourers is the only activity of labour unions	1.500	3.126
49.	Maintanance of labourers and their families is neglected by labour unions during strike period	2.250	2.834
50.	Labourers are under the clutches of labour unions	2.500	3.085
51.	When labourers are getting reasorable wages now-a-days there is no need for labour unions	2.500	2.290
*52.	Farmers are reluctant to invite suggestions from labourers on farm operations, because of labour union activities	2.833	2.000

\* Statements selected for inclusion in the scale



APPENDIX - VIII

KERALA AGRICULTURAL UNIVERSITY  
Department of Agricultural Extension  
College of Agriculture, Vellayani

Farmer-Labourer relationship in rice production systems - A case study

INTERVIEW SCHEDULE

PART - A

Date:

S1. No.

1. Name of the Farmer/ Labourer :

2. Address :

3. Age :

4. Educational status :

Illiterate  
can read only  
can read and write  
class up to which studied

5. Experience :

Indicate the number of years of experience as a paddy farmer/ labourer

6. Family income :

Indicate your family annual income

**7. Exposure to media :**

Kindly indicate the frequency of your exposure to the following mass media

<u>Mass media</u>	<u>Frequency of exposure</u>				
	<u>Two or more times a week</u>	<u>Once a Week</u>	<u>Once a fortnight</u>	<u>Once a month</u>	<u>Never</u>
News paper					
Radio					
Radio rural programme					
Farm magazines and other literature on agriculture					

**8. Social participation :**

Are you a member/office-bearer of any social organization?

Yes / No.

No of organizations in which you are a member/ office-bearer .....

Distinctive features (MLA, MP if any) .....

Indicate the frequency of attending meetings in the organizations

Regularly / Occasionally / Never

**9. Participation in union activities :**

Are you a member/ office-bearer of any union/ association?

Yes / No

Indicate your extent of participation in union activities

<u>Activities</u>	<u>Extent of participation</u>		
	<u>Regularly</u>	<u>Occasionally</u>	<u>Never</u>
Giving subscription			
Attending meetings			
Taking part in dharnas, conferences, fund raising etc.			

**10. Awareness about labour welfare measures:**

- (i) Do you know the important labour welfare measure started by Kerala government?
- (ii) Do you know when the scheme was started?
- (iii) Are you aware of the number of years an agricultural labourer should work under a land owner/ owners to get the benefit?
- (iv) Do you know the prescribed income limit for availing the scheme?
- (v) Are you aware of the frequency of payment of pension?
- (vi) Do you know when the Kerala Agricultural Workers Welfare Fund Scheme started?
- (vii) Do you know the age limit of the target group under this scheme?
- (viii) Do you know the contribution to be made by an agricultural labourer?
- (ix) Do you know the amount of contribution to be made by a land owner?
- (x) Have you heard of the super annuation benefits under this scheme?
- (xi) Have you heard of the educational scholarships under this scheme?



(vii) Treat others as you would like to be treated by others is a good act.

(viii) Discussion of personal matters should be kept out of ones professional relationships.

(ix) Human nature is fundamentally co-operative.

(x) A co-operative decision leads to better implementation and increased production.

## 12. Attitude towards labour unions :

Kindly indicate your agreement or disagreement with the following statements.

Agree / Disagree

(i) When government is taking all favourable measures to labourers, there is no necessity of labour unions.

Agree / Disagree

(ii) There is peace in the village because of labour union activities.

(iii) Labour unions are a must to get prompt payment of wages.

(v) There is no need for labour unions for the betterment of labourers.

(vi) A congenial working atmosphere to the labourers is made available by labour union activities.

(vii) Labour unions ensure continuous employment to the labourers.

(viii) Labour unions extend necessary help to maintain the labourers and their families during strike period.

(ix) Peace in the village has been disturbed due to labour union activities.

(x) Union members are looked down by the farmers.

(xi) The economic status of the labourers could be improved only because of labour union activities.

(xii) Labour unions play a great role in the prosperity of the labourers.

(xiii) Labourers lose getting fringe benefits from the farmers by becoming members of labour unions.

(xiv) Labour unions restrict the freedom of the labourers in selecting the farmer of their choice to work with.

(xv) Labour unions undergo various sufferings for the welfare of the labourers.

(xvi) Labourers get reasonable wages because of labour unions.

(xvii) Farmers are reluctant to invite suggestions from labourers on farm operations, because of labour union activities.

(xviii) In the absence of labour unions, labourers get more help from the farmers.

Agree / Disagree

(xix) It is the unions that come to the rescue of labourers during needy hours.

(xx) The interest of labourers is protected through labour unions.

(xxi) Labour unions discourage labourers to do the quantum of work as prescribed by the farmers.

(xxii) Non-union members are preferred over union members for work by the farmers.

13. Gregariousness :

Kindly indicate the extent to which you engage yourself in the following activities

Most   Often   Some   Rarely   Never  
often                    times

(i) I get acquaintance with strangers voluntarily

(ii) I take upper hand in common activities

(iii) I participate in debates

(iv) I make lot of friends

Most   Often   Some   Rarely   Never  
often                    times

(v) I make friendship with persons quickly

(vi) I take upper hand in discussions

(vii) I talk to a wide range of people

(viii) I take leadership roles

(ix) I go on strike for the rights.

(x) I help the persons to get acquaintance with each other

(xi) I take membership in various organizations

(xii) I go to places where people gather

(xiii) I make quarrels at needy places

(xiv) I go on tours

(xv) I do things which require utmost attention

PART - B

For Farmers only

1. Labour use efficiency :

	<u>First crop</u>	<u>second crop</u>
Area under paddy (in cents).....		
Yield obtained (in kgs).....		

Kindly indicate the number of hired labourers engaged for the given below operations.

<u>Operations</u>	<u>First crop</u>		<u>Second crop</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Land preparation for nursery				
Fertilizer application for nursery				
<u>Operations</u>				
Irrigation for nursery				
Pulling of seedlings				
Land preparation for mainfield				
Transplanting/ broadcasting				
Replanting				
Fertilizer application				
Weeding				
Plant protection				
Irrigation				
Harvesting, threshing etc.				



**2. Adoption Quotient :**

	<u>First crop</u> <u>Area (in cents)</u>	<u>Second crop</u> <u>Area (in cents)</u>
Name of the paddy variety cultivated and its area		
Have you done seed treatment?	Yes/No	Yes/No
If yes, quantity of chemical used and method of seed treatment		
Have you done soil testing?	Yes/No	Yes/No
If yes, how?		
Have you done liming?	Yes/No	Yes/No
If yes, quantity used and method of application		
Application of chemical fertilizers	(a) based on soil testing (b) based on package of practices recommendation (c) based on own experience	
Have you adopted plant protection measures?	Yes/No	Yes/No
If yes, quantity of chemical used and method application.		

**3. Opinion about labourers :**

Kindly indicate the extent to which you agree or disagree with the following statements.

	<u>Strongly</u> <u>agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly</u> <u>disagree</u>
(i) Agricultural production of our country increased significantly due to the contribution made by agricultural labourers.					

Strongly Agree Neutral Disagree Strongly  
agree disagree

(ii) The suggestions of agricultural labourers regarding cultivation practices lead to economy of cultivation

(iii) Agricultural labourers are the most deprived class of people who need nourishment by farmers

(iv) Agricultural labourers show scant respect towards farmers

(v) Agricultural labourers are interested only in getting more and more wages

(vi) Agricultural labourers are aware of their rights and not their duties

(vii) Agricultural labourers are very affable

(viii) Agricultural labourers do strike for justifiable reasons always

(ix) The progress of agricultural labourers is a pre-requisite for agricultural development.

(x) Cooperation between farmers and agricultural labourers is the key to peace in agricultural sector

#### 4. Management Orientation :

Kindly indicate your agreement or disagreement with the following statements

##### Planning

Agree / Disagree

(i) Each year one should think fresh about the crops to be cultivated in each type of land

Agree / Disagree

(ii) It is not necessary to make prior decision about the variety of crop to be cultivated.

(iii) The amount of seed, fertilizers and plant protection chemicals needed for raising a crop should be assessed before cultivation

(iv) It is not necessary to think ahead of the cost involved in raising a crop

(v) One need not consult any agricultural expert for crop planning

(vi) It is possible to increase the yield through farm production plan.

### **Production**

(i) Timely planting of a crop ensures good yield.

(ii) One should use as much fertilizer as he likes

(iii) Determining fertilizer dose by soil testing saves money.

(iv) For timely weed control, one should even use suitable herbicides

(v) Seed rate should be given as recommended by the specialists

(vi) With low water rates one should use as much irrigation water as possible

### **Marketing**

Agree / Disagree

(i) Market news is not so useful to a farmer

(ii) Farmer can get good price by grading his produce

(iii) Warehouse can help the farmer to get better price for his produce

Agree / Disagree

(iv) One should sell his produce to the nearest market irrespective of price

(v) One should purchase his inputs from the shop where his relatives purchase

(vi) One should grow those crops which have more market demand.

**5. Persuasiveness :**

Kindly indicate the extent to which you engage yourself in the following activities.

Always Some times Never

(i) My arguments with labourers regarding work lead to quarrels.

(ii) I have the ability to get full cooperation from labourers in carrying out agricultural operations

(iii) I always have difference of opinion with labourers regarding the agricultural operations to be performed

(iv) My suggestions regarding agricultural operations are appreciated and accepted by fellow farmers

(v) I am unable to control my labourers continuing to do agricultural operations in their traditional way, not adhering to my instructions on modern methods

Always Some times Never

(vi) I am unable to influence labourers to do cultivation operations effectively

(vii) Labourers do extra work without hesitation when I ask them to do so

Always Some times Never

(viii) My instructions on agricultural operations are criticised by labourers as vague

(ix) My advice on agriculture and related matters is regarded as credible by others

(x) I lack the capacity to put forward my arguments during discussion with others

**6. Ability to handle conflicts :**

Kindly indicate the extent to which you engage yourself in the following activities

Always Some times Never

(i) I often feel difficult to handle my labourers

(ii) However hard I try, things go beyond my control while dealing with the labourers

(iii) I keep things under my control even under very stressful conditions

(iv) I do not allow external forces interfering in my dealings with labourers

(v) I am unable to overcome political pressures in my dealings with labourers

(vi) I seek the support of fellow farmers/ union leaders in dealing the problems with labourers

(vii) I try to find solutions to problems with labourers which will maintain mutually cordial relationship with them

Always   Some times   Never

(viii) I work on personal relations to avoid conflict with labourers

(ix) I use force in winning over the conflicts with labourers

(x) I await for the opportunity to take revenge on labourers who create problem to me

## 7. Flexibility :

Kindly indicate the extent to which you engage yourself in the following activities

Always   Some times   Never

(i) I can tolerate little disturbances in the working of labourers

(ii) One need not be very strict about the timings of labourers

(iii) I schedule my agricultural operations taking into consideration the convenience of labourers

(iv) There is nothing wrong in rescheduling the agricultural operations based on labour availability

(v) Whenever there are differences or misunderstandings with labourers, I react sharply

(vi) I feel hesitant while talking with labourers

(vii) I easily become angry even if a minor work is not done systematically by labourers

(viii) I get irritated when there is difference of opinion with labourers

(ix) I possess sufficient emotional control in dealing with labourers

(x) I have a superiority complex when I deal with labourers

PART - C

For Labourers Only

1. Employment days :

How many days do you get work as agricultural labourer in a year?

2. Orientation towards work :

Kindly indicate the extent of your agreement or disagreement with the following statements

Strongly Agree Neutral Disagree  
agree

(i) Agricultural labour is the suitable job I can get in my circumstances

(ii) There is no harm in being an agricultural labourer

(iii) I have no objection to my children also becoming agricultural labourer

(iv) Agricultural labour is a decent job

(v) Agricultural labour is a useful job

(vi) Agricultural labour has low social status

(vii) Agricultural labour is redundant

(viii) I would give up my job as agricultural labour to accept any other job

(ix) Agricultural labour is the last resort for any decent men

(x) There is no scope for specialisation in agricultural labour

Most   Often   Sometimes   Never  
often

(v) Farmers consult labourers regarding plant protection measures to be adopted

(vi) Farmers discuss about the time of harvest of crops with labourers

(vii) Farmers consult labourers about where the produce to be sold, how it should be sold and at what price it should be sold

(viii) Labourers help farmers by giving their opinion on agricultural operations

(ix) Farmers give due weightage to the opinion of labourers

(x) Farmers do not like to seek the opinion of labourers on agricultural operations

(xi) Farmers use to find faults with the opinion of labourers

(xii) Farmers do the agricultural operations according to the opinion of labourers





## II. Empathy

1. Use of personal touch rather than authority in getting the work done by labourers  
preponderant - absent
2. Tactful and diplomatic way of getting the work done by labourers  
preponderant - absent
3. Consideration of each others feeling before speaking or acting  
recognised - ignored

## III. Equity

1. Discussion of problems of work with labourers  
existent - non-existent
2. Solutions to the problems of work arrived at  
jointly - unilaterally

## IV. Tolerance

1. Minor comments by each other during work situation  
slighted - valued
2. Heed to the problems of labourers  
patient - impatient
3. Treatment of labourers during work situation  
impartial - partial
4. Differences of opinion with each other during work situation  
tolerated - precipitated
5. Clarity of instructions regarding work given to labourers  
clear - hazy
6. Feeling of indispensability of labourers in cultivation  
existent - non-existent
7. Labourers doing the work as instructed even in the absence of farmers  
ensured - neglected

## **V Guidance**

1. Rapport with labourers engaged in field work excellent - worst
2. Guidance to labourers as and when required during work situation. adequate - inadequate
3. Propriety of instructions to labourers on scientific practices proper - improper

## **VI Recognition**

1. Address each other respectfully existent - non-existent
2. Open faith and trust in labourers exhibited - masked
3. Nagging of labourers for doing work avoided - attempted
4. Wastage of working time by discussing unnecessary matters by labourers avoided - allowed

## **VII Economic**

1. Payment of extra wages for extra work paid - refused

## **VIII Social**

1. Concern for each other when becoming seriously ill prevalent - absent

## **IX Priority**

1. Priority for the particular labourer while selecting for work heeded - avoided

**FARMER-LABOURER RELATIONSHIP  
IN RICE PRODUCTION SYSTEMS  
– A CASE STUDY**

BY

**S. RAMANATHAN, M.Sc. (Ag.)**

**ABSTRACT OF THE THESIS**

submitted in partial fulfilment of the requirement  
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## ABSTRACT

The study was undertaken with the objective of analysing the farmer-labourer relationship in paddy production systems. The study was conducted in two districts of Kerala namely, Thiruvananthapuram and Alapuzha representing two distinctly different paddy production systems. Dyadic approach was used in the conduct of the study and altogether 150 farmer-labourer dyads were selected, 75 dyads each from the selected districts using random sampling.

The farmer-labourer relationship was measured with the help of a scale developed for the study having 33 items. A pilot study was conducted for the selection of items to be included in the scale. The response for the items was obtained on a 5 point continuum with bipolar adjectives at the extreme ends as in the case of semantic differential technique. The data on farmer-labourer relationship and on 11 common variables, 7 farmer-related variables and 4 labourer-related variables were collected using a structured interview schedule.

The relationship dimensions identified empirically were 'facilitation', 'empathy', 'equity', 'tolerance', 'guidance', 'recognition', 'economic', 'social' and 'priority'.

In general, a little more than half of the farmer-labourer dyads had high relationship. Like wise, in case of relationship dimensions such as facilitation, equity, tolerance, guidance, social and priority majority of the dyads came under high group.

There was no significant difference between the overall relationship of the two study districts and among the three union membership categories. However, there was significant difference between the labourer categories with male labourers having significantly higher relationship than their female counterparts.

The dimension-wise performance of farmer-labourer dyads on the whole was in the order of 'tolerance', 'economic', 'empathy', 'recognition', 'social', 'guidance', 'priority', 'facilitation' and 'equity'. While there existed a vast dissimilarity in the relationship performance of dimensions

of the two study districts, the two labourer categories and the three union membership categories were in agreement with regard to dimension-wise relationship performance.

The socio-economic and psychological factors namely, management orientation, persuasiveness, gregariousness, education, ability to handle conflicts and labour use efficiency put together contributed significantly to the relationship of farmer-labourer dyads and explained 68 per cent of the variation in the relationship of farmer-respondents. In case of labourer-respondents, the variables participation in decision making with farmers, employment days and education were observed to be significantly contributing to the farmer-labourer relationship and explained 20 per cent of variation in the relationship.