COMPARATIVE ANALYSIS OF CHARACTERISTICS OF WOMEN LABOURERS ENGAGED IN RICE FARMING IN THE SOCIAL SYSTEMS OF KOLLAM AND KANYAKUMARI DISTRICTS

BY

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THESIS

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DECLARATION

I hereby declare that this thesis entitled **Comparative analysis of characteristics of women labourers engaged in rice farming in the social systems of Kollam and Kanyakumari districts** is a bonafide record of research work done by me during the course of research work and this thesis has not previously formed the basis for the award to me of any degree diploma associateship or any other similar title of any other University or society

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12-07-1996

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CERTIFICATE

Certified that this thesis entitled "**Comparative analysis of characteristics of women labourers engaged in rice farming in the social systems of Kollam and Kanyakumari districts** is a record of research work done independently by **Mrs T RAJULA SHANTHY** under my guidance and supervision and it has not previously formed the basis for the award of any degree fellowship or associateship to her

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Psalms 92 1

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

Introduction

INTRODUCTION

The labourers who spend their day between slush and mud, who work with a starving stomach and now with a half-appeased appetite, who know no rest in storm or sunshine, who often times have no dwelling site which can be called their own, they grow our paddy but starve.... Their condition is appalling and heart-rending

Dr Pattabhi

These words apparently visualize the crude reality in which the Indian agricultural labourers live

Labour is the prime factor be it the primary, secondary or tertiary sector It is the leaverspring that injects life strength and continuity to the development process of the country If the leaverspring is weak or depleted the consequences are bound to be grave

A woman starts working from childhood then as a girl and more when she gets a life partner and works on and on from motherhood to grand motherhood and beyond It is the woman who steers the ship in many of the family and in such cases she goes

to the extent of sacrificing her all to see that her children come through with finer mettle to face the odds of life

According to the 1991 census 38 per cent of all agri cultural labourers 20 per cent of cultivators and 29 per cent of all livestock and forestry workers are women Contributing a fair share of working population women form part of a highly valuable human resource which with appropriate training and education, can bring about phenomenal changes in desirable direction

Labour productivity in agriculture has two important aspects First it profoundly affects national prosperity i e the national income secondly it principally determines the standard of living of the agricultural population National prosperity in the economic perspective is largely synonymous with the high output per man-hour Therefore if a country intends to attain prosperity it needs to encourage technical assistance and improvements to the labour population which help to increase productivity in the agricultural economy (Shafi, 1981)

Human capability is a critical resource which is extremely variable In fact latent human capability may very well be the greatest untapped resource If so we need to understand individual behaviour as it relates to the work situation (Singh 1988) Any intervention for improving the conditions of women involved in agricultural activities to be

meaningful should begin with an understanding of their role profile in terms of various agricultural and related activities (Sen, 1993) Women must then be placed within this context to be evaluated

The objective of the farmer is to maximise net profit and this can be fulfilled if all the factors of production are used efficiently To know in what way different factors of production are used efficiency indicators are to be developed Method of production is said to be more efficient when it yields a greater valuable output per unit of a valuable input (Rane 1983) Labour, being an important factor of production its efficiency and the factors that bear upon it are of prime concern

The structural change in agricultural productivity has silently transformed the role of women in agriculture (Roy, 1990) They are found to participate in almost all the crop cultivation activities except ploughing Wage paid employment in agriculture has its spells of different duration depending upon crop seasons In the intervening periods they find employment in productive non-agricultural occupations Though women workers form a significant proportion of the total labour force they have traditionally been in receipt of lower wages than men and this situation prevails till date

Women s contribution to the farm sector has largely been ignored and inadequately understood in the Indian context (Marothia and Sharma, 1985) In recent years there has been more reliance on the agricultural sector in India for employment creation Employment performance of agriculture strongly influences overall employment growth because of its continuing predominant share in total employment (Sinha 1995) Very few scientific attempts have been made to examine the employment and wage pattern of female labour in crop production and other supportive activities Employment planning for women in the rural areas will have to take into account these facts and appropriate plans and programmes be initiated It is therefore pertinent to examine the employment pattern and the relative share of female labour in economic contribution

The development process in the Indian economy if by-passed women in general it was particularly so of rural women engaged in unorganised sector who constitute the core of the weaker sections Very little is known about their conditions especially at a micro-level as women's status and problems were explored more at all India level Though certain problems are common to women in general they vary according to strata even within a region and therefore micro level studies are important

In this context of what has been stated above it would become clear that an objective systematic appraisal of women

agricultural labourers will be of immense benefit to the planners and administrators and ultimately to the agricultural development process Accordingly the present study was undertaken with the following specific objectives

Objectives of the study

1 To develop and standardise a scale to measure labour efficiency of agricultural labourers

2 To measure the labour efficiency of women agricultural labourers in Kollam and Kanyakumari districts with the developed scale

3 To identify the factors influencing labour efficiency of women agricultural labourers

4 To study the relationship of socio personal and psychological characteristics with the labour efficiency of women agricultural labourers

5 To analyse the employment and wage pattern of women agricultural labourers in Kollam and Kanyakumari districts

Scope of the study

The study is the first of its kind to develop a scale to measure labour efficiency of agricultural labourers An insight into the various factors influencing labour efficiency

can serve as a guideline to farmers and farm management personnel to direct their attention towards better productivity of agricultural labourers and thereby reduce the cost of production A deep probe into the employment and wage pattern can be made use of by the development department personnel to create more avenues of employment especially during the lean seasons The measuring device developed in this study will be a significant contribution to the body of research in agricultural extension

Limitations of the study

The study experienced the limitation of time money and other resources as it formed a part of the doctorate degree programme of the researcher This in turn restricted the scope of extending the study to wider locations and including as many respondents as possible for data collection However, care has been taken to carry out the research systematically

The study was based on the expressed response of the women agricultural labourers, which may not be free from their individual prejudices in the responses at times However care was taken to collect the information without any loss

In spite of these limitations it is believed that the findings and conclusions drawn could stand the test of time

Theoretical orientation

2 THEORETICAL ORIENTATION

A detailed review of literature on the research topic was undertaken to develop appropriate concept of labour efficiency and to establish the theoretical framework for the study based on ideas and concepts gathered Due to dearth of research studies directly pertaining to labour efficiency of agricultural labourers in general and women agricultural labourers in particular the review of the literature on industrial labour and related aspects was also made The literature reviewed is organised and presented under different sections as given below At the end of each part, generalisations have been made to develop the concepts used in this study

2 1 Concept of labour

2 2 Concept of labour efficiency

2 3 Concept of agricultural labourer

2 4 Factors influencing labour efficiency

2 5 Relationship of socio personal and psychological variables with labour efficiency

2 6 Employment and wage pattern of agricultural labourers

2 7 Conceptual model of the study

2 1 Concept of labour

In this part of theoretical orientation the review on labour are presented The term labour has a variety of related usages and applications stemming from its general meaning of work or effort often in the sense of painful or heavy toil

According to Dictionary of Social Sciences the term labour in general usage denotes the exertion of human effort at whatever level of skill and remuneration Labour, as an adjective may mean concerning employees as a whole or mainly those who are wage earners or otherwise in subordinate or lower-paid positions As a collective noun it denotes those who work as employees - but commonly only manual workers The Chambers twentieth century dictionary describes labour as bodily work effort towards the satisfaction of needs workers collectively, supply or services of workers especially bodily workers

Marshall (1961) defined labour as any exertion of mind or body undergone partly or wholly with a view to some good other than the pleasure derived directly from the work According to Greenwald (1965) labour refers to the human effort or activity that is directed towards production It includes all the physical and mental talents employed in producing goods Earl (1968) stated that labour refers to all human services except decision making

Agrawal and Bansil (1969) defined labour as physical and mental human effort directed towards economic activity or creation of utility Shrivastava and Tyagi(1976) stated that labour refers to unskilled or semi skilled labourer as also to the mental and physical exertion that is undertaken with a view to earn money Harvey (1978) stated that labour refers to the actual effort both physical and mental made by human beings in production According to Agrawal (1979) labour is any work mental or manual When it is rendered for return or consideration like wages it is labour in economics Sharma and Sharma (1981) meant labour as a living resource which has feelings, inspirations personal problems and wide variations in quality

Sharma (1984) defined labour as any work which is done with the aim to get a return or an income He also quoted the definition by Jevons that labour is an effort bodily or mental put forth by human beings not exclusively for the sake of pleasure immediately associated therewith but partly or wholly with a view to the attainment of some ulterior object to earn economic reward According to Ghosh et al (1988) labour refers to the element of production represented by those hired workers whose efforts or activities are directed towards making the profit Jhingan (1990) stated that labour includes both physical and mental work undertaken for some monetary reward He also quoted the definition by Thomas that labour connotes all human

efforts of body or mind which are undertaken in the expectation of reward Munir (1992) stated that labour represents all human services other than decision making Cramer and Jensen (1994) defined labour as the physical act of performing a task Devi (1994) considered labour as bodily or mental effort carried by human beings in order to get economic returns immediately

On a perusal of the above mentioned definitions two broad aspects could be shared in common They are a) physical and mental human effort (Marshall 1961 Greenwald 1965 Agrawal and Bansil 1969 Shrivastava and Tyagi 1976 Harvey 1978, Agrawal, 1979, Jhingan, 1990 Devi 1994) and b) leading to economic returns (Marshall 1961 Agrawal 1979 Sharma 1984 Jevons Jhingan 1990, Devi, 1994)

Based on the above discussion in this study labour is conceived as the physical and mental effort leading to economic returns

2 2 Concept of Labour Efficiency

Labour efficiency was considered as a derivation consisting of two concepts viz labour and efficiency It was epitomized earlier that labour is the physical and mental effort leading to economic returns To develop the concept of labour efficiency it is necessary to analyse the term efficiency also

According to Pitman English dictionary the word efficient, the adjective form of efficiency means capable

competent able to get results and the word effective adjective form of effectiveness means having the power to produce desired result New comprehensive international dictionary of the English language gives the meaning of efficiency as the character of being efficient or effective the ratio of the work done Similarly the Random House Dictionary of the English language gives the meaning of efficiency as the state or quality or degree of being efficient, competency in performance accomplishment of or ability to accomplish a job with a minimum expenditure of time and effort The Organisation for European Economic Co operation speaks of the efficiency of the workman himself that is to say his degree of skill or the application with which he works The concept efficiency in economics relates to performance also

Evans (1953) stated that when the term productivity is used without other qualification labour productivity is ordinarily meant even though labour efficiency would be more accurate According to Clark and Gottfried (1957) efficiency in general usage means the quality of competence capability effectiveness or productivity the ability to produce desired result Evans and Evans (1957) in the Dictionary of Contemporary American usage stated that efficient means producing the desired effect but it has the added connotation of doing so with a high ratio of return or expenditure Wyllie (1960) defined efficiency as capacity or ability of any person,

process or thing to reach whatever end desired Horring (1964) considers productivity, in broad terms to denote the ratio of output to any or all associated inputs in real terms Saxon (1965) says productivity as a physical relationship between output and the input which gives rise to that output

Johanssen et al (1968) meant efficiency as the effectiveness of performance of the right thing at right way and place and effectiveness as achievement of the objectives in terms of best possible interpretation of trading circumstances and potential profitability Agrawal and Bansil (1969) stated that in economic terms efficiency is the ratio between the value of input and the value of the output Radhakrishna (1969) expressed that efficiency is by definition a relative concept According to Sankaran (1970) efficiency refers to a ratio between output and input In labour efficiency output implies not only material products of work, but also the pleasure and satisfaction which the worker may derive from his accomplishment Banki (1974) stated that efficiency is the ability of a person to perform the right thing at the right time in the right place

Drucker (1974) stated that efficiency is concerned with doing things right and concerns itself with the input of effort into all areas of activity Torrington (1974) defined performance as the rate of output achieved by a worker over a day or shift by reference to a performance on a rating scale

Rosenberg (1978) defined efficiency as the measure of production relative to input of human and other resources Agrawal (1979) described efficiency as the amount of work performed within a given time Hicks and Gullett (1981) described efficiency as doing things accurately and with minimum use of time and resources and effectiveness as doing these things necessary to accomplish the objective Padmanabhan (1981) defined efficiency as the capacity to do productive work on the farm per man per unit time Sharma and Sharma (1981) stated that efficiency refers to the amount of productive work accomplished in a given period of time Srivastava (1982) stated that the concept of productivity is sometimes considered as synonymous with efficiency, but there is a distinction between the two It has been pointed out that the word efficiency does embrace the idea of productivity but it goes beyond it in the sense that it expresses an aptitude or capacity or the quality of the input

Rane (1983) stated that in farm business efficiency refers to the amount of productive work completed per man on the farm per unit time

Suresh (1983) stated that efficiency is a relative concept It cannot be defined accurately and precisely because efficiency of any economic activity will vary according to working units and motivation of decision making units Different meanings are attributed to the term like capacity or ability to

do things well It is commonly accepted as an index ratio or percentage In this sense the term is a measuring rod to gauge the ratio of performance in terms of numerator and denominator In general efficiency has been recognised as an index of performance of the degree of achievement to economic course of action According to Sink (1985) efficiency is the degree to which the system utilised the right things Collin (1986) meant efficiency as the ability to work well or to produce right results or the right work quickly and effectiveness in producing results

Koontz et al (1986) viewed efficiency as achievement of the ends with least amount of resources and effectiveness as the achievement of objectives Prokopenko (1987) stated that efficiency tells us how well actually needed output is generated from available input and indicates the use of available capacity Ghosh et al (1988) gave the meaning of efficiency as maximum output with minimum input of labour and capital and effectiveness as the extent to which an action or activity achieves it s stated purpose Mohan (1988) stated that efficiency is the measure of quality of execution of an activity whereas effectiveness is the measure of extent of contribution which an activity makes to the overall endeavour for the achievement of the pre determined goal

Singh (1988) has quoted Claugue (1969) that productivity is a word which is used broadly to express the

overall efficiency with which our industries perform He also quoted Frenske (1968) that productivity is a form of efficiency is a ratio is a role of return primarily in monetary terms is a measure of some kind Jhingan (1990) stated that efficiency is a relative concept and it refers to the capacity to do more work or better work or both during a given period of time Verma (1990) stated that efficiency refers to the manner in which goal oriented operations are carried out generally measured as the ratio of inputs to outputs Munir (1992) stated that the term productivity has been used in different meanings and has aroused many conflicting interpretations Sometimes it is considered as the overall efficiency with which a production system works, while others it is defined as a ratio of output to resources expended separately or collectively

Literature revealed that there does not seem to have consensus as to the precise definition of the concept of productivity as well as efficiency However the two terms have been widely used and interpreted in myriads of ways

Analysing the varied meanings ascribed to the term efficiency three major aspects could be identified as a) capacity to do productive work (Padmanabhan 1981 Sharma and Sharma 1981 Rane 1983 Jhingan 1990) b) performance of right things in right way (Johanssen et al 1968 Banki 1974 Drucker 1974 Hicks and Gullett 1981 Suresh 1983 Collin

1986 Mohan 1988 Verma 1990) c) producing desired result (Clark and Gottfried 1957 Evans and Evans 1957 Wyllie 1960 Collin 1986)

In the light of the above discussion efficiency is conceived as the ability of an individual to do productive work in the right and just manner to achieve the desired result Resultantly, labour efficiency is conceived as the physical and mental ability of an individual to do productive work in the right and just manner to achieve the desired result

2 3 Concept of agricultural labourer

The First Agricultural Labour Enquiry Committee (Government 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 (Government of India 1956) enlarged the definition to include those who are engaged in other agricultural operations like dairy farming horticulture raising of livestock bees poultry etc

Misra and Lalvaiah (1957) defined agricultural labourer as all those persons employed in the fields for wages in kind or cash for carrying on agricultural operations on a temporary or permanent basis and such persons may or may not own any land According to Garg (1959) agricultural labourers are those who are employed on wages in agricultural operation

Report of the National Commission on Labour (1969) stated that the Fourth Five Year Plan documents defined an agricultural labourer as one who depends on agricultural wages for more than half his income Singh and Singhal (1969) defined agricultural labourer as a person who for more than half of the total number of days on which he actually worked during the year as an agricultural labourer

Bansil (1975) stated that an agricultural labourer in terms of economics could be defined as a person who works for wages in agriculture 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

According to the census of India (1981) a person who worked in another persons land for wages in cash kind or share of crop without any right or lease or contract on the land on which he works was regarded as an agricultural labour Padmanabhan (1981) 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 Lukose

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

Lalitha and Sharada (1988) considered labourers who work in the agricultural sector on wages or whose income are derived mainly from wage labour in agriculture as agricultural labourers According to Ravichandran et al (1990) women agricultural labourers with land are farm women who are employed in their own farm as cultivator and also engaged as agricultural labourer in other s farm because of their small farm size Landless women agricultural labourers are the farm women employed in the fields of others for cash and have no land of their own

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 Ramanathan (1995) defined agricultural labourer as men or women available for hire employment to perform agricultural operations in paddy cultivation

In the present study agricultural labourer was considered as women performing agricultural operations in paddy cultivation for a farmer in receipt of wages in the form of either cash or kind or both

2 4 Factors influencing labour efficiency

Having understood labour efficiency the ways and methods through which we may be able to attain a high level of labour efficiency on the farm should be thought about It is important because increased labour efficiency results in higher farm returns and we are concerned with maximising farm returns as the main objective of farm management

Roethlisberger and Dickson (1939) revealed that labour efficiency is influenced by physical conditions at work place group social structure group norms group pressures group acceptance wages and incentives

Hart et al (1942) stated that size of farm business use of labour saving equipment and machinery field layout building arrangement combination of enterprises and farm transport influence labour efficiency

Forster and Leager (1950) stated that intelligence skill, training adaptability to different tasks power to absorb instruction or to understand and grasp new and different ways of doing tasks influence labour efficiency

Dhondyal (1959) stated that efficiency of agricultural labourers can be increased by providing work according to capacity, ability and skill providing facilities to workers, punctual payment of wages and incentives for better work

Bronislaw (1964) stated that the following factors influence labour productivity the skill or qualification of the worker the intensity of his efforts in the process of labour and the innate ability of the worker i e his physical and mental energy

Heady and Jensen (1964) identified the factors affecting labour efficiency as field and farmstead layout enterprise combination, farm work simplification, size of farm, work incentives wages participation in work planning and profit sharing arrangements

Reynolds (1964) stated that performance of workers is influenced by their divergent knowledge training attitudes skill, health and physical strength

Agrawal and Bansil (1969) listed the following factors to influence labour efficiency physical factors heredity climate food and other necessaries health intellectual factors clearness of mind, quickness of apprehension strength of memory and the power of consecutive thought moral factors honesty work habit, ability to work in time ability to co operate with co workers faithfulness to the interests of the farm patience contentment cheerfulness and hopefulness organisational factors fairness in payment proper allotment of tasks for the day careful supervision nature of equipments just treatment and strict discipline

Sutermeister (1969) listed the factors determining employee productivity as education experience training interest aptitude personality, job layout general economic condition level of aspiration cultural background relation with superior incentives wage and physical conditions

Tandon and Dhondyal (1971) stated that efficiency of labour depends upon the physical condition of the labourer kinds of tools and implements used climatic condition and skill of the workers

Bansil (1975) stated that efficiency of labour can be improved by social security measures payment by results and spread of general and technical education

Ganguli (1975) stated that the causes of inefficiency of Indian labour are climatic conditions poor physique ignorance illiteracy, unsatisfactory working conditions bad housing conditions, low standard of living poor quality of machinery and implements used inefficiency of management and migratory character

Milton and Wallace (1977) reported that productivity of farm labour is influenced by applying work methods that emphasize labour efficiency itself the quality and capabilities of the agricultural worker himself increased use of particular agricultural inputs and the adoption of new production, processing and distribution technologies

Agrawal (1979) classified the factors influencing labour efficiency as labour factors - education skill physique working conditions family life migratory character and non labour factors machinery and equipment management trade unions wages amd working conditions

Kahlon and Singh (1980) stated that farm size size of the various enterprises specialisation in the tasks skill abundance of other resources and the proportion in which casual labour is hired affect) the efficient use of labour

Sharma and Sharma (1981) stated that efficiency of farm labour is influenced by size of farm business distribution of work over time period level of mechanization improving farm layout farm work simplification training of labourers and managerial ability of employer

Srivastava (1982) stated that labour productivity is influenced by conditions of work skill educational and training facilities proper wages and incentives

Rane (1983) stated that efficiency of farm labour depends upon the physical condition of labourer interest with which he works climatic condition under which he works nature of tools and implements training of labourers wages and additional facilities provided

Sankaran (1986) attributed the following causes for low efficiency of Indian labour enervating climate poor physique of labourers low wages migratory character poor equipment inefficient management and attitude of labour

Singh (1988) stated that work experience cultural background aspiration level leisure time activities life satisfaction skill knowledge cohesiveness relation with superiors perception of the situation wages incentives interest and training influence productivity

Johl and Kapur (1989) suggested ways to increase the labour efficiency as enlarging the size of farm business planning labour distribution enterprise combination improving farm and field layout providing incentives and training for the workers and farm work simplification

Sadhu and Singh (1989) stated that productivity of farm labour is influenced by size of labour force physical condition methods of farming tools and implements used supervision, diversification of production family background and distance of farm from place of residence

Jha (1990) stated that productivity of agricultural workers is influenced by superstitions size of holdings willingness enthusiasm and techniques of agriculture used

Jhingan (1990) listed the following factors to influence labour efficiency personal qualities race heredity education training intelligence honesty standard of living working conditions working hours wages nature of machines incentives socio political and economic conditions climatic conditions social conditions social security political stability and employer employee relations

Goankar (1992) stated that women labour productivity can be increased by training female labour mobility provision of creches at workplace creation of part time employment and unionisation of agricultural workers

2 5 Relationship of socio personal and psychological vaariables with labour efficiency

2 5 1 Annual income

Wilkening and Johnson (1958) have reported that status of woman was positively associated with her involvement in major decisions only in those families having both high income and social participation

Deb et al (1968) revealed that rationality of farmers was related to farm income

Sawer (1973) found that involvement of women in decision making was negatively associated with income

Dipali (1979) in her study on farm women reported that low income group had high participation score

Singh and Chander (1983) reported that income was found to exercise non significant effect on women s participation in decision making

2 5 2 Type of house

Singh and Singhal (1969) reported that the housing conditions of agricultural workers are deplorable Their houses are the worst in the villages They do not have their own land to construct their own houses and always remain at the mercy of the land owners for small house sites

Menon (1972) reported that in Kerala most of the low class people were agricultural labourers and they lived in small huts by the side of their high caste members

2 5 3 Type of family

Sharma and Singh (1970) reported that the type of the family is not a discriminating factor in participation of women in farm operations

Kumar (1982) revealed that joint family system is not prevalent among agricultural labourers

Mansingh (1990) stated that two third of the women agricultural labourers lived in nuclear families and had upto five members

Shilaja (1990) found that women agricultural labourers were having mostly nuclear families

2 5 4 Material possession

Alphonsa (1978) opined that possession of implements is a major indicator of agricultural wealth of the scheduled castes

Ramachandran (1990) from his study in Tamilnadu reported that the combined assets of agricultural labour households were Rs 5 64 lakhs

2 5 5 Marital status

Marital status is one of the causes which influence the turn over rate married people quitting the job less frequently than the unmarried ones It is viewed that probably marriages make for both stability and responsibility which reduce the turn over rate under normal conditions of employment But there is also the probability that job instability and avoidance of marriage may be caused by the same personality trait (Mohanty 1988)

Kuttykrishnan and Suchetha (1989) stated that as a general characteristic of lower strata among women in rural

labour households of Kerala early marriage was very common The age at marriage revealed that 80 1 per cent of them were married before the age of 18

2 5 6 Dependency

Dependency was referred to the number of persons above the age of fourteen who are solely dependent on the respondent

Dipali (1979) revealed that small families were in high participation score in comparison to big families

2 5 7 Mass media participation

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

Renukaradhya (1983) found a significant relationship between mass media participation of trained farmers with their level of economic performance

Bhagat and Mathur (1989) reported that women's programmes and rural programmes which are educational in nature was preferred by farm women They opined that radio provide education to them for improving their living increasing their knowledge and providing information on home improvement

Shilaja (1990) stated that in less progressive villages, mass media participation showed positive and significant relationship with mixed farming productivity of large farm women

2 5 8 Family background

Farm worker s efficiency is affected by his family background A worker belonging to a farm family will tend to be more efficient than the worker coming from a non-farm family as the former enjoys the benefit of his early experience and also the experience of his family The ratio of farm family workers to hired labourers coming from non farming background greatly affects the efficiency of labour (Dhondyal 1959)

Singh (1988) stated that cultural background of a worker affects his perception of the situation and helps to determine his inclination to perform a work He also stated that family is a primary agency of social control not only transmitting explicit values and beliefs but even more importantly inducing types of character structures

2 5 9 Social participation

Terborg (1977) stated that homelife and family responsibilities are barriers to effective socialization

Renukaradhya (1983) found that majority of the trained farmers were in high social participation category with higher score of economic performance

Gowda (1988) observed that variation in ragi productivity of small and marginal farmers was influenced by social participation He also observed that social participation contributed significantly for the variation in groundnut productivity of marginal farmers

2 5 10 Place of working

Stark (1981) reported that the circulatory migration approach emphasises risk minimisation rather than profit maximisation in explaining migration behaviour

Cole and Sanders (1985) and Todara (1971) opined that poor economic situation of agricultural labourers often push them to find better employment opportunities

Baby (1995) stated that agricultural labourers are forced to migrate to other places in order to find better employment opportunities

2 5 11 Intrinsic motivation

Author	Year	Respondent	Relation
Koch	1961	industrial workers	positively related to job commitment
Lawler and Hall	1970	industrial workers	Positively related to job involvement
Hackman and Lawler	1971	industrial workers	positively related to job performance
Cummings and Bigelow	1976	blue and white collar workers	not related to job involvement
Stone and Mowday	1977	industrial workers	related to job satisfaction
Orpen	1978	supervisors	positively related to performance
Gopal and Kumar	1979	industrial workers	positively related to job involvement
Singh	1978	industrial workers	related to productivity

2 5 12 Cosmopolite orientation

Agrawal and Bansil (1969) stated that a man s outlook remains essentially narrow if he remains wedded to the place where he is born This in turn affects his intellectual development leading to poor efficiency

Badiger (1979) observed that majority of the respondents from high urban contact group played dominant role in decision making in farm and home aspects in high proportion than the other category

Sumathy (1987) in her study on coffee growers reported that majority of the respondents were highly cosmopolite

Vinge (1987) stated that the experience gained outside her house enables a woman to enrich her family relationships through new outlook on tradition in a changing world By continuously seeking connection with the world of science and culture she tries to become financially successful

Mulay (1988) indicated that farm women from villages where technology is being transferred are on the forward march

2 5 13 Economic motivation

Taylor (1911) stated that economic motivation of industrial worker was positively related to productivity

Miner (1965) found that the motivation of women changed with training and experience in a manner similar to that observed for men

Chandran (1989) reported a significant positive relationship of the economic motivation of pepper growers with their awareness and attitude towards development programmes and improved practices

Rajak and Sarkar (1991) reported that economic motivation of agricultural labourers was positively related to productivity

2 5 14 Attitude towards one's work

Thurstone (1946) defined attitude as the degree of positive or negative effect associated with some psychological object towards which people can differ in varying degrees

Sharma (1972) defined attitude as a personal disposition which impels an individual to react to some object, or situations

Author	Year	Respondent	Relation
Homans	1941	industrial workers	positively related to work output
Finley et al	1955	industrial workers	positively related to efficiency
Mehta	1955	industrial workers	positively related to productivity
Herzberg et al	1957	industrial workers	positively related to productivity
Reynolds	1964	employees	affects performance
Mongia	1976	industrial workers	influences worker s productivity
Padmanabhan	1981	agricultural labourers	significant positive relation to efficiency
Sharma and Sharma	1981	farm labourers	causes variation in working efficiency
Dwivedi	1985	industrial workers	affects work satisfaction
Sankaran	1986	agricultural labourers	related to efficiency

2 5 15 Credit orientation

Babu (1987) concluded that economic performance of grape growers had positive relationship with credit orientation

Thimmaraju (1989) revealed that economic performance of coconut growers were significantly related to credit orientation

2 5 16 Gregariousness

Roethlisberger and Dickson (1939) and Singh (1988) stated that gregariousness among industrial workers has a direct influence on their efficiency in production

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

2 5 17 Age

Author	Year	Respondent	Relation
Scott et al	1941	industrial workers	positively related to turn over
Gilmer	1961	industrial workers	negatively related to turn over
Harrell	1967	industrial workers	related to work satisfac faction
Schuler	1975	employees	related to job involve ment
Saal	1978	employees	related to job involve ment
Sharma and Sharma	1981	farm labourers	negatively related to efficiency
Talukdar	1984	A D O	related to productivity
Reddy	1986	V E W	positively related to productivity
Sadhu and Singh	1989	agricultural labourers	related to productivity

2 5 18 Education

Chaudhari (1968) stated that level of agricultural productivity was significantly related to the level of education in Indian agriculture

Besen (1971) during a study of productivity in the United States indicated a strong evidence for considering education as a determinant of productivity

Whether we talk of exploitation or turn our eyes to the employment generation, the role of literacy is significant Not only this it is also instrumental in throwing a direct impact on the productivity of the workers Particularly in an agrarian economy where the concept of mechanised or modern cultivation has gained a new momentum, education constitutes on outstanding place (Jha 1990)

Author	Year	Respondent	Relation
Mehta	1955	industrial workers	positively related to productivity
Ganguli	1958	industrial workers	positively related to efficiency
Harrell	1967	industrial workers	related to work satisfaction
Agrawal and Bansil	1969	agricultural labourers	positively related to efficiency
Sutermeister	1969	industrial workers	related to productivity
Ganguli	1975	industrial workers	related to efficiency

Shrivastava and Tyagi	1976	agricultural labourers	positively related to efficiency
Agrawal	1979	agricultural labourers	influences working capa city
Choudhary	1984	agricultural labourers	related to productivity
Singh	1988	industrial workers	related to productivity
Sadhu and Singh	1989	agricultural labourers	positively related to productivity
Jhingan	1990	agricultural labourers	positively related to efficiency
Rajak and Sarkar	1991	agricultural labourers	positively related to productivity

2 5 19 Caste

Dewett et al (1948) stated that caste has a profound influence on labour efficiency

Panikar (1979) in his study conducted in Kuttanad reported that agricultural labourers consists primarily of low caste Hindus like Ezhavas

Alexander (1981) stated that agricultural labour was the occupation of Harijans but developments such like the growth of population and scarcity of land pushed many members of higher castes into it

Sharma and Sharma (1981) reported that caste distinction influences labour efficiency of farm labourers

Yadav and Azad (1987) reported that number of female workers per household were higher in scheduled castes as compared to backward and upper caste groups with an average of 5 50 4 15 and 1 75 respectively

Sen (1985) stated that due to the low status associated with work in the agricultural fields this work is often done by members of the scheduled caste house holds in the south and scheduled tribe households in various parts of the country

Jhingan (1990) stated that if the society to which the workers belong is backward and is based on caste and creed relationships, workers will not work in co operation with workers belonging to other castes and thus labur efficiency will be low

Several other authors have also quoted that caste of agricultural labourers influence female labour participation and their productivity (Sisodia, 1985 Dak et al 1986, Jha 1990)

2 5 20 Experience

Chambers English dictionary (1972) defines experience as practical acquaintance with any matter gained by trial or wisdom derived from the changes and trials of life

Jhingan (1990) stated that with the repetition of the same work, one gets specialisation in it Ihis specialisation enables him to do work in the best possible way which improves his skill

Author	Year	Respondent	Relation
Mehta	1955	industrial workers	positively related to productivity
Scott et al	1961	employees	related to productivity
Agrawal and Bansil	1969	agricultural labourers	positively related to efficiency
Sutermiester	1969	industrial workers	related to productivity
Schuler	1975	employees	positively related to job involvement
Singh	1988	industrial workers	related to productivity
Sadhu and Singh	1989	agricultural labourers	positively related to productivity

2 5 21 Competition orientation

Barnett (1953) stated that human beings are inherently lazy and are forced to exert themselves by economic threat of rivals It is observed that the desire to build up the reputation of one s village is often instrumental in causing acceptance of projects, competition between individuals families castes and villages

Hirriyanniah (1983) revealed that the respondents belonging to different categories of competition orientation had exhibited the similar trend in their rational behaviour

Sumathy (1987) reported that majority of the farmers in her study were of high competition orientation

Anantharaman (1991) did not notice any relationship between orientation towards competition and managerial efficiency of cassava farmers

2 5 22 Independence

Hobbs *et al* (1964) constructed independence scale and found that the scores on this scale were significantly related to the farmer s net income

Singh (1967) found significant relationship between farmer s score on freedom orientation scale and the adoption of recommended practices

Supe and Singh (1969) revealed that the correlation coefficient between independence score and rationality quotient scores were not statistically significant

Shrivastava and Tyagi (1976) stated that the independence of agricultural labourers influenced their efficiency

Several authors have reported that independence of industrial workers is related to job involvement and job performance (Hackman and Lawler 1971 Hulin 1971 Organ 1975 Ruh *et al* 1975 Schuler 1975 Stone 1975 Rabinowitz *et al* 1977)

Hirriyannaiah (1983) observed that there was no significant difference in the ratio and behaviour of the respondents belonging to different categories of independence

Vinge (1987) stated that the desire for independence has made women play a role in the economic main stream

2 5 23 Knowledge

Knowledge as a component of behaviour plays an important role in the total behaviour of individuals Once knowledge is acquired and retained in the mind it produces changes in the thinking process and a sort of mental alchening takes place The result of their active functioning of knowledge may sometimes be seen in overt behaviour of individual

Dipali (1979) revealed that there was positive relationship between level of knowledge of rural women in farm practices and their degree of participation in agricultural operations

Padmanabhan (1981) observed a significant positive relationship between the knowledge of scientific agriculture and efficiency of male agricultural labourers whereas no relationship in the case of female agricultural labourers

Karthikeyan (1986) stated that agricultural labourers had more knowledge in the fields of irrigation after cultivation preparatory cultivation and harvesting while they

had less knowledge in the fields of plant protection manures and manuring and seeds and sowing

Several authors have revealed that knowledge affects worker s performance and is related to turnover (Reynolds 1964 Mohanty, 1988 Singh 1988)

2 5 24 Values related to agriculture

Author	Year	Respondent	Relation
Shepard	1970	industrial workers	related to job performance
Wanous	1974	employees	related to job involvement
Brief and Aldag	1975	industrial workers	related to job performance
Johnson and Stinson	1975	industrial workers	related to job performance
Organ	1975	industrial workers	related to job performance
Stone	1976	industrial workers	related to job satisfaction
Sharma and Sharma	1981	farm labourers	related to efficiency
Singh	1988	industrial workers	related to productivity

Singh and Sohal (1976) reported that all the four values namely scienticism individualism fatalism and activism were significantly interrelated and they have been consistently found to direct action in modern social systems while fatalism,

familism and passivism are typical of more traditional economically underdeveloped systems

Sethi (1982) stated that the traditional values do not favour female participation in agricultural work but they participate to enhance their earnings for the family to make both ends meet

2 5 25 Satisfaction

Author	Year	Respondent	Relation
Herzberg et al	1957	employees	related to work performance
Korman	1968	employee	related to performance
Agrawal and Bansil	1969	agricultural labourers	positively related to efficiency
Kavanagh and Helpern	1970	employees	positively related to job satisfaction
Cherrington et al	1971	employee	no inherent relation to performance
Siegal and Bowen	1971	employees	related to performance
Jacobs and Solomon	1977	employees	related to performance
Sadhu and Singh	1977	agricultural labourers	positively related to job satisfaction
Orpen	1978	Supervisors	positively related to performance
Mitra et al	1984	agricultural change agents	positively related to job satisfaction
Mohanty	1988	supervisors	related to turnover
Singh	1988	industrial workers	related to productivity

2 5 26 Innovativeness

Rogers and Shoemaker (1971) defined innovativeness as the degree to which an individual is relatively earlier in adopting new ideas rather than other members of a social system

Sagar and Ray (1984) observed that innovation proneness to interest in and to seek changes in farming technologies and to introduce such changes when practical and feasible shall significantly contribute towards increased productivity of the farmers in general and the small farmers in particular

Gowda (1988) reported innovation proneness of farmers has relation with the productivity

Gangadharan (1993) opined that innovation is the degree of an individual s interest to seek changes in farming techniques and to introduce such changes into his own farm operations when found practical and feasible

2 5 27 Religiosity

Shakhatreh (1992) stated that religiosity affects female labour participation in agriculture

Singh (1992) stated that the agricultural workers believe in traditions and they are marked by religiosity though its level varies with the type of workers The level of religiosity is higher in case of local workers than of migrants

Devi (1994) reported that mainly Hindus were found to be engaged in agricultural labour and very little porportion of respondents were Christians

2 5 28 Political awareness

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

Vinge (1987) stated that political developments in India have been responsible for determining the role of women in a changing society

2 5 29 Alienation

Singh (1972) in a study on agricultural workers found that they are alienated to some extent The migrants are alienated due to the fact that they are powerless and alien to the society But some local workers believe that gains from the agricultural produce are not shared equitably so they feel isolated Otherwise they are satisfied with the farmers

Mitchell (1975) stated that alienation denotes a socio psychological condition of the individual which involves his estrangement from certain aspects of his social existence

John (1976) stated that all pervasive nature of alienation as it affects every aspect of human activity makes it a problem that demands concrete resolution in the actual sphere of human activity even as the ambiguity of meaning that accompanies the experiences makes it both natural and necessary to seek perspectives upon the human problem in the most unexpected ways and from even the most unlikely sources

Several authors have studied the relation of the level of alienation with the job performance of industrial workers (Hulin and Blood 1968 Shepard 1970 Hackman and Lawler 1971 Hulin 1971 Schuler 1973 Siegel and Ruh 1973 Robey 1974 Brief and Aldag 1975 Johnson and Stinson 1975 Organ 1975 Ruh et al 1975)

The research finds genuine reasons to select these variables as all of them are least explored in the farm settings especially in the context of female agricultural labourers Precisely it can be said that the present study is aimed at finding out the relationship of these variables with efficiency of women agricultural workers

2 6 Employment and wage pattern of agricultural labourers

Garg (1959) observed that a casual labourer gets work for wages only for about seven months remains unemployed for three months and gets self employment for two months

Sachdeva (1961) opined that an agricultural labourer is unemployed roughly for about four months in a year

Giri (1965) reported that women workers are mostly casual and are employed for about 134 days in a year 120 days in agricultural and 14 days in non agricultural labour

Pant (1965) opined that wages in Indian agriculture depend upon productivity and as productivity is very low wages will also be low According to him wages of women and children are lower because the work done is less strenuous

Pillai and Panikar (1965) reported that in Kerala the labourer and the members of his family received their wages partly in money but mostly in kind After the harvest they

received a share of the crop more or less sufficient to maintain the family during the whole year

Singh and Singhal (1966) revealed that women agricultural labourers could get employment for 134 days of which 120 days accounted for agricultural labour and 14 days for non agricultural labour They also started that agricultural wages lag behind industrial wages due to relatively low paying capacity of farmers and lack of collective bargaining among the labourers Sanghvi (1967) reported that when employment is available number of labourers will be more which will not increase the volume of employment but only tends to depress the wage rate

Sundharam (1970) stated that on an average the agricultural workers have only 200 days of labour and are idle for the rest of the year Only in those areas where there is double cropping there will be work throughout the year Here too because of too large a number the bargaining position of the workers is low and hence wages are low

Hinge and Dhongada (1971) observed that in Maharashtra for females during the period from January to June there was relatively more unemployment and they find full employment from August till December during which they are busy for operations like weeding and harvesting They also reported that women agricultural labourers were employed for 108 days in agriculture

and weeding harvesting and grasscutting were the major items of their work

Tandon and Dhondyal (1971) reported that farm wages vary from region to region depending upon local custom nature of work, standard of living and supply and demand for labour

According to Directorate of Economics and Statistics (1972) in Kerala one hectare of double cropped paddy field provides 300 man days of employment per year

National Sample Survey (1972 73) reported that the incidence of unemployment is higher among females and among casual labourers

Aggarwal (1973) reported that on an average an agricultural labourer of Ludhiana gets employment for 151 to 270 days in a year and they find supplementary employment in brick kiln

Bansil (1975) stated that the annual earnings of the casual workers are much smaller due to low wage rate The farm workers are paid partly in kind and partly in cash and they receive perquisites in the form of breakfast lunch clothes etc

Ganguli (1975) revealed that agriculture in India is seasonal in character which keeps the agriculturists engaged for four to five months in a year

According to Rural Labour Enquiry Report (1975) the average days of employment available to adult male agricultural labourers was 255 days and for adult female agricultural labourers it was 201 days

Chakravarthy (1976) observed that during peak agricultural season an active farm woman spends eight to nine hours in the farm three to four hours on taking care of cattle and three to four hours on other household work

Lal (1976) reported that the real wages in agriculture was highest in states such as Kerala and West Bengal He also opined that increase in wage was associated with the widespread introduction of new technology

Mamoria (1976) reported that there is a peak demand for labour in the harvesting season followed by transplanting and weeding Duration of employment in a year varies from 5 to 7 months in dry areas and 9 to 10 month in irrigated areas

Chambers and Harriss (1977) reported from a comparison of wage rates in twelve villages studied by the Cambridge Project that wage rates were higher in villages where production was more continuous and more labour intensive

Mann and Singh (1977) reported that the number of employment days per agricultural labour were 339 days for share croppers 335 days for workers working on contract basis and 233

days for casual workers On an average agricultural labour was employed for 294 days

Jose (1978) reported that the agricultural wage rates in Kerala have been among the highest compared to other states

Jayaraman (1979) stated that agricultural activities are at a peak only during the monsoon months June to September and once the monsoon crop is harvested agricultural activities come to an end Multiple cropping and livestock maintenance help to provide year round employment and income

Panikar (1979) reported that in Kuttanad during virippu and punja together a male agricultural labourer had work for about 124 days and a female agricultural labourer was employed for 132 days He also reported that in Kuttanad wage rates of agricultural labourers are higher than that in the rest of Kerala due to the organised strength of workers which has a comparatively long tradition of trade union activity

Biplab (1980) stated that agricultural labour emerges as the major source of household income of agricultural labourers accounting for 56 per cent in Haryana 76 per cent in Ferozepur and 86 per cent in Gurdaspur He also stated that employers of Kerala and Tamil Nadu provide better terms as wages employment and homestead land

Mead (1980) stated that women find wage employment in rice processing and as maid servants doing sensal housework

They are usually hired to perform a variety of tasks rather than one specific task

Mencher (1980) reported that even though wage rate is high in Kerala number of days for which employment is available for agricultural labour is less

Moser and Young (1981) stated that the stereotype of the housebound wife holds true for only a limited number of women (in third world countries) since just a small percentage of men earn regular wages Most working class women have to supplement the family budget by undertaking a variety of paid unskilled income generating activities Without this active economic participation their family would not survive

Sharma and Sharma (1981) stated that wage rates depend upon the labour availability and its demand in a particular locality If the supply of labour is enough the farmers will engage adult males and will like to engage females or children at quite low wages but in an area with shortage of labour and comparatively high demand farmers will have to engage women and children even at higher wages due to non availability of men

Sethi (1982) observed that the wages of an agricultural labourer in Punjab vary from Rs 5 to Rs 20 depending upon the nature of the agricultural operations and the sex and age of the workers Agricultural activities like transplanting winnowing picking of cotton and threshing of paddy are paid a lower wage and wages of females are significantly lower than that of males

Chauhan (1983) stated that the landless labourers do not get sufficient work in agriculture for a substantial part of the year and the wages received by the landless labourers are also less mainly because of their weak bargaining power and near zero opportunity cost

Jaysankar and Narayan (1983) reported that a labourer on an average would get 258 days of employment in a year

Saikia (1983) reported that the average annual employment of females in farm activities was 51 63 days in marginal farms 73 13 days in small farms and 89 37 days in medium farms each day being reckoned as 8 hours of actual work

Gulathi (1984) reported that in Kerala in paddy cultivation operations are so designed that the sexes have particular roles to perform and the scheduled caste women are excluded even from certain operations generally done by females She also reported that for any woman agricultural labourer the maximum number of days she can expect to get work in one transplanting season hardly ever exceeds 21 days A woman agricultural labourer will get 3 5 days of work to do weeding in one season

Balaraman (1985) revealed that on an average the wages paid to female worker is roughly two third to three fourth of the wages paid to male labourer

Jaiswal and Singh (1985) stated that a women labourer get total employment of 270 days on an average per annum Of this 85 56 per cent was from agricultural sources and the rest from nonagricultural sources The break up of total employment monthwise revealed that women labour got the highest employment to the extent of 10 19 per cent in the month of April and 9 25 per cent in each of the months of May November and January The lowest employment was in the months of July August and September each accounting for about 6 3 per cent of the total employment

Sisodia (1985) stated that on an average, female labour was utilised for 4 56 days per hectare of cropped land in 1982 83 compared to 7 84 days in 1977-78 About 15 per cent of total family labour was contributed by female members in ancillary agricultural activities

Whitehead (1985) argues that wage employment coexists with other forms of production of various kinds so demands on labour do not necessarily operate according to the principles of the labour market and wage employment In addition many people in third world countries do not earn the so called family wage in which one wage is sufficient for the whole family Thus women have to contribute to the family income through their involvement in production either as paid or unpaid labour

Dantawala (1986) reported that female wages as a percentage of male wages at the all India level had been less than 70 per cent of male wages in all labour enquiries

According to Haque and Sirohi (1986) during 1950 51 to 1982-83 the compound growth rate of average daily wage for agricultural labour varied between 4 99 per cent in West Bengal to 7 96 per cent in Kerala

Barkat (1987) revealed that in Bangladesh off farm activities constitute a primary source of employment and income of about one quarter of all households and one third of the labour force For female workers off-farm activities accounted for one fifth of their total working time

Goodman (1987) stated that according to the Neoclassical model unemployment caused by technological change is only temporary If the market is freed automatic compensation will occur

Mies (1987) stated that apart from wage work in agriculture women also perform a number of subsistence tasks like collecting fuelwood vegetable and grass without which their families cannot survive

Parmar (1987) reported that in Sourashtra region the female worker is found to earn Rs 8 02 and Rs 6 90 average daily wage rate in developed and less developed villages respectively

Patnaik (1987) observed that in Haryana the number of days of employment that women obtained was only 39 per cent of the corresponding figure for men

Rajan (1987) reported that women find employment only for 138 days a year but men have work for atleast 208 days

The Hindu (1987) reported that in terms of money, the wage of an agricultural labourer has increased by 50 65 per cent in the last one decade and the real wage has actually declined by about 10 20 per cent because of the rise in the price of essential commodities

Yadav and Azad (1987) concluded that transplanting is one of the most important farm operations in which the women workers are engaged Other important operations are weeding and harvesting

Pandey et al (1988) stated that the percentage of women to total family members employed in the farm was found to decrease with the size of holding but large farms had relatively higher employment of female labour than small and marginal farms

Punjabi and Sadhu (1988) stated that Bangladeshi women not only work in the fields but poverty forces them to participate in other types of hard manual labour such as road and building construction In South East Asian countries such as Indonesia, women are very active in the rice fields a crop which usually requires intensive farming

Chakraverty et al (1989) reported that level of employment per worker varied inversely with the farm size in both irrigated and rainfed villages of Mayurbanj district They also reported that on the average total working days per worker was found to be 176 70 mandays on irrigated farms and 152 40 mandays on rainfed farms

Jha (1990) estimated that in Bihar agricultural employment is available to male workers for 167 days and the female workers remain unemployed for a longer period of 197 days

Ramachandran (1990) reported that in Tamil Nadu when a plot of unirrigated land is converted to ground water irrigated land there is a multifold increase in labour absorption He also reported that the average number of days of employment at hired tasks for landless agricultural labourers was 140 days of which about 96 days were spent at agricultural labour and about 44 were spent at non agricultural tasks

Roy (1990) stated that in Punjab rice farming system has traditionally involved women in providing labour for transplanting, harvesting and post harvest operations on the farm The female labour involved in farming operations spend 37 22 per cent time per acre of land for transplanting

Sharma (1990) revealed that in Mathura district Uttar Pradesh 17 per cent bonded labourers were paid wages upto Rs 100

per month Another 57 per cent were paid within the range of 100 200 rupees per month The rest 26 per cent labourers were given the wages above Rs 200 per month These wages included payment in cash and kind

Kaur (1991) found that the maximum days for which a female can get work is about five months of which only for three months they get full employment Pawar et al (1991) reported that overall total employment for male agricultural labour in Maharashtra was 261 63 days and for female agricultural labour it was 256 45 days

Sentilnathan (1991) opined that seasonal unemployment and underemployment were the biggest problems faced by the agricultural labourers

Sudharani and Raju (1991) conducted a study in Andhra Pradesh and pointed out that in March August October November December January months female labour participation was maximum in paddy based cropping system In August due to transplanting in October-November due to weeding in December January due to harvesting in March due to harvesting of second crop more female labour was needed

Gautum and Meenakshi (1992) indicated that in Himachal Pradesh within agriculture labour force the proportion of women is more as compared to men and their contribution in agriculture/farm activities is also greater

Yadav et al (1992) stated that most women are willing to take up jobs to supplement their family income particularly activities like knitting and dari (rung making)

Shah and Rathore (1993) stated that women agricultural labourers of Jodhpur received cash payment according to minimum wage act or rate prevalent in the area and more than one-third of them had monthly income ranging from Rs 1501 to Rs 2000

Devi (1994) stated that female agricultural labourers were engaged in agricultural labour for 104 days and in non agricultural labour for 37 days During the months from May to October there were relatively more employment in the case of both male and female laborers

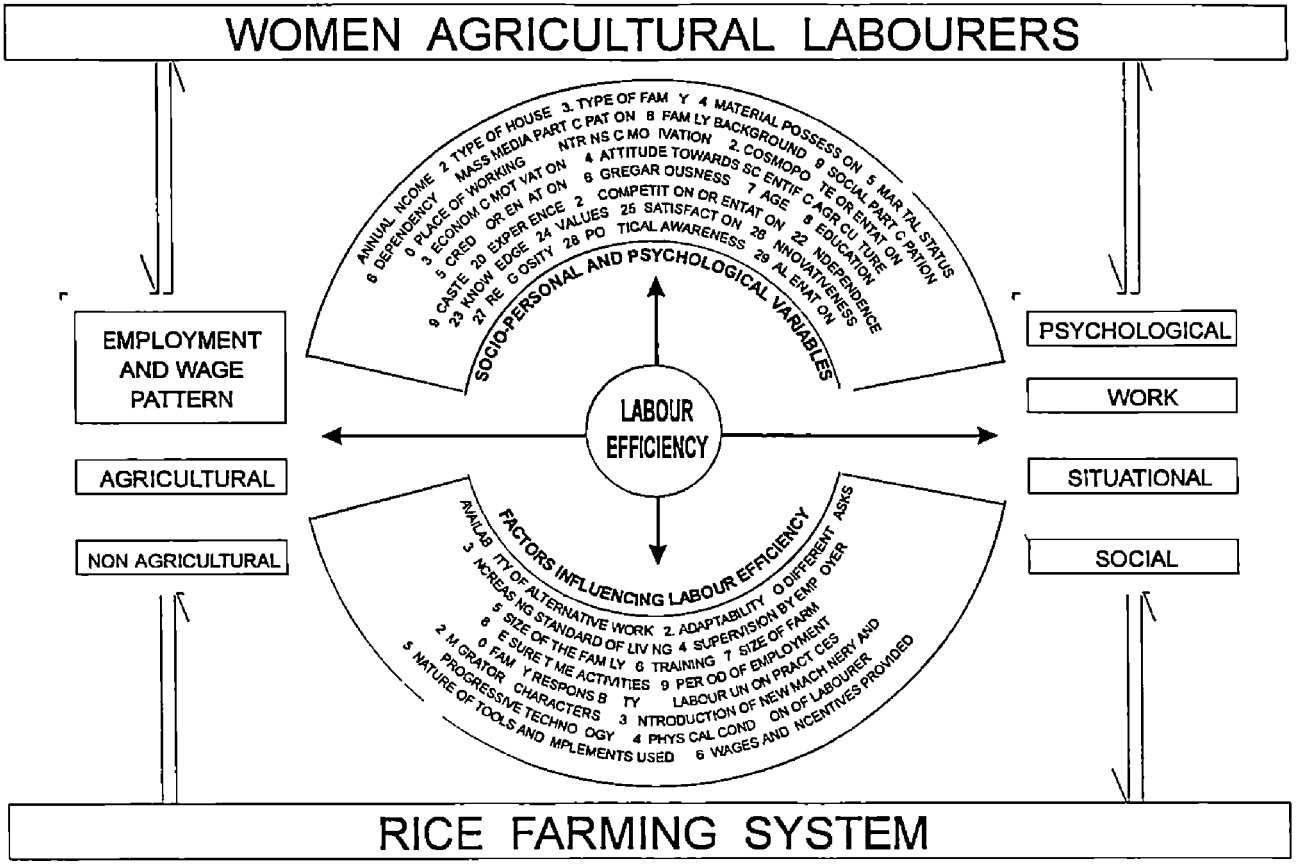


Fig 1 Conceptual model of the study

Methodology

3 METHODOLOGY

Designing, by forewarning the difficulties to come ensures against wasteful expenditure so we can be armed against them in advance A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research by adopting simple procedure

This chapter deals with methods and procedures followed in the various phases of research and they are given under the following heads

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 for the study
3 7 Hypotheses set for the study

3 1 Locale of the study

3 1 1 Selection of the study area

The study was conducted in Kollam district of Kerala and Kanyakumari district of Tamil Nadu where more or less similar agro-climatic conditions and cropping pattern exist Among the

southern districts of Kerala (Thiruvananthapuram Kollam Pathanamthitta, Alapuzha Kottayam Idukki and Ernakulam district) Kollam district has the highest number of rural women population (as per 1991 census) and has 23 00 per cent of the total workers as agricultural labourers In Kanyakumari district 46 42 per cent of the gross cropped area is occupied by rice and 35 97 per cent of the total workers are agricultural labourers

3 1 2 Brief description about study area

3 1 2 1 Kollam district

It is one of the important districts of Kerala as far as rice cultivation is concerned Nearly 6 00 per cent of the total rice area of Kerala is in this district It contributes 7 00 per cent of total paddy production in the state and has an average productivity of 2 09 tonnes per hectare

The district is divided into 13 blocks and has 73 panchayats It enjoys an annual rainfall of 2500 mm The major rivers flowing through the district are Kallada and Ithikkara

The principal crops cultivated in the district are rice rubber, coconut, pepper and cashewnut The main planting season of rice is April-May (first crop) and September October (second crop) Forty seven per cent of the area is under high yielding varieties of rice like Pavizham Jyothi and PTB-20 The major soil types are laterite and sandy loam soil

3 1 2 2 Kanyakumari district

It is the southern most district in Tamil Nadu having 40,000 ha area under rice accounting for 9 00 per cent of area and 12 00 per cent of paddy production in Tamil Nadu with average productivity of 5 95 tonnes per hectare It is surrounded in the north and north east by Nellai district north west by Thiruvananthapuram district of Kerala west by the Arabian sea and in the south by the Indian ocean It has four taluks and nine blocks The average rainfall is 1450 mm and 37 00 per cent of area under cultivation is irrigated The important rivers flowing in the district are Paraliyar and Kothayar which unite to form the Thambaraparani, Valliyaru Thoovalaru and Mullayar Nearly 33 00 per cent of area is occupied by forests The major soil types in the district are red loam, laterite and coastal alluvium

Paddy, cassava, coconut banana and rubber are the principal crops grown in the district Rice is planted in April May (first crop) and October-November (second crop) and 83 00 per cent of area is covered by high yielding varieties of rice namely ASD 16 ADT 37 Ponmani and TPS 3 The fertilizer consumption per unit area of gross cropped area is 60 25 35 kg/ha

3 2 Selection of the respondents

3 2 1 Selection of blocks and panchayats

Out of the thirteen blocks in Kollam district, two blocks viz Mukhathala and Ithikkara were selected at random Three panchayats each from the two selected blocks were selected at random Accordingly in Kollam district Meyyanadu Thirukovilvattom and Vadekkavila panchayats from Mukhathala block and Athichanalloor, Chathanoor and Poothakkulam panchayats from Ithikkara block were selected Out of the nine blocks in Kanyakumari district, two blocks viz Killiyoor and Thiruvattar were selected at random Keezhkulam, Nattalam and Middalam panchayats from Killiyoor block and Athur Thiruvattar and Kattathurai panchayats from Thiruvattar block were selected for the study

3 2 2 Selection of the labour respondents

The respondents of the study were selected by keeping the following conditions

1 The respondents should derive major portion of their income by rendering service as hired agricultural labourers

2 They should have worked as agricultural labourers for atleast three consecutive paddy crop seasons so as to know about the different agricultural operations involved in rice farming

A list of women agricultural labourers engaged in rice farming was prepared in consultation with the extension personnel and farmers in the concerned panchayats From this list, twenty five women agricultural labourers were selected at random from each panchayat Altogether 300 women agricultural labourers were selected for the study at the rate of 150 from each district The list of blocks, panchayats and number of women agricultural labourers selected for the study from each district 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

The objective of the study necessitated labour efficiency of women agricultural labourers as the dependent variable for the study

3 3 2 Independent variables

The independent variables in the study refers to the socio-personal and psychological factors of women agricultural labourers The independent variables for the present study was selected following the procedure outlined here under

Based on the review of literature a list of 29 variables that could possibly establish a relationship with

Table 1 Location of study and number of farmers selected

	State	District		Block		Panchayat	No of women agricultural labourers
1	Kerala	Kollam	1	Mukhathala	1	Meyyanadu	25
					2	Thirukovilvattom	25
					3	Vadekkavila	25
			2	Ithikkara	1	Athichanalloor	25
					2	Chathanoor	25
					3	Poothakkulam	25
							150
2	Tamil Nadu	Kanyakumari	1	Killiyoor	1	Keezhkulam	25
					2	Nattalam	25
					3	Middalam	25
			2	Thiruvattar	1	Athur	25
					2	Thiruvattar	25
					3	Kattathurai	25
							150
			Total sample size				300

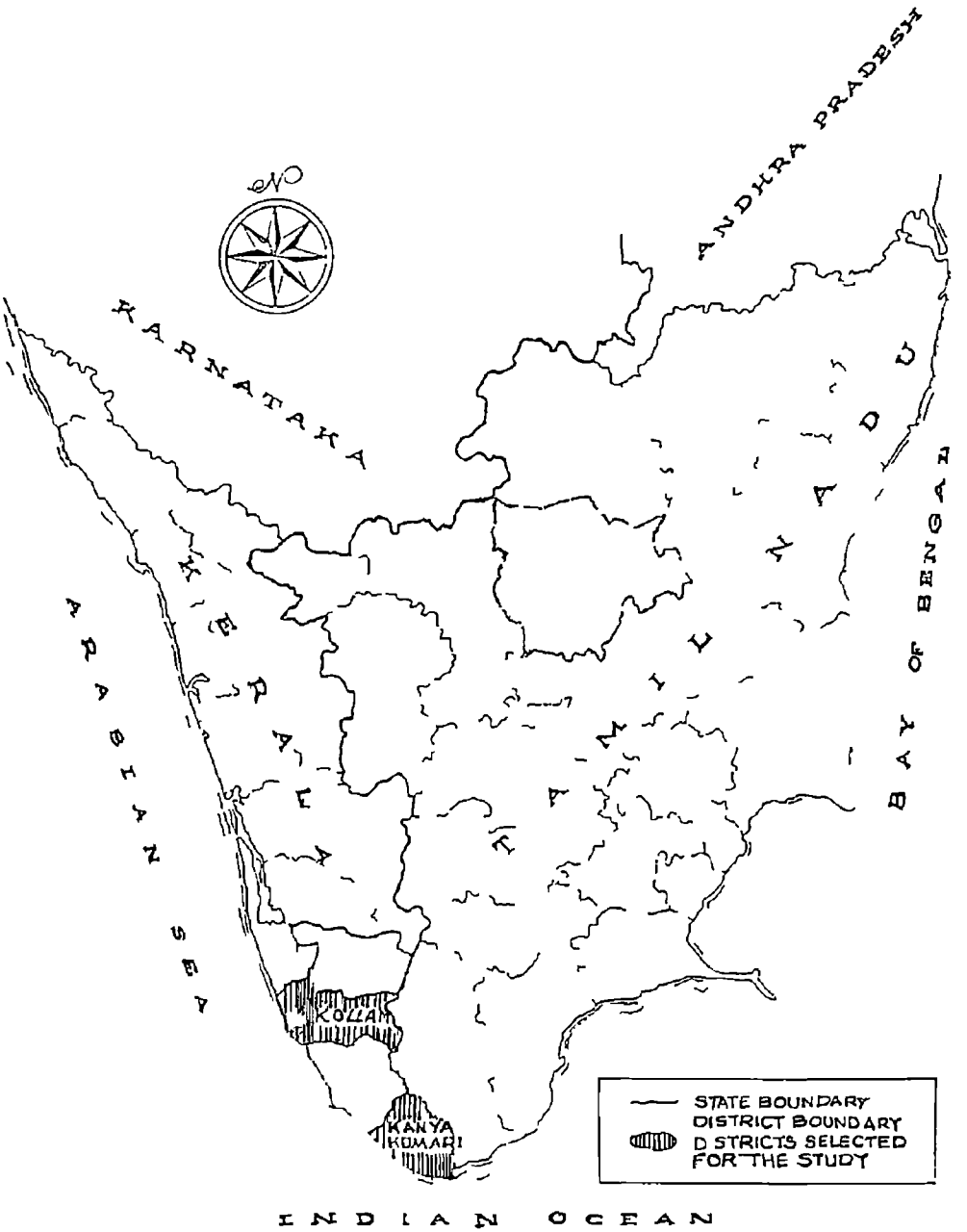


FIG 2 MAP SHOWING THE DISTRICTS SELECTED FOR THE STUDY

labour efficiency as contemplated in the theoretical orientation chapter was prepared The list was sent to 100 judges comprising Professors Associate Professors and Assistant Professors of the Tamil Nadu and Kerala Agricultural Universities and Scientists of the Indian Agricultural Research Institute and other ICAR Scientists with social science background They were requested to evaluate the variables critically and indicate the relevancy of each variable in influencing labour efficiency on a five point continuum of 'most important , more important 'important , 'less important and least important with weightage of 5 4 3, 2 and 1 respectively (Appendix I) Out of 100 experts, 60 returned the list after recording their judgement

Based on the responses of the 60 judges, percentage score was worked out for each independent variable Percentage score was calculated by the ratio of scores obtained to the maximum possible scores multiplied by 100 The independent variable which had 75 or more as percentage score was included in the study The variables with their corresponding percentage score are given in Appendix II Finally 19 independent variables viz , age, education caste experience in rice farming, mass media participation intrinsic motivation, competition orientation, independence, knowledge of paddy cosmopolite orientation, economic motivation, values related to agriculture, satisfaction gregariousness, attitude towards scientific agriculture, innovativeness religiosity political awareness and alienation were selected for the study

3 4 Operationalisation and measurement of the variables

3 4 1 Dependent variable - Labour efficiency

It was measured with the help of a scale developed for the study In this section a review on various aspects of measurement of labour efficiency is attempted so as to provide a justifiable footing to the measurement procedure of labour efficiency adopted for this study

The labour efficiency index is composite, in the final analysis it reflects the realisation of many other economic objectives such as reduction in the cost of production, degree of specialisation effectiveness of capital investments and use of basic funds (Prudensky 1964) The post war direction of economic thought towards the analysis of the problems involved in the growth and development has led to the resurgence of interest into the dynamics of labour productivity

3 4 1 1 Approaches and measurement tools developed

The possible approaches for measuring labour efficiency as suggested by various authors are presented here

Davis (1951) stated that labour efficiency is the ratio of output to the number of workers employed for the fabrication of the former and which is measured by the quantity of articles produced in a given unit of time Siegel (1961) stated that a

general commonsense definition of a concept like productivity, however, admits numerous measures which fall into three major categories - physical productivity financial productivity and net output productivity

Bronislaw (1964) of Polish Academy of Sciences said that labour efficiency is the sum of the use value produced (products or material services) per worker employed in material production It is always calculated with reference to some unit of time Dovrings (1967) reported that labour productivity means the income of the population engaged in agriculture and can be measured in terms of output per worker Hayani and Rattan (1970) accounted agricultural labour productivity differences in developed countries and of less developed countries by using Cobb Douglas Production function They incorporated the independent variables like land, labour, livestock fertilizers machinery, education and technical manpower

Barnard and Nix (1973) stated that the overall efficiency of labour can be measured by relating a total farm output measure to the input costs and comparing with standards The general form of the calculation is (Net output / labour cost) x 100 Standard Man Days (S M D) can also be used A standard Man Day (once called 'Man work unit') is eight hours of work supplied by an average worker The number of S M Ds theoretically required is compared with the number available

Pasour (1981) suggested that a level of performance which is achievable only under ideal conditions of perfect knowledge is not an appropriate standard against which to measure real performance In a similar vein he argues that performance standards derived on the assumption of profit maximisation is not realistic A third area of controversy raises questions about the accuracy of empirical measures

The more refined systems of measurement of labour efficiency, in particular value added per man-hour are of importance chiefly in economically advanced countries where it is intended to compare labour efficiency in agriculture with that of other occupations, or where it is necessary for social purposes to compare the income and productivity of workers in agriculture with those in other occupations They are of less importance in developing countries where there is commonly abundance of farm labour, and where farm workers are often seasonally employed or underemployed except at times of peak labour demand (Shafi, 1981)

Russell and Young (1983) viewed that it is valid to try to estimate producers performance in terms of technical efficiency, since to a large extent the latter would avoid many of the criticisms levied upon more general efficiency concepts

The above systems of measurement of labour efficiency measured only the partial productivity Mongia (1976) stated

that partial productivity ratio do not measure changes in the efficiency of that particular resource only nor of productiive efficiency generally The progress cannot be assigned to labour or capital but we have to take into account various factors which affect efficiency These factors are quality changes in factors of production, technological changes and scale of production

Another system of assessment of labour efficiency adopted by many workers was by functional approach on the basis of certain efficiency criteria

Hirsch (1947) stated that quality of manpower state of labour relations, employee morale quality of capital resources quality and kinds of materials, production processes and weather are to be considered while measuring productivity Dewett et al (1948) stated that two main components to analyse labour efficiency are 'power to do work' and 'will to do work The 'power to do work' depends upon the physique, health, skill in doing work and resourcefulness of the labourers The will to do work' reflects his mental qualities like ambition to rise, sense of duty honesty, perseverance intelligence and sense of responsibility Apart from these two social and situational factors should also be considered

Smith (1955) suggested that the following criteria may be considered while assessing the efficiency of workers general dependability neatness and orderliness of work, skill amount of

acceptable work produced application of time interest and energy to duties knowledge of duties and related information ability to learn and profit from experiences commonsense initiative and resourcefulness co-operativeness and ability to work with and for others

Rajappa (1976) rated the employees of a textile mill on the basis of the following criteria knows job well hardworking, responsible active, co operative, friendly, faithful and lazy Padmanabhan (1981) considered the following ten efficiency criteria for evaluating the efficiency of agricultural labourers quantity of work output per day quality of the work done (orderliness, neatness, completeness etc) interest in doing work skill in doing the work general dependability, knowledge regarding scientific agricultural practices responsibility punctuality sincerity and obedience

Pestonjee (1988) developed a performance rating scale to ascertain the level of efficiency of blue collar as well as white collar workers It is a likert type scale consisting of 13 items quality of work amount of work expended on the job, speed, quantity of work, capacity of work performance care in handling company property ability to work without supervision ability to handle different jobs, dependability attendance and punctuality planning ability initiative on the job and overall work performance with five response alternative The immediate

superior officer was asked to rate the performance of the workers Singh (1988) stated that several investigators have laid emphasis upon the environmental situational attitudinal and personality factors as determinants of job performance / productivity of employees

Thus most of the scales developed to measure labour efficiency belonged to functional approach In the above methods, the employer was asked to rate the labourers engaged by him In this study the agricultural labourers were asked to rate themselves on well defined items so as to reflect their efficiency either directly or indirectly

3 4 1 2 Development of labour efficiency scale

3 4 1 2 1 Operationalisation

Labour efficiency is operationalised in line with the concept of labour efficiency derived for the study

Labour efficiency is operationally defined as the physical and mental ability of an individual to do productive work in the right and just manner to achieve the desired result

3 4 1 2 2 Scale development procedure

The main aim behind the scale development was to construct a scale of general nature so as to enlarge the scope of application of the scale to measure labour efficiency of

agricultural labourers not only with reference to rice farming system but also in any other single crop enterprise The scale was developed by functional approach as it carries more meaning in the context of agricultural labourers

3 4 1 2 2 1 Item generation

The first step in the development of the scale was to identify all possible items reflecting labour efficiency of agricultural labourers The primary source for item collection was literature discussion with experts in related fields and through critical incident technique The collected items were screened by verifying its applicability for various agricultural situations Altogether 115 items were generated and theoretically classified under four major dimensions namely psychological, work, situational and social dimensions (Appendix IV) The appropriateness of the items were pretested with a group of agricultural labourers

3 4 1 2 2 2 Preliminary screening of items

The relevancy of the 115 items generated was established by sending these items to 100 judges with proper instructions (Appendix III) Experts in the field of extension economics and management were selected as judges The judges were asked to indicate the relevancy of items on a three point continuum of more relevant relevant and less relevant

Sixty judges responded The mean score percentage for each item was worked out and are presented in Appendix IV The item having mean score percentage of 80 and above were selected for the study This selection procedure yielded 58 items

3 4 1 2 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)

Item analysis was done on the responses of two groups of agricultural labourers, one belonging to Kollam district and the other Kanyakumari district The 58 items selected were administered to 100 agricultural labourers selected randomly from the non-sample villages of two districts viz Kollam in Kerala and Kanyakumari in Tamil Nadu The respondents were asked to give their responses on a five point continuum of 'strongly agree' 'agree', 'undecided' 'disagree' and strongly disagree' The responses were quantified by alloting scores of 5 4 3 2 and 1 for the above mentioned response categories in that order as followed by Mathew (1989) while developing managerial activity scale and Anantharaman (1991) for managerial efficiency scale

3 4 1 2 2 3 1 Item discrimination

It refers to the power of an item to discriminate the low efficiency from the high efficiency category of agricultural labourers The total score for each respondent was found Following the suggestion of Kelley (1939) high and low level groups were formed by grouping the respondents whose total score fell within top and bottom 27 per cent respectively The values of critical ratio were used as discrimination index as suggested by Singh (1986) and followed by Nehru (1993) The critical ratio (t - value) of each item was calculated using the formula given by Edwards (1957)

3 4 1 2 2 3 2 Item - total score correlation

The correlation of each item score with total score yields a measure of internal consistency (Anastasi 1961) Using Pearson's product-moment method correlation was worked out for each item between item score and total score of individual

3 4 1 2 2 3 3 Selection of items for final scale

The results of the item analysis of the 58 items performed on the basis of discrimination index and item total score correlation are presented in Appendix V Thirty two items which had significant discrimination and item total score correlation were selected for inclusion in the final scale

3 4 1 2 2 4 Classification of selected items into components

Several ways of grouping the items into dimensions are being in vogue both on theoretical lines and by statistical measures Factor analysis Principal Component Analysis Mc Quitty Linkage Analysis and Cluster analysis are some of the statistical methods widely being 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 in the study This classification aided analysing and interpreting the labour efficiency of women agricultural labourers with respect to various dimensions delineated from the cluster analysis

3 4 1 2 2 4 1 Cluster analysis

Cluster analysis a simple form of correlational analysis is a useful technique in itself and can also be used as a preliminary step in some of the grouping methods (Benjamin. 1967) Cluster analysis is the general procedure by which we objectively group together entities on the basis of their similarities or differences (Sokal and Sneath 1963 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 O analysis

The basic criterion for cluster analysis technique is 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 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 euclidean distance (d) standardised distance (ds) dissimilarity index (D) and correlation measure 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 labour efficiency euclidean distance was used in the present study and the same for every pair of items was calculated using the formula

$$d^2ii \quad - \quad \sum_{j-i}^{q} (Xij \quad Xi\ j)^2$$

where d^2ii - euclidean distance between items i and i

$(Xij \quad Xi'j)^2$ - difference between the scores of items i and i' for the j^{th} respondent

Having calculated the pair wise euclidean distance of items grouping of items into clusters was carried out by employing the method suggested by Tocher as given in Singh and Chaudhary (1979) 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 32 items of labour efficiency scale is given in Appendix VIII

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 > B)+d^2 (B ->C)+d^2 (A >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 labour efficiency identified are presented under results chapter

3 4 1 2 2 4 2 Labelling of clusters

The items grouped into various clusters employing Tocher method were considered to represent the various dimensions

of labour efficiency Labelling was done by taking into consideration the common content of the items grouped under each cluster as followed by Nehru (1993) and Ramanathan (1995)

3 4 1 2 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 B of Appendix IX) The response categories for the items and the scores allotted for the response categories are the same as described in the item analysis part

Computation of individual scores was done for each dimension derived by cluster analysis and for labour efficiency as a whole According to Bennett and Bowers (1976) there are several ways of measuring the factor from a simple method of using the score which an individual obtains on variables, which best represent the factor to sophisticated estimation methods based on factor loadings of all variables on that factor

In the present study, dimension score was derived by simple addition of the scores obtained by individuals on the items grouped into a dimension This can be denoted as

$$\sum_{i-1}^{n} ti \qquad t_1+t_2+t_3+ \qquad + tn$$

where t_1 t_n refers to individual s score on items Labour efficiency score was computed by summing the dimension-wise scores as

$$\sum_{i-1}^{n} Di = D1+D2+D3+ \quad +Dn$$

where D_1 D_n refers to individual scores on dimensions

The differential weightages were not given to items because all the items selected in the final scale had statistically significant item validity indices and hence it was assumed that their contribution towards efficiency 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

The managerial efficiency scale of Anantharaman (1991) and farmer-labourer relationship scale of Ramanathan (1995) also did not have differential weights for items and total scores were computed by simple addition of item scores

The final format of the scale given in Appendix IX has 32 items grouped under ten dimensions The minimum score obtainable by a respondent by using the scale is 32 and the maximum is 160 The average efficiency score obtained by a group

of respondents to whom the scale is applied is worked out and this score is used to categorise the women agricultural labourers as high and low groups High group refers to those women agricultural labourers whose efficiency score is higher than the average score and the women agricultural labourers having low efficiency score come under low group

3 4 1 2 4 Standardisation of the scale

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

3 4 1 2 4 1 Reliability of the scale

The reliability of a test refers to the consistency of scores obtained by some individuals on different occasion or with different sets of equivalent forms (Anastasi 1961) In this study reliability was determined by split half method (odd even method) The scale was administered to 100 women agricultural labourers of non sample villages of Kollam and Kanyakumari districts Pearson s product moment correlation was worked out between the two sets of labour efficiency scores to obtain the reliability of the half test Using Spearman Brown prophesy formula, the reliability of the whole test was worked out This worked out to be 0 9245 which was significant indicating the reliability of the scale

3 4 1 2 4 2 Validity of the scale

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 2 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 2 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 In this study based on perusal of literature self concept was used as the construct The test was administered to 100 respondents of non sample villages of Kollam and Kanyakumari districts Correlation was worked out between the self concept scores and labour efficiency scores A significant correlation of 0 6057 was obtained indicating that the scale has construct validity

3 4 2 Independent variables

3 4 2 1 Age

Age has been taken as the number of completed years of respondents at the time of enquiry and chronological age was considered as such

3 4 2 2 Education

Education is conceptualised as the extent of non-formal and formal education an individual possessed The scoring procedure was as follows illiterate-1 can read and write 2 One score was added for every successful completion of formal schooling The same scoring procedure was followed by Menon (1995)

3 4 2 3 Caste

The categorisation followed in the census report (1991) was adopted All the respondents were classified into three categories as forward, backward and scheduled caste assigning scores of 3 2 and 1 respectively

3 4 2 4 Experience in rice farming

It is defined as the number of years since the respondent has been involved in rice farming

In the present study farming experience is measured in terms of number of years the respondent has been engaged in rice

farming The same type of measurement was followed by Anbalagan (1974) and Shilaja (1990)

3 4 2 5 Mass media participation

It is defined as the extent to which the respondent is exposed to different mass media of communication such as radio television newspaper, leaflets etc A score of 3 2 and 1 was assigned for the responses of regularly occasionally' and never' respectively The possible score ranged from 4 to 12 The same procedure was suggested by Trivedi (1963)

3 4 2 6 Intrinsic motivation

It refers to the degree of feeling of accomplishment or of personnel worth as perceived by the labourer herself Here the only requirement is that the outcome be valued by the individual herself When an individual anticipates obtaining some valued outcome as a result of a contemplated action or course of action that outcome may be termed as incentive for engaging in the action (Hackman and Lawler, 1971) This variable was measured by using the scale developed by Lawler and Hall (1970) The scale consisted of four statements and the possible score ranged from 4 to 20 Rating was on a five point continuum 'strongly agree 'agree undecided , disagree' and 'strongly disagree

3 4 2 7 Competition orientation

It is operationally defined as the degree to which a woman agricultural labourer is oriented to place herself in a competitive situation in relation to others for projecting her excellence in farming

In the present study the scale developed by Singh (1981) was used to determine the competitive orientation of respondents with slight modification in the scoring procedure Instead of five point continuum of response a dichotomous pattern of 'agree or disagree was followed A score of 2 was given for the 'agree response and 1 score for disagree response in the case of positive statements The scoring procedure was reversed in the case of negative statements The score obtained on each statement was summated to obtain the total score of a respondent The maximum score obtainable by a respondent was 10 and a minimum of 5

3 4 2 8 Independence

Independence of an individual is characterised by an orientation towards evaluating means in terms of the instrumentality and efficiency and not submit to social judgements or approval in making decision between alternative means In the present study this value dimension was measured by using the independence scale developed by Supe and Singh (1969)

with modification in the scoring procedure Instead of a five point continuum of response as used by Supe and Singh in this study a dichotomous pattern of response (Agree/Disagree) was followed as it was considered difficult for the women agricultural labourers to respond on a five point continuum This scale consists of six statements of which the first five statements were positive while the last statement was negative A score of 2 was assigned for the Agree response and 1 score for Disagree response in the case of positive statements and scoring procedure was reversed for negative statements The scores obtained on each statement were cumulated to obtain the total score

3 4 2 9 Knowledge of paddy

In the present study knowledge refers to the information possessed by a woman agricultural labourer regarding scientific crop production Knowledge of women agricultural labourers regarding paddy was measured employing a teacher made knowledge test 13 items were included A score of 1 was assigned for correct response and a score of 0 for incorrect response The total obtainable score was 13

3 4 2 10 Cosmopolite orientation

A cosmopolite individual has some interest in the community and maintains a minimum relationship within the community but she is highly oriented to the problems and affairs

outside the community and regards herself as part of outside world To assess the cosmopolite orientation of respondents, the statements given by Moulik and Lokhande (1969) were used with some modifications in the weights assigned to the statements The respondents were asked to rate each statement on three point continuum viz Agree 'Undecided 'Disagree For positive statements 3, 2 and 1 scores were given for Agree Undecided and Disagree responses, respectively and the reverse order of scoring was followed for negative statments

3 4 2 11 Economic motivation

It was operationalised in terms of profit maximisation and the relative value placed by a respondent on economic ends It was measured using the scale developed by Supe (1969) The scale consisted of 7 statements The responses were collected in a five point continuum as strongly agree agree undecided disagree and strongly disagree with assigned scores of 5 4 3 2 and 1 respectively for positive statements The scoring was reversed in the case of negative statements The scores obtained by an individual on all statements were added up to get the economic motivation score of the individual

3 4 2 12 Values related to agriculture

Beal and Sibley (1967) observed that values are the standards upon which evaluations are made the criteria by which

both ends and means are chosen Consequently an individual is emotionally committed to standards in such a manner that they influence guide or direct his behaviour This study takes into account the nature of values held by a woman agricultural labourer about agriculture and related tasks

For quantifying this variable the scale developed by Alexander (1982) was used with slight modification A score of 1 was given for response indicating belief in traditional or irrational values (for Disagree responses) and a score of 2 for a response indicating belief in modern or rational values (for Agree responses) The scoring procedure was reversed for statement No 2 since it is a negative statement The scores of each respondent on the eight statements were summed up to obtain the scale value

3 4 2 13 Satisfaction

Satisfaction was operationalised as contentment of the respondents in their basic needs family needs as well as social needs Satisfaction was measured by using the scale developed by Sinha and Sharma (1980) with slight modifications There were eight statements in the scale and response was obtained in a 5 point continuum Scores of 5, 4 3 2 and 1 were assigned for 'most satisfied', more satisfied , 'satisfied' less satisfied and 'least satisfied respectively

3 4 2 14 Gregariousness

It was operationalised as a tendency habit or desire to be with other people or the ability or inclination of a person to seek and enjoy the company of other people and collegues Schedule developed by Muthiah (1981) containing 3 positive and 1 negative statement was used For positive statements 4, 3 2 1 score were assigned for 'most frequent 'frequent 'less frequent' and 'least frequent responses respectively The scoring pattern was reversed for the negative statement

3 4 2 15 Attitude towards scientific agriculture

An aibitrary scale was developed to measure attitude towards scientific agriculture by Meera (1981) Same scale was used by Devi (1994) also

It consisted of 5 statements and response was obtained in a five point continuum with scores of 5 4 3 2 and 1 to 'strongly agree 'agree', 'undecided , disagree and strongly disagree responses respectively For negative statements the scores were in the reverse order The score of each respondent was obtained by adding up the score corresponding to their response for each statement

3 4 2 16 Innovativeness

Innovativeness was operationalised as the respondents readiness to accept any new information or practice when compared to other members of the social system

The innovativeness scale of Feaster (1968) with slight modification was used in this study The scale consisted of eight statements For the first 4 statements a score of 3 2 and 1 was given to yes undecided and no responses respectively Scoring procedure was reversed in the case of last 4 statements The summation of the score obtained by a respondent for all the statements indicated the innovativeness score

3 4 2 17 Religiosity

Religiosity is referred as any system of belief or worship on some higher unseen controlling power or powers with the emotion and morality connected therewith

In this study the scale developed by Singh (1992) has been used The scale consisted of eight statements A score of 2 and 1 was assigned for 'yes and no responses respectively The religiosity score for each respondent was calculated by adding the score for all the eight statements

3 4 2 18 Political awareness

It is the state of being aware of the political affairs of the Government Political awareness in this study was measured by getting the response of the respondents on five questions reflecting their awareness on the political affairs A score of 1 was given for correct response and 0 score for

incorrect response Total score was got by adding up the scores on all the 5 questions Same scale was used by Singh (1992)

3 4 2 19 Alienation

Alienation is that condition when man does not experience himself as the active bearer of his own power and richness, but as an impoverished thing dependent on powers outside of himself (Fromm 1955) It is a general syndrome made up of a number of different objective conditions and subjective status which emerge from certain relationships between workers and the socio-technical setting of employment (Blauner, 1965)

The scale on alienation was developed by Kureshi and Dutt (1979) The same scale was applied with slight modifications In the original one the respondents were asked to answer by agreeing to one of four alternative responses Since the study is on women agricultural labourers the response was obtained by agree/disagree pattern allotting scores of 2 and 1 respectively

3 4 3 Employment and wage pattern

Bishnoi (1966) defined employment as a state of being engaged in productive work Continuous engagement in such work with sufficient amount of labour put in and an adequate reward flowing from it constitute full employment

Female participation in agriculture is sensitive to the range of activities included as part of agricultural production for example field work in crop production, processing and animal husbandry Its measurement depends on the rigidity of the sexual division of labour and on the degree to which either male or female tasks are included in the definition of agricultural production (Deere and Leal, 1982)

There are two basic approaches for measuring the work force The gainful worker appraoch has a broad reference period and stresses the usual activity The labour force approach has a more limited reference period considering those who were working during a reference day or week prior to the survey Of the two the 'gainful worker approach would better enumerate women workers since it would catch more seasonal and sporadic work (provided that work is counted as work) (Fong 1982)

In this study particulars regarding the activities in which women agricultural labourers are engaged with respect to paddy cultivation the extent of employment in different crop seasons, lean season and their off seasonal activities and income pattern from the respective employment activities were collected from the two states The data was collected at fortnightly intervals for a period of one year by selecting subsampling of 10 per cent of total sample from each state using a structured schedule (Appendix VII)

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 IX) The interview schedule consisted of two parts Part A was used to collect information on various independent variables Part B was used to gather the response of women agricultural labourers on the labour efficiency scale and factors influencing labour efficiency

3 6 Statistical tools used for the study

The data collected from the respondents were scored, tabulated and analysed using appropriate statistical methods Assuming that the data were normally distributed more of parametric tests were preferred as per the suggestions of Bonean (1960) and McNemar (1962) Parameters like mean variance correlations were estimated to summarise the data and t test was employed for drawing inferences from the data Multivariate analysis like multiple regression and path analysis were also performed to draw valid inferences

3 7 Hypotheses set for the study

In the light of the postulated relationship of variables as per the theoretical orientation and based on the objectives and the assumptions relevant hypotheses were formulated as given below

1 There would be no significant difference in the efficiency of women agricultural labourers engaged in rice farming of the two states

2 There would be no difference in the dimensions of labour efficiency between the women agricultural labourers of the two states

3 There would be no significant relation between the factors influencing labour efficiency of women agricultural labourers in the two states

4 The variation in the labour efficiency of the respondents would not be explained by the socio personal and psychological factors included in the study

5 There would be no significant contribution of each of the soico personal and psychological factors towards labour efficiency of women agricultural labourers

6 There would be no difference in the employment and wage pattern of the respondents in the two districts

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 labour efficiency scale

4 2 Labour efficiency of women agricultural labourers

4 3 Factors influencing labour efficiency of women agricultural labourers

4 4 Socio personal and psychological characteristics of women agricultural labourers

4 5 Relationship between socio personal and psychological char acteristics and labour efficiency

4 6 Employment and wage pattern of women agricultural labourers

4 7 Labour efficiency of women agricultural labourers a cursory glance

4 8 Strategic model to improve the standard of living of women agricultural labourers

4 1 Dimensions of labour efficiency scale

Cluster analysis was applied to group/cluster the items and the procedure for classification of 32 items into ten clusters was described in the previous chapter The clusters thus formed represented the dimensions of the scale and are referred as efficiency dimensions

The theoretical dimensions of efficiency was delineated based mainly on the literature available on labour efficiency under industrial settings as studies dealing directly on farm labour efficiency 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 It was noticed that all these dimensions did not occur in exclusive independent clusters rather they occurred in combinations Hence depending upon the nature and content of the majority items present in a cluster the clusters were named suitably The efficiency dimensions identified through cluster analysis are presented below

4 1 1 Dimension 1 Determination in work situation

Nine items were grouped under determination in work situation and the details of the items along with their average distance are given in Table 2 The items were you work with full dedication' you feel responsibility in work , you are willing to do any type of work at any time you feel no obstacle can stop you from achieving your final goal you usually remain cheerful in spite of trouble you remain in uniform spirit most of the time you feel that if you do not perform well, you have to bear the consequences in your next birth you are reluctant to work when the employer himself works in the field and small working hours with tea and lunch

Table 2 Dimension 1 Determination in work situation

Sl No	Item No	Item
1	5	You work with full dedication
2	6	You feel responsibility in work
3	7	You are willing to do any type of work at any time
4	1	You feel no obstacle can stop you from achieving your final goal
5	31	You usually remain cheerful in spite of trouble
6	32	You remain in uniform spirit most of the time
7	4	You feel that if you do not perform well you have to bear the consequences in your next birth
8	30	You are reluctant to work when the employer himself works in the field
9	16	Small working hours with tea and lunch break and rest makes you put in more work

Average distance - 1 2326

break and rest makes you put in more work A look at the content of majority of items would reveal that they reflected the determination aspect of labour efficiency of agricultural labourers in their work situation Hence this cluster was labelled as 'determination in work situation

4 1 2 Dimension 2 Inter personal relationship

The items under this dimension were you can work with any type of employer farmer good rapport with the employer farmer makes you work hard , you feel as if you are working on your own farm when your employer considers your suggestions 'you can work with the same efficiency throughout the working time and you are least affected by the time of working (vide Table 3) The analysis of the nature of these items indicated that the former three represented the inter personal relationship between the agricultural labourer and the farmer The latter two items reflected the ability of the agricultural labourer to work continuously which in a way is influenced by the inter-personal relation with the farmer Owing to these reasons this cluster was labelled as 'inter-personal relationship

4 1 3 Dimension 3 Confidence

There were two items grouped under this dimension with the average distance of 1 1428 (Table 4) The items were you are generally confident of your own ability and you find

Table 3 Dimension 2 Inter personal relationship

Sl No	Item No	Item
1	27	You can work with any type of employer farmer
2	28	Good rapport with the employer farmer makes you work hard
3	29	You feel as if you are working on your own farm when your employer considers your suggestions
4	17	You can work with the same efficiency throughout the working time
5	18	You are least affected by the time of working

Average distance - 1 2567

yourself working about something or other As the content of the items indicated the firm trust and self-reliance of the agricultural labourers this cluster was named as confidence

4 1 4 Dimension 4 Adjustability

This dimension had three items their average distance being 1 2372 (Table 5) The items included were frequent interruption in your regular work makes you work less than your capacity 'you are least affected by the amenities (food water etc) provided in the field and you cannot work effectively if you travel more The analysis of the nature of these items indicated the ability of agricultural labourers to tolerate disturbances and adjust to any work situation Hence this dimension was given the name adjustability

4 1 5 Dimension 5 Competency

The two items grouped under this dimension are you can learn a new work easily and you have adequate knowledge to produce quality work with their average distance of 1 213 (Table 6) The common content of these items was concerned about the capacity of the agricultural labourer to work with perfection Hence this dimension was named as competency

4 1 6 Dimension 6 Team spirit

The items clustered under this dimension and their average distance are furnished in Table 7 The items were

Table 4 Dimension 3 Confidence

Sl No	Item No	Item
1	2	You are generally confident of your own ability
2	3	You find yourself working about something or other

Average distance - 1 1428

Table 5 Dimension 4 Adjustability

Sl No	Item No	Item
1	20	Frequent interruption in your regular work makes you work less than your capacity
2	21	You are least affected by the amenities (food water etc) provided in the field
3	22	You cannot work effectively if you travel more

Average distance - 1 2372

competitive spirit among labourers makes you excel in your work and team spirit makes you work with excellence The cluster was labelled as 'team spirit since the common content of the items of this cluster indicated the team spirit among the labourers

4 1 7 Dimension 7 Commitment

The items you try to excel in the work you set to do and 'you work like a slave at everything with average distance of 1 2437 was clustered under this dimension (Table 8) The two items reflected the declared attachment of an agricultural labourer towards a cause and hence this cluster was labelled as commitment

4 1 8 Dimension 8 Work environment

This dimension had two items you have entertainment in work' and you get time for relaxation while working with an average distance of 1 2982 as presented in Table 9 As the items grouped under this dimension pertained to the working conditions of the agricultural labourers it was labelled as work environment

4 1 9 Dimension 9 Socio economic

This dimension had four items you have good relation with other labourers at work you can work with all types of

Table 6 Dimension 5 Competency

Sl No	Item No	Item
1	12	You can learn a new work easily
2	13	You have adequate knowledge to produce quality work

Average distance 1 2130

Table 7 Dimension 6 Team spirit

Sl No	Item No	Item
1	26	Competitive spirit among labourers makes you excel in your work
2	25	Team spirit makes you work with excellence

Average distance - 1 2435

Table 8 Dimension 7 Commitment

Sl No	Item No	Item
1	10	You try to excel in the work you set to do
2	11	You work like a slave at everything

Average distance - 1 2437

Table 9 Dimension 8 Work environment

Sl No	Item No	Item
1	8	You have entertainment in work
2	9	You get time for relaxation while working

Average distance - 1 2982

fellow workers reasonable assurance that in the event of injury or disablement your dependents would be suitably provided for makes you give your best and incentives given to the best workers make you work hard with an average distance of 1 3617 (Table 10) The former two items pertained to friendly association between the labourers and the latter two confined to social security and economic aspects Hence this dimension was named as socio-economic

4 1 10 Dimension 10 Situational

The item proper location of the farm/farm house makes your work easier as given in Table 11 could not be grouped with any other clusters The item under this dimension was theoretically categorised under situational dimension and the cluster analysis too confirmed this theoretical grouping

The majority of the items of labour efficiency scale and the dimensions identified through cluster analysis revealed that they represented the innate ability of the labourer as well as his perception of the work situation Here work situation refers mainly to working conditions and human relations at work Though successful farming requires an efficient management of all the resources on the farm the management of labour needs special attention due to some of its peculiar characteristics This is a conclusive proof to show that the labour efficiency in the changing agrarian scenario demands more attention It is not

Table 10 Dimension 9 Socio-economic

Sl No	Item No	Item
1	24	You have good relation with other labourers at work
2	23	You can work with all types of fellow workers
3	15	Reasonable assurance that in the event of injury or disablement your dependents would be suitably provided for makes you give your best
4	14	Incentives given to the best workers makes you work hard

Average distance = 1 3617

Table 11 Dimension 10 Situational

Sl No	Item No	Item
1	19	Proper location of the farm/farm house makes your work easier

mysterious to note this kind of behaviour in the agricultural labourers with additional non-agricultural employment avenues at their disposal

Tandon and Dhondyal (1971) while discussing the ways to increase labour efficiency in Indian conditions suggested that maintenance of good rapport with the wage earner engaged in field work provision of necessary facilities in the field and propriety of instructions to labourers on scientific practices created a conducive environment for work Padmanabhan (1981) in his study on agricultural labourers has stated that good supervision farmers working with the labourers provision of government aids and farmer s friendly behaviour towards labourers were mentioned as suggestions by labourers to increase their efficiency

Sharma and Sharma (1981) stated that apart from personal characters certain human tendencies also have an impact on the working of labourers To give them kind treatment to objectively consider their suggestions while taking decision to make them feel that they are working on their own farm to provide them some additional facilities in terms of residence clothes or foodgrains at cheaper rate makes agricultural work more attractive and thereby increase their efficiency in work Singh (1988) stated that in automated systems the human element is not very important However in most organisations the

performance of employee is relatively more important than equipment and raw materials This is more true in agricultural situation

From the above description it is clear that efficiency of agricultural labourers is effected by their own improvements as well as by developments made in the work situation It can be concluded that all these dimensions immensely impinge upon labour efficiency

4 2 Labour efficiency of women agricultural labourers

4 2 1 Distribution of women agricultural labourers under low and high efficiency group

The percentage distribution of women agricultural labourers under low and high efficiency group with respect to their over all labour efficiency and the efficiency dimensions for the total sample and the district categories are given below

4 2 1 1 Distribution of women agricultural labourers in total sample and in Kollam and Kanyakumari districts based on their labour efficiency

The percentage distribution of women agricultural labourers of low and high groups in the total sample and the two districts based on overall labour efficiency with mean scores and

Table 12 Distribution of women agricultural labourers in total sample and in Kollam and Kanyakumari districts based on their labour efficiency

Particulars	Mean score	Efficiency group	
		Low (%)	High (%)
Total sample	77 23	63 00	37 00
Kollam	75 54	57 30	42 70
Kanyakumari	78 90	58 00	42 00
	t 2 66**		

the results of the 't test are furnished in Table 12 It is evident from the table that majority of the respondents (63 00 per cent) were under low group and 37 00 per cent were under high group In case of the two district categories it was observed that majority of the women agricultural labourers belonged to low group in both Kollam (57 30 per cent) and Kanyakumari (58 0 per cent) districts The results of the t test was significant indicating that the labour efficiency in the two study districts varied significantly Hence the hypothesis that there would be no significant difference in the labour efficiency between the women agricultural labourers of Kollam and Kanyakumari districts was rejected

4 2 1 2 Distribution of women agricultural labourers (total sample) based on labour efficiency dimensions

The percentage distribution of women agricultural labourers under low and high efficiency group based on labour efficiency dimensions along with the corresponding mean scores are presented in Table 13 Majority of the women agricultural labourers belonged to high group under the dimension adjustability and competency An equal proportion of women agricultural labourers came under low and high groups in 'confidence dimension In contrast dimensions such as determination in work situation inter personal relationship team spirit commitment work environment socio economic and

Table 13 Distribution of women agricultural labourers based on labour efficiency dimensions

(total sample)

	Dimensions	Mean score	Efficiency group	
			Low (%)	High (%)
1	Determination in work situation	23 23	55 67	44 33
2	Inter-personal relationship	11 12	60 00	40 00
3	Confidence	4 69	50 00	50 00
4	Adjustability	6 97	47 33	52 67
5	Competency	4 91	43 33	56 67
6	Team spirit	4 43	54 33	45 67
7	Commitment	4 51	55 33	44 67
8	Work environment	4 35	56 67	43 33
9	Socio-economic	9 28	58 33	41 67
10	Situational	2 29	63 00	37 00

situational had large proportion of women agricultural labourers under low efficiency group

4 2 1 3 Distribution and comparison of women agricultural labourers of Kollam and Kanyakumari districts based on labour efficiency dimensions

The distribution pattern of women agricultural labourers under low and high groups of Kollam and Kanyakumari districts with mean scores and 't value are given in Table 14

It is evident from the table that an equal proportion of women agricultural labourers fall under low group and high group in both the districts under determination in work situation The mean scores among the districts were not significant Hence the hypothesis that there would be no significant difference in determination in work situation dimension of labour efficiency of the two district categories was accepted

Regarding inter personal relationship more or less an equal proportion of women agricultural labourers came under low category (59 33 and 60 67 per cent) and high category (40 67 and 39 33 per cent) respectively in Kollam and Kanyakumari districts No statistical significance between mean scores for the two districts was found leading to the acceptance of the hypothesis that there would be no significant difference in inter personal

Table 14 Distribution and comparison of women agricultural labourers of Kollam and Kanyakumari districts based on labour efficiency dimensions

	Dimensions	Efficiency group				Mean score		t value
		Kollam		Kanyakumari				
		Low (%)	High (%)	Low (%)	High (%)	Kollam	Kanyakumari	
1	Determination in work situation	52 00	48 00	52 00	48 00	23 59	22 87	1 47
2	Inter personal relationship	59 33	40 67	60 67	39 33	11 20	11 04	0 69
3	Confidence	64 00	36 00	68 67	31 33	4 37	5 01	3 43**
4	Adjustability	64 00	36 00	52 67	47 33	7 12	6 82	1 41
5	Competency	64 00	36 00	47 33	52 67	5 08	4 74	1 94
6	Team spirit	56 67	43 33	52 00	48 00	4 36	4 51	0 64
7	Commitment	58 00	42 00	52 67	47 33	4 53	4 49	0 32
8	Work environment	63 33	36 67	50 00	50 00	4 13	4 57	2 46*
9	Socio economic	57 33	42 67	59 33	40 67	9 25	9 31	0 54
10	Situational	66 00	34 00	60 00	40 00	2 19	2 39	1 61

* significant at 5% level
** Significant at 1% level

relationship dimension of labour efficiency of the two district categories

With regard to confidence majority of the women agricultural labourers belonged to low group category (64 00 and 68 67 per cent) in Kollam and Kanyakumari districts respectively Confidence score of women agricultural labourers in Kanyakumari district is significantly higher than that of Kollam Hence the hypothesis that there would be no significant difference in confidence dimension of labour efficiency of the two district categories was rejected

Regarding adjustability the percentage distribution of women agricultural labourers under low and high group categories was 64 00 and 36 00 per cent in Kollam district whereas it was 52 67 and 47 33 per cent in Kanyakumari district respectively However the mean efficiency scores of the two districts did not differ significantly as revealed from the test of significance As a result the hypothesis that there would be no significant difference in adjustability dimension of district categories was accepted

The distribution under competency exhibited a different pattern unlike the earlier dimensions discussed There was higher proportion (64 00 per cent) of women agricultural labourers under low category in Kollam compared to Kanyakumari district which had higher proportion (52 60 per cent) under high

group However the t value revealed that there was no considerable difference in the efficiency score of both the districts Hence, the hypothesis that there would be no significant difference in competency dimension of the two districts was accepted

Similarity in the proportion of women agricultural labourers falling under low and high group in the two districts was noted in team spirit The t value also revealed no significant difference in the mean scores of the two districts leading to the acceptance of the hypothesis that there would be no significant difference in the team spirit dimension of labour efficiency between the women agricultural labourers of Kollam and Kanyakumari districts

The distribution pattern under commitment' exhibited a similar trend as that of the earlier dimension team spirit with almost an equal proportion in both the districts falling under low and high group categories The difference in the mean scores of the two districts was also statistically not significant Accordingly the hypothesis that there would be no significant difference in the commitment dimension of labour efficiency between the two districts was accepted

A different pattern of distribution from the other dimensions was noticed in work environment Majority (63 33 per cent) of the respondents in Kollam district were under low

group whereas in Kanyakumari district the proportion under low and high group was equal The t' value between the mean scores of the two districts was statistically significant leading to the rejection of the hypothesis that there would be no significant difference in the work environment dimension of labour efficiency among the two districts

It is very clear from the distribution of women agricultural labourers in Tables 12 and 13 that in general they were found to be low in overall efficiency In the efficiency dimensions of adjustability and competency, the women agricultural labourers in high group were above 50 00 per cent in both the districts With respect to the other dimensions determination in work situation inter personal relationship, confidence, team spirit commitment work environment socio economic and situational majority of the women agricultural labourers were observed to have low efficiency In the case of confidence dimension the women agricultural labourers cannot be said to be efficient or not as equal proportion of women agricultural labourers came under low and high efficiency groups The reasons for observing generally low efficiency may be as follows

Rice is the staple food for the majority of the world s population India is the second largest producer contributing one fifth of total world rice production Rice farming covers

about 25 per cent of the cropped area and accounts for 40 per cent of the food production and nearly 20 per cent of the gross net produce Among the major crops of Kollam and Kanyakumari districts paddy is the only crop requiring large number of hired labourers for its production Rice being a seasonal crop offers employment opportunities to the women agricultural labourers only during the peak seasons Added to this the area under paddy is in the declining trend getting replaced by high income fetching crops like banana and coconut As revealed in the employment pattern of women agricultural labourers discussed in the later part they find more days of employment and derive major share of their income from non agricultural sector Moreover for works in brick kiln and cashew factory the women agricultural labourers are paid based on the quantum of work done paving way to work at ease Whereas in the agricultural sector the women agricultural labourers are under pressure to do a particular amount of work per day and is more pressing during peak seasons for transplanting and harvesting In most of the areas they do agricultural work just to oblige the farmer as they were involved in working in the same land for generations Agriculture being a hereditary and caste occupation, the sentimentality attached towards agricultural work makes women agricultural labourers still work in the fields In such a situation the women agricultural labourers take agricultural work in the lighter sense and hence bestow less effort and attention

in doing agricultural work This might be the possible reason for noticing more per cent under low efficiency in the overall level and in majority of the labour efficiency dimensions It has been reported that in general Indian labour is not much efficient intrinsically and many internal factors are responsible for their low efficiency (Sankaran, 1970)

This trend is being noticed in other regions as well Women agricultural labourers in Haryana face the problem of overwork as the quantum of work they have to complete in a day is very high Sometimes when they are not able to complete their work in a day, they are paid half day's wage Thus they remain working throughout the day without any break Extra work is frequently taken from them, but they are seldom paid for the additional labour Also they are never sure that they will get work in the peak season, due to high incidence of female labour Owing to these reasons the women agricultural labourers get frustrated and loose their interest in work (Kaur 1991)

Majority of the farmers in Kerala 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

empathising and recognising the efforts of the labourers by the farmers especially in getting the work done by the labourers (Ramanathan, 1995) Efficiency of labour also depends upon the relation between the farmer and labourer If the relation between the two are friendly and cordial, efficiency will be high If the employer possess sympathetic attitude towards the workers the worker will give his best

The reasons for the significant difference in the two study districts with regard to overall labour efficiency may be as follows In Kerala, the status of agricultural labourers is apparently different from that observed in other states Due to the high literacy level and influence of unionisation among labourers the agricultural labourers feel much elevated in their social status It was observed that the farmers in Kerala do not have a say on the agricultural labourers employed by them Any attempt to direct and control the agricultural labourers results in stoppage of work and reduced turnover The situation of agricultural labourers in Tamil Nadu is different Though Kanyakumari district has high literacy level the plight of women agricultural labourers is poor They hardly have any unionisation activities and are least aware of their rights and benefits Only recently the women agricultural labourers of low castes have started going for non agricultural works in brick kiln and cashew factory Hence under such circumstances it

is possible to notice regional variation in the labour efficiency pattern of women agricultural labourers

It was inferred from the study that the labour efficiency dimensions confidence and work environment had statistically significant difference between the women agricultural labourers of the two districts As discussed above considerable change in the study districts was noticed in terms of the mental status of women agricultural labourers and treatment by the farmer In Kanyakumari district, most of the labourers work continuously in the same field for years and has good rapport with the employer farmer This creates a condusive environment for work and helps to develop confidence in their minds Whereas in Kollam district it was observed that women agricultural labourers are hired from the nearby villages atleast during peak seasons and they do not bother much about the relationship with the farmer These might be the possible reasons for the significant difference between the two districts with regard to work environment and confidence dimensions

Increase in production must be accompanied by a reduction in the cost of production of every additional unit and such a state of affair amounts to higher productivity (Dalvi quoted by Singh, 1988) Land and capital are considered as passive factors of production whereas labour is an active factor Labour efficiency is a complex affair not easy to

measure and compare especially in agriculture with different conditions of soil climate animal power, implements and the direction and incentives to work However with proper attention to direct them in the right way desirable changes can be brought

From the above description it is clear that labour efficiency of women agricultural labourers is a many sided affair It no doubt stresses the fact that an efficient labour contributes to maximise production But it also brings out its limitation that it alone cannot suffice Other related factors much be such that efficient labour is most effectively utilised

4 3 Factors influencing labour efficiency of women agricultural labourers

4 3 1 Comparison of women agricultural labourers in Kollam and Kanyakumari districts based on the factors influencing labour efficiency

The percentage distribution of women agricultural labourers in Kollam and Kanyakumari districts based on the factors influencing labour efficiency are depicted in Table 15

It is evident from the chi square test value given in table that the proportion of women agricultural labourers in Kollam and Kanyakumari districts with respect to the factors viz 'introduction of new machinery and progressive technology and 'nature of tools and implements used differ significantly The

Table 15 Comparison of women agricultural labourers in Kollam and Kanyakumari districts based on the factors influencing labour efficiency

Sl No	Factors	Kollam (%)	Kanyakumari (%)	Test criterion Z
1	Availability of alternative work	71 33	78 00	1 33
2	Adaptability to different tasks	56 00	46 00	1 73
3	Increasing standard of living	53 33	58 00	0 81
4	Period of employment	80 00	78 67	0 28
5	Training of labourers	68 00	69 33	0 25
6	Supervision by employer	74 67	80 67	1 25
7	Introduction of new machinery and progressive technology	70 00	54 00	2 86**
8	Physical condition of labourer	50 67	50 00	0 12
9	Nature of tools and implements used	57 33	72 67	2 78**
10	Wages and incentives provided	74 67	78 67	0 82

** Significant at 1 per cent level

proportion pattern in the two districts with regard to the other eight factors did not show any statistical significance The percentage distribution reveals that nearly 75 00 per cent of the respondents each in Kollam and Kanyakumari districts have reported availability of alternative work period of employment supervision by employer and wages and incentives provided as important factors influencing their efficiency Nearly 70 00 per cent of the respondents in both the districts reported training of labourers to influence their efficiency Adaptability to different tasks increasing standard of living and physical condition of labourers were considered important by nearly 50 00 per cent each of the respondents in the two districts Variation in the response pattern was observed in the case of two factors namely introduction of new machinery and progressive technology and nature of tools and implements used

4 3 2 Distribution of women agricultural labourers based on the factors influencing labour efficiency (total sample)

Table 16 reveals the percentage distribution of women agricultural labourers based on the factors influencing labour efficiency Period of employment ranked first and was reported by a majority of 79 33 per cent of respondents as an important factor influencing labour efficiency The factors viz supervision by employer wages and incentives provided and availability of alternative work ranked second third and fourth

Table 16 Distribution of women agricultural labourers based on the factors influencing labour efficiency (total sample)

Sl No	Factors	Percentage	Rank
1	Availability of alternative work	74 67	IV
2	Adaptability to different tasks	51 00	IX
3	Increasing standard of living	55 67	VIII
4	Period of employment	78 33	I
5	Training of labourers	68 67	V
6	Supervision by employer	77 67	II
7	Introduction of new machinery and progressive technology	62 00	VII
8	Physical condition of labourer	50 33	X
9	Nature of tools and implements used	65 00	VI
10	Wages and incentives provided	76 67	III

respectively as reported by nearly 75 00 per cent of the respondents to influence their efficiency Training of labourers, nature of tools and implements used and introduction of new machinery and progressive technology were considered important by nearly 65 00 per cent of the respondents The factors viz increasing standard of living adaptability to different tasks and physical condition of labourers ranked last and was reported by nearly 50 00 per cent of the respondents to influence their labour efficiency

4 3 3 Discussion on the relative importance of the factors influencing labour efficiency

Though successful farming requires an efficient management of all the resources on the farm the management of labour needs special attention due to its peculiar characteristics Unlike land or capital labour is a living resource which has feelings, inspirations, personal problems and wide variations in quality All these add to the managerial problems related to labour use Labour efficiency cannot be increased of its own, until various factors related to it are varied favourably In order to probe into the efficiency of labour understanding of the factors that bear upon it is a pre requisite The discussion on the identified factors which influence labour efficiency are furnished below

4 3 3 1 Period of employment

Period of employment is a prime factor influencing labour efficiency as evidenced from Table 16 Certain human tendencies have an impact on the working of labourers A labourer if engaged on hourly basis tends to put more hours for a piece of work through slowing down the speed of work or wasting more time by other recreations like chatting, smoking etc but if engaged on contract basis tends to finish the work as early as possible without caring for the quality of work Likewise a labourer who is hired during peak seasons for transplanting and harvesting does not take deep and sustained interest in the work It was observed that the contact with village keeps one healthy and vigorous, and to that extent contributes to their efficiency Major work on a farm is often done by the same labourers being employed year after year and so they have a better understanding of the farm and the work In few cases, they are also given the responsibility of maintaining farm resources Such a contact between the labourer and the farmer helps to keep their efficiency in high order Padmanabhan (1981) reported that when a farmer employs a labourer for more number of days the labourer may develop positive attitude and loyalty towards that farmer which in turn increases his efficiency

4 3 3 2 Supervision by employer

The personal ability of the farmer to manage labour is also equally important to increase labour efficiency It was

reported by Agrawal and Bansil (1969) that by an increase in efficiency and supervision it is often possible to double the daily output of labour in agriculture In order to ensure economy in labour the supply should be just sufficient so that conscious effort is required to get the work done within time A person usually slows down to make the time fit the job if he finds that the time is ample for completing the task leisurely The farmer must understand the capability of his labourers individually The tasks must be fairly allotted based on their capacity so that each labourer working sincerely earns rest as the reward of her industriousness An otherwise efficient labourer may be no good if management is not competent enough to make the best use of her The farmer should be able to tackle the obvious defects in his labourers which decrease efficiency In doing so great care must be taken to avoid overzealous treatment which often spoils the entire programme Ability to give and receive instructions and explanation to work is also an important component of supervision

4 3 3 3 Wages and incentives provided

Wages and incentives were considered as the next important factor to influence labour efficiency Generally the wages paid to farm labour are lower compared with industrial wages or wages paid in construction work In areas where alternative sources of employment exist the supply in

agriculture is considerably reduced due to this reason Morecka (1964) stated that the labour force, being in fact the main productive force, must be given due and adequate incentives both economic and non-economic so that it may be motivated to adapt itself to new techniques of production and intensify its effort to increase the amount of potential production per unit time The lash hails to command the faculties which instantly spring into activity under the inspiration of an ample reward A worker who receives sufficiently high wages will have high productive efficiency A low-paid worker always grumbles and is unable to put his heart into the job Consequently her efficiency is low Further regular payment of wages also adds efficiency of labour because workers adjust their budgets accordingly Otherwise they are put to much inconvenience When wage payment is irregular they are not able to devote themselves whole heartedly to their work which adversely affects their efficiency Malhotra (1949) stated that wages have an intimate bearing on the working capacity of labourers as they influence both the power and the will to work

4 3 3 4 Availability of alternative work

In the past women labourers of low castes were seen to work only in the fields They remained wedded to their native villages for all their necessities for survival But due to the social change in the village set up, they now go for work

outside their village as well They are also seen to involve in other non-agricultural activities Due to more avenues of employment at their disposal they have alternatives available Owing to these reasons the women agricultural labourers were observed to have taken agricultural work less seriously This might be the possible reason for considering availability of alternative work as an important factor to influence labour efficiency

4 3 3 5 Training of labourers

Farm work is taken as one that requires little training This is a mistaken belief Modern farming has been sophisticated due to the increasing application of science and technology to it hence farm workers in order to be efficient must be trained Education and training broadens outlook, and skill formation makes labour more competent Together these make one prepared for advancement and more responsible For getting efficient work from the labourers their training is very essential particularly in the context of crop cultivation with the new improved cultural practices and of using new improved implements A proper training of the workers also pays to the farmer by reducing break-down and repairing charges on the farm and completing the job more accurately and in a shorter period Training of women agricultural labourers is also necessary to change the social thinking and attitudes which are detrimental to

women Unless laboratory results are made to reach the users their mental horizon cannot be widened Agricultural training programmes have a significant effect on improving the mental health of labour force (Sadhu and Singh 1989)

4 3 3 6 Nature of tools and implements used

This is considered as an important factor concerning things other than labour which impinge upon their efficiency The continued use of worn out and obsolete machinery causes efficiency of labour to remain low A labourer however skilled and efficient she may be will produce relatively little work if the implements on which she works is outmoded and not perfect The more advanced the implements used in a field the more efficient are the workers therein The farmer should see that all the tools and implements are in good condition few days before they are required Sadhu and Singh (1989) stated that improved methods of farming better quality seed fertiliser and pesticides and improved tools and implements have resulted in considerable increase in farm labour productivity The distribution pattern of women agricultural labourers of both the districts differed significantly The women agricultural labourers of Kanyakumari district were found to be more traditional in their outlook and were concerned more about the present way of farming This might have made women agricultural labourers of Kanyakumari district give more importance to this factor

4 3 3 7 Introduction of new machinery and progressive technology

The growth of labour efficiency is ensured by the development and introduction of new and advanced technology (Plotnikov 1965) To cope up with the increasing demand of foodgrain production many new scientific innovations in agricultural technology is getting introduced everyday Mechanisation and modernisation have highly reduced the drudgery involved in women s tasks in terms of weeding pest control harvesting and post harvesting The agricultural labourers especially womenfolk due to their low literacy and technical knowledge, are not fully aware of the merits of the introduction of this new machinery and progressive technology Moreover as they are more familiar with the traditional way of farming, are resistant to change They still remain highly embedded with a traditional outlook and with no proper orientation towards modern agriculture Sharma and Sharma (1981) stated that the level of mechanization adopted on the farm affects the labour efficiency as the higher level of mechanization enables the labour to operate larger area per unit time Due to these reasons introduction of new machinery and progressive technology was considered as a factor to influence labour efficiency A significant difference was noticed in the response pattern of Kollam and Kanyakumari district with regard to this factor The high cost of labour and scarce labour availability in Kollam district emphasizes more thrust on machinery and progressive technology and this might be the possible reason for higher

proportion of respondents of Kollam district responding favourably to this factor

4 3 3 8 Increasing standard of living

Raising the standard of living as a means of increasing the efficiency of production is of particular importance in backward countries where population tends to press on the soil A worker having high standard of living is more efficient than a worker having low standard of living Good nourishing food suitable clothing ventilated and comfortable home with healthy surroundings is an invaluable aid to efficiency by its action on mental and physical health of workers The increasing standard of living also provides satisfaction to the women agricultural labourers which in turn influence labour efficiency favourably

4 3 3 9 Adaptability to different tasks

Every labourer has her own tastes habits and feelings A worker who takes up that type of work for which she considers herself to be the most suitable and which is in accordance with her taste performs well The role of an agricultural worker is not a specialised one and the same individual performs all the functions interchangeably and there was lack of monotony in work (Singh, 1992) Due to this general nature of work an agricultural worker should normally be able to perform several types of work which in a farm are mostly inter related It is also necessary that the women agricultural labourers should have

the ability to adapt to the different works and working conditions at a faster rate It was observed in the study that young women get used to the different tasks at a faster rate than the older lot

4 3 3 10 Physical condition of labourers

Health status is a basic factor to judge one s status in the family, the community and the country too The supply of labour force is not dependent merely on the number of workers but their health physical development and efficiency in work (Agrawal and Bansil 1969) The output of labour by a person with good physique and sound health will certainly (other things being equal) be higher than that of a worker whose body development and health are not so good Sound health gives greater stamina to stand the odds of the occupation and to work overtime If one is not healthy she can hardly be expected to exert herself fully Most farm work requires muscular strength and has to be done at the opportune time It is often found that a labourer works hard and well for a short time and then slackens off This is generally due to physical and mental weakness The peculiar situation in the farm makes the individual adapt to the environment and to attain the physical target Moreover since they work under the close supervision of the farmer they are compelled to work irrespective of their physical condition Hence only 50 00 per cent of the respondents considered physical condition to be a factor to influence their efficiency

It is clear that labour efficiency is a dependent variable on the efficient and effective utilisation of men materials and methods Their combination and integration as well as their mutual interactions, however depend upon the cultural social and organisational patterns in a society (Srivastava 1982) It is necessary to identify the specific factors and orient them in the right direction in order to ensure better efficiency in working

4 4 Socio-personal and psychological characteristics of women agricultural labourers

An analysis of the socio personal and psychological characteristics of women agricultural labourers was undertaken by categorising these variables as belonging to low and high groups using the concerned mean scores This was done with respect to the total sample and the two study districts viz Kollam and Kanyakumari

4 4 1 Distribution and comparison of women agricultural labourers based on socio personal and psychological characteristics

The percentage distribution of women agricultural labourers under low and high groups based on socio personal and psychological characteristics with respect to the total sample

Table 17 Distribution of women agricultural labourers based on the socio personal and psychological variables (total sample)

(n 300)

Variable No	Variable name	Low group (%)	High group (%)	Mean score
X1	Age	51 7	48 3	37 73
X2	Education	62 0	38 0	2 56
X3	Caste	84 3	15 7	1 16
X4	Experience in rice farming	58 7	41 3	9 40
X5	Mass media participation	52 0	48 0	5 68
X6	Intrinsic motivation	61 7	38 3	9 08
X7	Competition orientation	69 3	30 7	7 10
X8	Independence	51 3	48 7	8 54
X9	Knowledge of paddy	64 0	36 0	5 06
X10	Cosmopolite orientation	59 0	41 0	7 34
X11	Economic motivation	60 0	40 0	16 46
X12	Values related to agriculture	66 7	33 3	12 03
X13	Satisfaction	52 0	48 0	17 50
X14	Gregariousness	50 3	49 7	8 52
X15	Attitude towards scientific agriculture	53 7	46 3	12 62
X16	Innovativeness	52 3	47 7	15 58
X17	Religiosity	48 3	51 7	11 59
X18	Political awareness	55 7	44 3	2 50
X19	Alienation	50 3	49 7	17 46

Kollam district and Kanyakumari district are presented in Tables 17 18 and 19 respectively It could be observed from the tables that the pattern of distribution followed the same trend with regard to nine of the nineteen variable included in the study The distribution of women agricultural labourers with regard to age mass media participation independence satisfaction gregariousness, attitude towards scientific agriculture innovativeness religiosity and alienation in both the high and low group category were almost equal ranging from 45 00 to 50 00 per cent in each With regard to education, experience in rice farming, intrinsic motivation competition orientation knowledge of paddy cosmopolite orientation economic motivation values related to agriculture and political awareness nearly 60 00 per cent of the respondents were in the low group category and 40 00 per cent in the high group category respectively Regarding the variable caste there was a visible difference As evidenced in any agrarian social system it could be noticed that 84 30 per cent of the respondents belonged to low castes (Scheduled caste and scheduled tribes) and only 15 70 per cent belonged to higher castes

Agreement in this general trend described above was noticed in Kollam district in the case of ten variables namely age, caste, experience in rice farming, independence knowledge of paddy, cosmopolite orientation economic motivation gregariousness, attitude towards scientific agriculture and political awareness There was nearly 60 00 per cent and 40 00

Table 18 Distribution of women agricultural labourers based on the socio personal and psychological variables in Kollam district

(n = 150)

Variable No	Variable name	Low group (%)	High group (%)	Mean score
X1	Age	54 0	46 0	37 52
X2	Education	53 3	46 7	2 86
X3	Caste	85 3	14 7	1 15
X4	Experience in rice farming	57 3	42 7	8 92
X5	Mass media participation	60 7	39 3	5 37
X6	Intrinsic motivation	46 7	53 3	8 80
X7	Competition orientation	24 7	75 3	6 99
X8	Independence	53 3	46 7	8 45
X9	Knowledge of paddy	62 0	38 0	5 14
X10	Cosmopolite orientation	66 0	34 0	7 10
X11	Economic motivation	64 0	36 0	16 13
X12	Values related to agriculture	25 3	74 7	11 98
X13	Satisfaction	56 0	44 0	17 14
X14	Gregariousness	55 3	44 7	8 40
X15	Attitude towards scientific agriculture	53 3	46 7	12 61
X16	Innovativeness	56 0	44 0	15 30
X17	Religiosity	57 3	42 7	11 43
X18	Political awareness	56 0	44 0	2 63
X19	Alienation	58 0	42 0	17 19

per cent respondents in low and high group category respectively with regard to experience in rice farming mass media participation knowledge of paddy, cosmopolite orientation economic motivation satisfaction innovativeness religiosity political awareness and alienation A striking difference was noticed in the case of competition orientation and values related to agriculture There was nearly 75 00 per cent in the high group category with regard to competition orientation and values related to agriculture This indicates that alongwith a sentimental attachment to agriculture the women agricultural labourers also strived hard to soar high in life through competitive spirit

Concordance was more pronounced in the profile pattern of women agricultural labourers of Kanyakumari district with that of the total sample Similar proportion of women agricultural labourers belonged to the category of high and low group with respect to age caste experience in rice farming intrinsic motivation competition orientation independence economic motivation values related to agriculture, satisfaction gregariousness attitude towards scientific agriculture innovativeness and political awareness as seen in the total sample There was nearly 50 00 per cent each in high and low group category with regard to age, independence cosmopolite orientation satisfaction gregariousness attitude towards scientific agriculture and innovativeness With regard to

Table 19 Distribution of women agricultural labourers based on the socio personal and psychological variables in Kanyakumari district

(n = 150)

Variable No	Variable name	Low group (%)	High group (%)	Mean score
X1	Age	49 3	50 7	37 93
X2	Education	70 7	29 3	2 26
X3	Caste	83 3	16 7	1 17
X4	Experience in rice farming	56 0	44 0	9 88
X5	Mass media participation	43 3	56 7	5 99
X6	Intrinsic motivation	57 3	42 7	9 37
X7	Competition orientation	63 3	36 7	7 21
X8	Independence	48 0	52 0	8 63
X9	Knowledge of paddy	46 7	53 3	4 98
X10	Cosmopolite orientation	52 0	48 0	7 57
X11	Economic motivation	56 0	44 0	16 79
X12	Values related to agriculture	61 3	38 7	12 08
X13	Satisfaction	48 0	52 0	17 86
X14	Gregariousness	45 3	54 7	8 63
X15	Attitude towards scientific agriculture	54 0	46 0	12 62
X16	Innovativeness	48 7	51 3	15 85
X17	Religiosity	39 3	60 7	11 77
X18	Political awareness	55 3	44 7	2 37
X19	Alienation	42 7	57 3	17 73

experience in rice farming, intrinsic motivation competition orientation economic motivation values related to agriculture and political awareness nearly 60 00 per cent were in the low group category whereas with respect to mass media participation religiosity and alienation nearly 60 00 per cent were in the high group category Regarding education 70 70 per cent was in low group and 29 30 per cent in high group respectively Even though the literacy level in Kanyakumari district is 78 00 per cent, the situation of female agricultural labourers is far below

Kuttykrishnan and Suchetha (1989) and Kaur (1991) have also reported that illiteracy was found to be prevalent among female agricultural labourers and more than 70 00 per cent had never been to school All this points to the grim fact that this strata of females have to go a long way to reap the benefits of education

4 5 Relationship between socio personal and psychological characteristics and labour efficiency

Multiple regression analysis and path analysis were employed under the study for establishing the relationship between socio personal and psychological characteristics of women agricultural labourers with labour efficiency While the former gives the contribution of each variable to labour efficiency keeping other factors constant the latter reveals the direct and indirect effects of the variables on labour efficiency

4 5 1 Contribution of the socio-personal and psychological variables to labour efficiency

The results of multiple regression analysis done with the 19 independent variables against labour efficiency are presented in Table 20 The coefficient of determination worked out was 0 7592 which revealed that over 75 per cent of the variation in labour efficiency was explained by all the variables selected for the study Hence, the hypothesis that the variation in the labour efficiency of women agricultural labourers would not be explained by the socio personal and psychological variables included in the study was rejected

The partial regression coefficients computed showed that out of the 19 socio personal and psychological variables eight variables namely caste intrinsic motivation cosmopolite orientation economic motivation values related to agriculture gregariousness, attitude towards scientific agriculture and innovativeness were highly significant and three factors namely independence satisfaction and alienation were significant in contributing to the labour efficiency of women agricultural labourers Hence the hypothesis that there would be no significant contribution of each of socio personal and psychological factors towards labour efficiency was rejected in the case of eleven variables mentioned above The variables which did not exhibit significant regression coefficient were

Table 20 Simple correlation and multiple regression analysis of socio personal and psychological variables on labour efficiency

Variable No	Variable name	Correlation r	Regression analysis b value
X1	Age	0 0815	0 0886
X2	Education	0 0002	0 0002
X3	Caste	0 3154	9 3985**
X4	Experience in rice farming	-0 0344	0 0689
X5	Mass media participation	0 1044	0 6656
X6	Intrinsic motivation	0 4953	2 3829**
X7	Competition orientation	-0 0189	0 2436
X8	Independence	0 1426	1 6328*
X9	Knowledge of paddy	0 0661	0 3458
X10	Cosmopolite orientation	0 1875	1 5439**
X11	Economic motivation	0 5191	1 3348**
X12	Values related to agriculture	0 1614	1 6360**
X13	Satisfaction	0 1343	0 4595*
X14	Gregariousness	0 2351	1 6852**
X15	Attitude towards scientific agriculture	0 4520	1 6655**
X16	Innovativeness	0 2865	1 2520**
X17	Religiosity	0 0794	0 7913
X18	Political awareness	0 0255	0 2625
X19	Alienation	0 1219	0 9557*

R^2 0 7592

** significant at 1 per cent level

* significant at 5 per cent level

age education experience in rice farming mass media participation competition orientation knowledge of paddy religiosity and political awareness Therefore the hypothesis that there would be significant contribution to labour efficiency by each of these eight variables was accepted The multiple regression equation predicting the labour efficiency was as follows

$$
\begin{aligned}
Y \quad - \quad & 8\ 65 + 0\ 0886\ X_1 + 0\ 0002\ X_2 + \\
& 9\ 3985\ X_3 \quad 0\ 0689\ X_4 + 0\ 6656\ X_5 + \\
& 2\ 3829\ X_6 - 0\ 2436\ X_7 + 1\ 6328\ X_8 \\
& 0\ 3458\ X_9 + 1\ 5439\ X_{10} + 1\ 3348\ X_{11} + \\
& 1\ 6360\ X_{12} + 0\ 4595\ X_{13} + 1\ 6852\ X_{14} + \\
& 1\ 6655\ X_{15} + 1\ 2520\ X_{16} + 0\ 7913\ X_{17} + \\
& 0\ 2625\ X_{18} + 0\ 9557\ X_{19}
\end{aligned}
$$

From the prediction equation it could be said that an increase in intrinsic motivation would lead to an increase in labour efficiency by 2 3829 units, other factors being kept constant Similarly an unit increase in caste independence cosmopolite orientation economic motivation values related to agriculture satisfaction gregariousness attitude towards scientific agriculture innovativeness and alienation would lead to an increase in the labour efficiency by 9 3985 1 6328 1 5439 1 3348 1 6360 0 4595 1 6852 1 6655 1 2520 and 0 9557 units respectively While positive changes in the above

variables would lead to increase in labour efficiency the variables experience in rice farming competition orientation and knowledge of paddy showed that an increase in experience in rice farming competition orientation and knowledge of paddy would lead to a decrease in labour efficiency by 0 0689 0 2436 and 0 3458 units respectively

4 5 2 Direct and indirect effects of the socio-personal and psychological variables of the women agricultural labourers on their labour efficiency

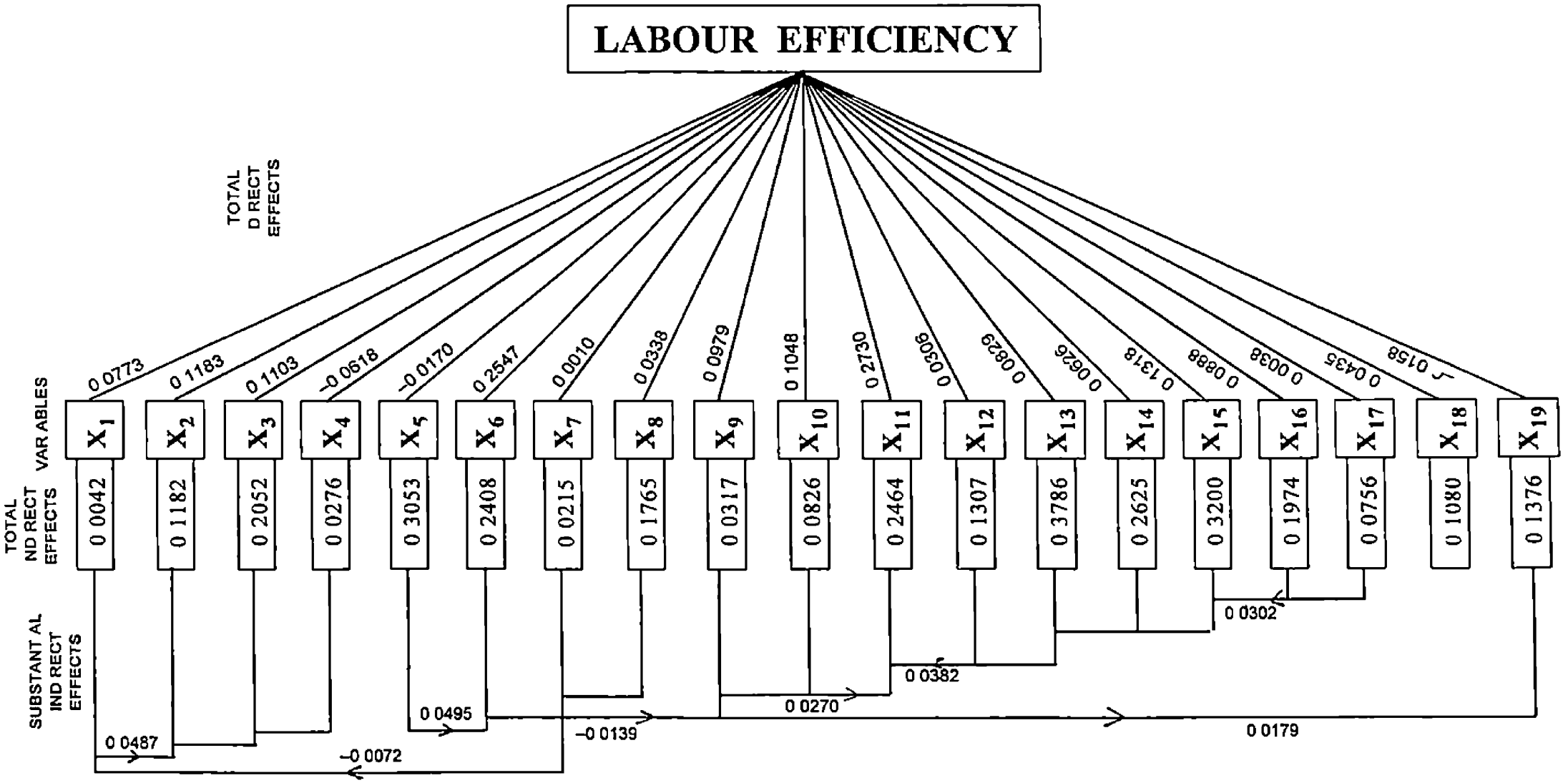
In order to gain insight into the path through which the independent variables exert influence on labour efficiency both directly and indirectly path analysis was carried out with all the independent variables

The results of path analysis are presented in Table 21 (Fig 3) From the table it is evident that the variable economic motivation had the highest positive and direct effect (0 2730) on labour efficiency There was positive and direct effects of intrinsic motivation (0 2547) attitude towards scientific agriculture (0 1318) education (0 1183) caste (0 1103) cosmopolite orientation (0 1048) innovativeness (0 0888) age (0 0773) gregariousness (0 0626) political awareness (0 0435) values related to agriculture (0 0306) and religiosity (0 0038) in that order of importance in terms of their direct effect on the labour efficiency of women

Table 21 Direct and indirect effect of the socio personal and psychological variables on labour efficiency

Variable Code No	Variable	Total effect	Total direct effect	Total indirect effect	Substantial indirect effect I	II	III
X1	Age	0 0815	0 0773	0 0042	0 0499 (X4)	0 0487 (X2)	0 0460 (X11)
X2	Education	-0 0001	0 1183	0 1182	0 0446 (X9)	0 0424 (X6)	0 0391 (X11)
X3	Caste	0 3155	0 1103	0 2052	0 0831 (X6)	0 0774 (X11)	0 0321 (X15)
X4	Experience in rice farming	0 0342	0 0618	0 0276	0 0624 (X1)	0 0411 (X2)	0 0148 (X9)
X5	Mass media participation	0 2883	0 0170	0 3053	0 0495 (X6)	0 0457 (X9)	0 0437 (X11)
X6	Intrinsic motivation	0 4995	0 2547	0 2408	0 1541 (X11)	0 0646 (X15)	0 0360 (X3)
X7	Competition orientation	-0 0225	0 0010	0 0215	0 0159 (X15)	0 0139 (X9)	0 0072 (X1)
X8	Independence	0 1427	0 0338	0 1765	0 0670 (X11)	0 0643 (X6)	0 0219 (X3)
X9	Knowledge of paddy	-0 0662	0 0979	0 0317	0 0539 (X2)	0 0179 (X18)	0 0137 (X15)
X10	Cosmopolite orientation	0 1874	0 1048	0 0826	0 0270 (X11)	0 0141 (X16)	0 0140 (X3)
X11	Economic motivation	0 5194	0 2730	0 2464	0 1438 (X6)	0 0663 (X15)	0 0318 (X13)
X12	Values related to agriculture	0 1613	0 0306	0 1307	0 0463 (X6)	0 0382 (X11)	0 0249 (X15)
X13	Satisfaction	0 2957	0 0829	0 3786	0 1047 (X11)	0 0771 (X6)	0 0310 (X15)
X14	Gregariousness	0 3251	0 0626	0 2625	0 0583 (X11)	0 0395 (X6)	0 0292 (X15)
X15	Attitude towards scientific agriculture	0 4518	0 1318	0 3200	0 1373 (X11)	0 1249 (X6)	0 0268 (X3)
X16	Innovativeness	0 2862	0 0888	0 1974	0 0721 (X11)	0 0495 (X6)	0 0302 (X15)
X17	Religiosity	0 0794	0 0038	0 0756	0 0352 (X11)	0 0257 (X6)	0 0192 (X13)
X18	Political awareness	0 0327	0 0435	0 1080	0 0402 (X9)	0 0324 (X2)	0 0169 (X1)
X19	Alienation	0 1218	0 0158	0 1376	0 0523 (X6)	0 0480 (X11)	0 0239 (X15)

Out of 57 substantial effects, 14 each pass through X11, 12 each pass through X6, 10 each pass through X15, 5 each pass through X9, 4 each pass through X2 and X3, 3 each pass through X1,2 each pass through X13 and one each pass through X4, X16 and X18



Out of 57 substan al effects 14 each pass th ough X 12 each pass th ough X_6 10 each pass th ough X_5 5 each pass th ough X_9 4 each pass th ough X_2 and X_3 3 each pass th ough X 2 each pass th ough X_3 and one each pass th ough X_4 X_6 and X_8

Fig 3 Diagrammatic representation of direct and indirect effects of the independent variables on labour efficiency

agricultural labourers Knowledge of paddy (0 0979) satisfaction (-0 0829) and experience in rice farming (0 0618) had a substantial but a negative direct effect on labour efficiency The direct effects of independence (-0 0338) mass media participation (-0 0170), alienation (-0 0158) and competition orientation (0 0010) were having relatively less magnitude

Further it could be seen from Table 21 that out of the 57 substantial indirect effects, the variables economic motivation intrinsic motivation and attitude towards scientific agriculture had substantial indirect effects of as many as fourteen, twelve and ten variables, channelled through these variables Moreover the variable knowledge of paddy had indirect effects of five variables channelled through this variable The variables education and caste had indirect effects of four variables channelled through each of the variables Likewise, the variables age and satisfaction had indirect effects of three and two variables channelled through each of the variables respectively The indirect effect of one variable was channelled through the variables experience in rice farming innovativeness and political awareness

The results of the regression analysis and path analysis indicated that the variables which had significant partial regression coefficients also had showed relatively higher

direct effects From this it could be concluded that the eleven variables namely caste intrinsic motivation independence cosmopolite orientation economic motivation values related to agriculture satisfaction gregariousness attitude towards scientific agriculture innovativeness and alienation had significant relation with labour efficiency

4 5 3 Discussion on the reasons for the nature of relationship of independent variables with labour efficiency

The reason for the observed nature of relationship of these independent variables with the labour efficiency of women agricultural labourers in the study are discussed below

4 5 3 1 Economic motivation

The motivational variable of the labour efficiency equation is a complex issue Many factors are involved in the development of an individuals value system which in turn affects one s perception of the situation surrounding a particular task Generally economic conditions and personal situation at a particular point of time may have significant impact on an individual s behaviour on the work When agriculture compares favourably with other occupations in offering more regular employment and remunerative wages the agricultural labourers develop interest and thereby work with

higher efficiency Agricultural labourers remain in the lower most rung of the socio-economic ladder in a society Earning money to meet their day-to day requirements is their prime motive and hence economic motivation being emerged as the most contributing variable to labour efficiency is justifiable In line with the findings of this study Taylor (1911) Karn (1961) and Rajak and Sarkar (1991) have reported that economic motivation has positive association with labour productivity

4 5 3 2 Intrinsic motivation

Intrinsic motivation exhibited a significant direct effect on labour efficiency of women agricultural labourers The inherent desire to excel in the work one sets to do is a common phenomenon seen in an individual It is manifested to a greater extent in a situation where scarcity and competition prevails The various influences of work experience cultural background aspiration level all affect one s inclination to work and are filtered through an individual s need which lead to motivation to perform the task at some degree of capacity In the present condition where employment is scanty and irregular the intrinsic motivation of women agricultural labourers creates a quest for perfection This leads to a concern for excellence in every field of activity Similar results of a positive association between intrinsic motivation and labour efficiency was also reported by Hackman and Lawler (1971) and Gopal and Kumar (1979)

4 5 3 3 Attitude towards scientific agriculture

Attitude towards scientific agriculture depicted a positive significant association with labour efficiency of women agricultural labourers The demand for foodgrain production increases day by day with the teeming population Under this circumstance scientific agriculture is the solution not only to augment foodgrain production but also to provide gainful employment in agricultural sector This fact has been of late well realised by the agricultural labourers as well creating in them a constant urge for better performance Padmanabhan (1981) has stated that it is the attitude of an individual that decides his behaviour and hence the labourers with positive attitude towards agriculture might do the agricultural operations more efficiently than those with negative attitude Alex (1994) in his study on female agricultural labourers has stated that agricultural labourers have adjudged the merits of the modern scientific agricultural practices and are aware of the farmer s significance in foodgrain production This positive attitude towards scientific agriculture has resulted in better role performance in decision making with the farmer This finding also derives support from almost similar studies conducted by Singh (1978) and Singh and Singh (1982)

4 5 3 4 Education

Education had a positive direct effect on labour efficiency of women agricultural labourers Education is

necessary to bring out the best in man this fact is too obvious to need any exposition For any economic actvity education is required for the development of confidence and habit of scientific thinking and action for solving emerging problems For these purposes appropriate education at all levels is important Such education is equally important even for adults on their farms and in village in every activity Education more particularly functional and vocational tends to improve the capabilities of farm labour and with the same amount of work can achieve better awards But unfortunately the poorer classes of the society tend to earn through wages and start working on the farm at much earlier ages due to their poor living conditions Padmanabhan (1981) stated that number of illiterates was more among women labourers and he found no significant association between education and efficiency However the finding of this study is supported by Ingle and Dharmadhikarj (1987) and Kanwar and Korane (1989)

4 5 3 5 Caste

Caste was found to have a significant effect on labour efficiency of women agricultural labourers Every person inherits certain qualities from the race to which he belongs A child inherits the skill of his parents by birth Naturally he will be more efficient if he enters the trade of his parents Agricultural labour is generally seen to be a caste occupation and hence women agricultural labourers belonging to agricultural

castes are found to be more efficient by virtue of their birth as well as experience Sharma and Sharma (1981) stated that a major factor causing low efficiency of labour in some parts of the country is caste distinction That is the farmers belonging to high castes do not even touch the plough and do not participate in field operations Such traditional values are to be replaced by value of work as the traditional agriculture is changing to commercial agriculture In contrary to the finding of this study Padmanabhan (1981) found no significant association between caste and efficiency of agricultural labourers However the findings of Dewett et al (1948) and Jhingan (1990) go in line with this study

4 5 3 6 Cosmopolite orientation

Cosmopolite orientation was found to have a positive significant relationship with labour efficiency of women agricultural labourers Cosmopolite women agricultural labourers move out of their local setting and interact with other people, receive certain cues from them which will serve to reinforce their knowledge regarding various improved farming techniques As a result of this interaction there is scope for widening their horizons of thinking which ultimately leads to better understanding of the work and better performance The finding of this study is in line with the study of Shilaja (1990) on farm women in which competition orientation was found to have

positive significant relationship with mixed farming productivity

4 5 3 7 Innovativeness

Innovativeness exhibited a positive and significant relationship with labour efficiency Innovativeness acts as an indicator of a person s evaluative perception of innovation with different dimensions Innovativeness it has been argued has contributed to the change in farming conditions and still continue to raise the performance level Lerner (1981) had indicated that concern with success was an activity and optimism that it will be attained it can only be sustained by a commitment to activism which requires not only passive acquiescence towards innovations from the outside but also a vigorous sense of initiative from within oneself to activate new ways A woman agricultural labourer who is innovative is prepared to change her beliefs attitudes and ways of acting in response to new challenges and development Women agricultural labourers due to high exposure to mass media and social contacts are becoming aware of the various scientific agricultural practices As the women agricultural labourers realise the benefits accrued from this scientific cultivation they try to set a high quantum of production by adopting the same This might be the possible reason for a highly significant positive association of innovativeness with labour efficiency Closely related results were reported by Sagar and Ray (1984) and Gowda (1988)

4 5 3 8 Age

Age was found to have a positive direct effect on the labour efficiency of women agricultural labourers Women agricultural labourers are being pushed into labour at an early age due to their economic compulsion So also they marry at an early age and take up adult roles much early Since they are involved in agricultural activities right from their early stages it is possible to have better efficiency as age increases Sharma and Singh (1970) Dipali (1979) Seema (1986) and Kanwar and Korane (1989) also reported that women agricultural labourers involve in agricultural work at an early age

4 5 3 9 Gregariousness

Gregariousness was found to exhibit a highly significant positive influence on labour efficiency of women agricultural labourers In agriculture work is not divided into smaller parts nor workers are given separate work Here the work is done in a lot Workers have to be responsible and co-operative because they have to decide about the next piece of work after completing the task in hand The women agricultural labourers were found to co-operate with their fellow workers and helped them in every respect They put primary emphasis on social relations at their places of work An agricultural labourer who has the capacity to move friendly with the fellow

workers creates a conducive environment to work Such a type of feeling in their mind might be the possible reason for a positive association with labour efficiency Mathewson (1931) Schachter et al (1951) and French (1964) have reported that group cohesiveness has a relation with productivity Singh (1992) also in his study on female agricultural workers found that they co-operate and help their fellow workers in every respect

4 5 3 10 Political awareness

Political awareness was found to have a positive direct effect on labour efficiency of women agricultural labourers The women agricultural labourers work in groups in the field and this gives them an opportunity to interact and communicate with others This interaction makes them to acquire much awareness about the political situations and other local happenings Such an awareness makes them more receptive to new ideas and this might be the reason for positive association with labour efficency In contrary to this Singh (1992) reported that the agricultural workers have little awareness about the prevailing political situation and they do not bother to talk about these things while working

4 5 3 11 Values related to agriculture

This variable was found to have a significant positive association with labour efficiency of women agricultural labourers Values and beliefs have got a central role in the

change process and it is assumed that they are crucial in influencing women agricultural labourers goals and behaviour Technological change requires behavioural change on the part of the farm labourers and behavioural change will not occur until these values change In the present study the women agricultural labourers were found to possess more of traditional values and were resistant to change Interestingly this sentimentality has inculcated in them an attachment towards agriculture and this might be the reason for the positive association with their labour efficiency Padmanabhan (1981) in his study on agricultural labourers found a significant positive relationship between value orientation and efficiency of agricultural labourers The finding of this study though not similar is in confirmity with the studies reported by Supe and Kolte (1972) and Singh and Sohal (1976)

4 5 3 12 Religiosity

Women agricultural labourers were found to have a positive direct effect of religiosity on their labour efficiency They were marked by traditional outlook towards their surroundings and were afraid of God more than they were afraid of the farmer This belief constantly reminds them that they will get their wages only by doing work Also they have some fear of the farmer because they get the wages in the evening or soon thereafter because a majority of them work as daily wage

earners The workers had a staunch belief that if they did not perform well they may have to bear the consequences in their next birth All this made the women agricultural labourers put in more effort thereby increasing their efficiency

4 5 3 13 Independence

Independence was positively and significantly associated with labour efficiency of women agricultural labourers In the absence of menfolk many times women are left with the burden of managing their farm and home alone Due to their continuous involvement in performing various activities they might develop the capacity of taking decisions independently without any help from outside Their active participation in such activities and farming might have improved their managerial capacity In most of the field situations the agricultural labourers have an opportunity for self expression and in such a situation the increase in their working capacity is inevitable Almost similar results were reported by Shrivastava and Tyagi (1976) and Vinge (1987)

4 5 3 14 Satisfaction

Satisfaction exhibited a significant positive associ ation with labour efficiency of women agricultural labourers A contended life in all aspects makes a person alert and helps to develop interest in the work one sets to do It is human nature to bestow more attention and concentration towards work when

one is free from other mental tensions Women agricultural labourers were also seen to exhibit similar trend Lawler and Hall (1970) viewed that the degree of performance is contingent upon the rate of higher order need satisfaction Sharma (1974) stated that the workers seem to be relatively content with their work groups families neighbourhoods and communities Agrawal (1979) reported that when a worker has his family day in and day out around him he becomes healthy and vigorous and as a result efficient This result is supported by the research findings of Vroom (1964) Agrawal and Bansil (1969) Sandhu and Singh (1977) and Singh (1988)

4 5 3 15 Mass media participation

Mass media participation was found to have a positive association with labour efficiency of women agricultural labourers Mass media play a significant role in the spread of new ideas It also provides opportunities for repeated exposure to new technologies and motivate towards positive action Due to their repeated exposure to these sources the women agricultural labourers gain knowledge about recent improvements in agriculture As the women agricultural labourers become aware about the benefits of the improved practices through mass media sources they try to perform such operations in the field in a better way The finding of this study is in line with those reported by Kaur (1982) Renukaradhya (1983) Saradamoni (1983) and Bhagat and Mathur (1989)

4 5 3 16 Alienation

Alienation was found to have a negative direct effect on labour efficiency A woman agricultural labourer with higher level of alienation does not identify herself with work but feels herself apart or alienated from its purposes When work activity does not permit control does not evoke a sense of purpose or does not encourage larger identifications, employment becomes simply a means to the end of making a living and the labourer feels estranged Naturally with such a mental condition their efficiency gets reduced Sheth (1971) has stated that as society moves from simple craft oriented technology to modern mass production system, the worker feels increasingly alienated from his job resulting in progressively decreasing commitment Veroff (1979) stated that a refined analysis of the achievement imagery revealed that women s protocols differ significantly from men's in two respects viz a) a more frequently stated need to work alone without collaboration and b) a more frequently stated need to achieve solely as one s own Similar result was reported by Singh (1992)

4 5 3 17 Competition orientation

Competition orientation had negative association with labour efficiency Agricultural work necessitates a co operative spirit among the workers as most of the work is done in groups This helps to create a healthy atmosphere for team work When the

spirit of competitiveness is in its peak the fundamentality of team spirit is lost each trying to overcome the other This ultimately results in mental disturbance and loss in group cohesiveness leading to a decrease in their efficiency Contrary to this Shilaja (1990) reported that participation in competition offers an environment of working for excellence which will enable the farm women to manifest their excellence in their field activity

4 5 3 18 Knowledge of paddy

Knowledge is the treasure of truth and facts and is a pre requisite for performing any activity with perfection In the present study the knowledge of farm women on scientific paddy cultivation aspects was assessed and this was found to have no association with labour efficiency Most of the women agricultural labourers in this study were illiterates or with less formal schooling and hence their low knowledge on scientific crop cultivation is justifiable As the women agricultural labourers are involved in the agricultural operations right from an early age they do the work mechanically without any technical knowledge For example they may plant seedlings without knowing the name of the variety In such a situation it is possible to have no association between knowledge and labour efficiency In line with the present study Padmanabhan (1981) found no relation between knowledge and efficiency It might be because the large

number of women labourers studied had little knowledge of scientific agriculture and about 80 50 per cent of the women labourers had only below average knowledge on scientific agriculture

4 5 3 19 Experience in rice farming

Continuously going through the same set of movements in particular simplified tasks, gives a greater opportunity for detailed observation and finding out a better way of doing the work When a person is engaged constantly in one kind of work the ability to do the work increases because practice makes one perfect This statement may not hold true in the case of women agricultural labourers wherein most of the agricultural operations performed by them require little or no skill In the present study it was found that the women agricultural labourers apart from agricultural works engage themselves in non agricultural occupations for most part of the year This might be the possible reason for negative association of experience and their efficiency In line with this observation Padmanabhan (1981) stated that since there were more number of young labourers among the sample of women labourers their period of exposure was also less and hence a significant negative relation with labour efficiency was observed Ramanathan (1995) found no relationship of labour experience with farmer labour relationship

4 5 Employment and wage pattern of women agricultural labourers

Throughout the history of mankind women have been engaged in economic activity along with men As a matter of fact the economic function has been the joint responsibility of both in all ages In this study the employment of women agricultural labourers in different agricultural and non agricultural operations was given focus and the results are being discussed below

4 5 1 Monthwise employment pattern of women agricultural labourers in Kollam District

The monthwise employment pattern of women agricultural labourers in Kollam district are depicted in Table 22 (Fig 4)

It was observed that the total number of days of employment of women agricultural labourers in a year was 207 days (approximately 7 months) Of the 207 days of employment per year per woman agricultural labourer 82 days were in agricultural labour accounting for 39 61 per cent and the remaining 125 days (60 39 per cent) were in non agricultural labour It was also inferred from the table that there was relatively more employment from January to March and May During the months of July-August and November December there was relatively slack in employment

Table 22 Monthwise employment pattern of women agricultural labourers in Kollam district (No of days of employment)

Sl No	Month	Agricultural	Non-agricultural	Total
1	1995 April	2	17	19
2	May	9	13	22
3	June	9	10	19
4	July	3	7	10
5	August	2	11	13
6	September	14	2	16
7	October	16	3	19
8	November	4	2	6
9	December	8	6	14
10	1996 January	7	16	23
11	February	6	19	25
12	March	2	19	21
	Total	82	125	207

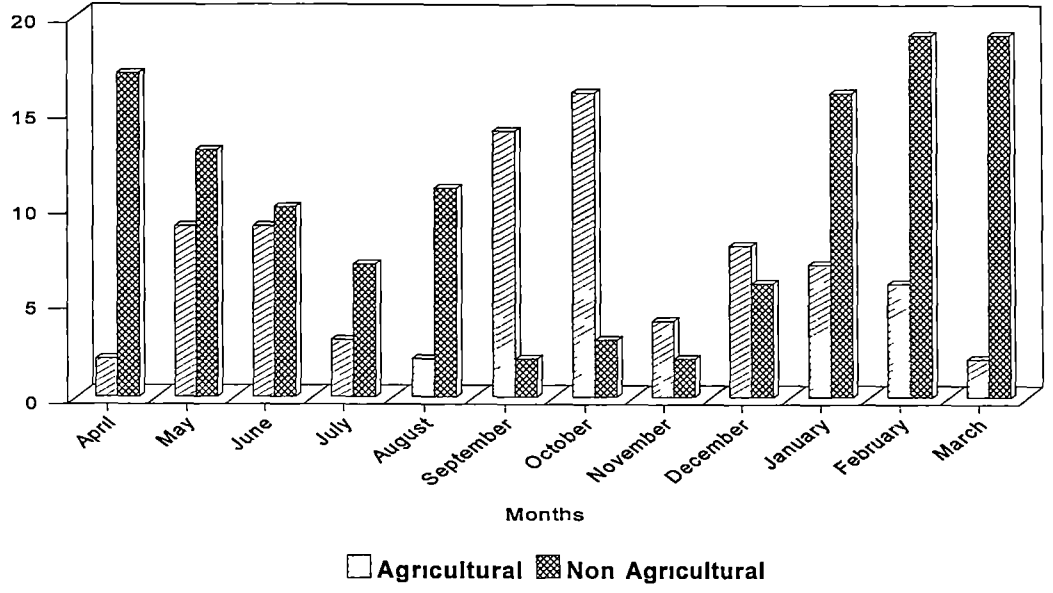


Fig 4 Monthwise employment pattern of women agricultural labourers in Kollam District (No of days of employment)

4 6 2 Monthwise employment pattern of women agricultural labourers in Kanyakumari district

A view at Table 23 (Fig 5) brings to focus the monthwise fluctuations in the number of days of gainful employment of women agricultural labourers in Kanyakumari district

The results presented in Table 23 reveal that on an average the women agricultural labourers were employed for 182 days in a year Of this, 78 days (42 86 per cent) were in agricultural labour and the remaining 104 days (57 14 per cent) were in non agricultural labour The maximum number of days of employment was in January (22 days) followed by March (20 days) and the least number of days of employment was during the months of August September and December

4 6 3 Distribution of working days for various operations per person per year

Table 24 shows the distribution of working days for various operations per person per year In the case of agricultural operations in Kollam district the highest number of working days were spent for transplanting followed by harvesting whereas in Kanyakumari district the highest number of working days were spent for transplanting followed by weeding In the case of non-agricultural operations in both the districts maximum

Table 23 Monthwise employment pattern of women agricultural labourers in Kanyakumari district (No of days of employment)

Sl No	Month		Agricultural	Non-agricultural	Total
1	1995	April	5	12	17
2		May	7	4	11
3		June	11	8	19
4		July	6	9	15
5		August	2	8	10
6		September	9	4	13
7		October	11	4	15
8		November	9	5	14
9		December	5	8	13
10	1996	January	6	16	22
11		February	5	8	13
12		March	2	18	20
	Total		78	104	182

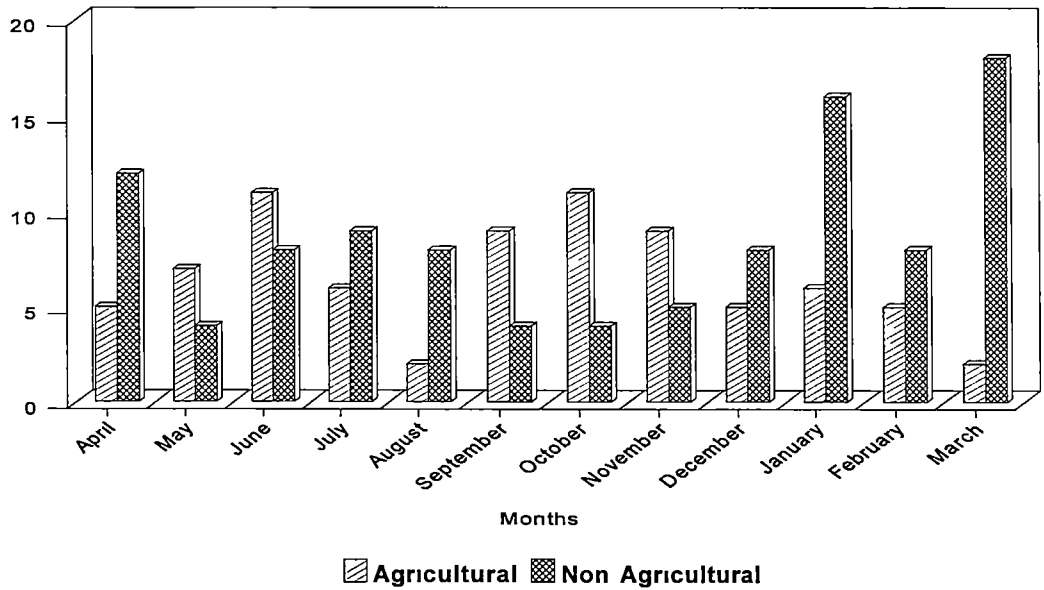


Fig 5 Monthwise employment pattern of women agricultural labourers in Kanyakumari District (No of days of employment)

Table 24 Distribution of working days for various operations per person per year

Sl No	Name of operation	Average working days	
		Kollam	Kanyakumari
1	Transplanting	24	22
2	Weeding	16	18
3	Carrying manure	9	14
4	Harvesting	22	15
5	Transporting harvested produce	11	7
6	Irrigation	-	2
7	Plaiting coconut leaves	14	17
8	Cashew factory work	53	33
9	Grading cashew	11	
10	Brick kiln work	47	21
11	Mat and basket making from palmyra leaves	-	21
12	Agave fibre extraction	-	12
	Total	207	182

number of days of employment were in cashew factory followed by brick kiln work

4 6 4 Income and wage pattern of women agricultural labourers in Kollam and Kanyakumari districts

Monthwise income and wage patterns of women agricultural labourers were also studied and the results are furnished in Tables 25 to 27 (Fig 6) Wage in kind was converted to wage in cash for convenience in analysis

4 6 4 1 Monthwise income of women agricultural labourers in Kollam district

It was found from Table 25 that women agricultural labourers in Kollam district could get highest income from agricultural labour during the months of September-October as this is the peak period for agricultural works The least income from agricultural labour was during April and August It could also be seen that women agricultural labourers get higher total income during April May the major share being obtained from non agricultural labour Women agricultural labourers in Kollam district could earn an average annual income of Rs 3610 00 from agricultural labour and Rs 5447 50 from non-agricultural labour Thus the average income per day was Rs 9 81 from agricultural labour and Rs 14 92 from non agricultural labour

Table 25 Monthwise income of women agricultural labourers in Kollam district (in Rupees)

Sl No	Month		Agricultural (Rs)	Non-agricultural (Rs)	Total income (Rs)
1	1995	April	110 00	1062 50	1172 50
2		May	435 00	812 50	1247 50
3		June	307 50	325 00	632 50
4		July	127 50	227 50	355 00
5		August	110 00	462 50	572 50
6		September	600 00	85 00	685 00
7		October	705 00	127 50	832 50
8		November	170 00	85 00	255 00
9		December	350 00	105 00	455 00
10	1996	January	300 00	560 00	860 00
11		February	255 00	647 50	902 50
12		March	140 00	947 50	1087 50
Average annual income (Rs)			3610 00	5447 50	9057 50
Average income/day (Rs)			9 81	14 92	24 73

4 6 4 2 Monthwise income of women agricultural labourers in Kanyakumari district

A critical examination of the data presented in Table 26 (Fig 6) shows that the women agricultural labourers of Kanyakumari district derived maximum income from agricultural labour during September October and June being the peak season for agricultural works During the months of March and August their income from agricultural labour was the least It could also be seen from the table that during March-April the women agricultural labourers got higher total income as their involvement in non agricultural operations was more during these months It was also noticed from the table that a woman agricultural labourer could earn an average annual income of Rs 2695 00 from agricultural labour and Rs 3327 50 from non agricultural labour Their average daily income from agricultural labour was Rs 7 38 whereas the same from the non agricultural labour was Rs 9 12

4 6 4 3 Wage rates for various agricultural and non agricultural operations in Kollam and Kanyakumari districts

Table 27 indicates the wage rates for various agricultural and non agricultural operations as revealed from the study

Table 26 Monthwise income of women agricultural labourers in Kanyakumari district (in Rupees)

Sl No	Month	Agricultural (Rs)	Non agricultural (Rs)	Total income (Rs)
1	1995 April	187 50	660 00	847 50
2	May	262 50	220 00	482 50
3	June	362 50	155 00	517 50
4	July	165 00	182 50	347 50
5	August	35 00	160 00	195 00
6	September	307 50	150 00	457 50
7	October	432 50	150 00	582 50
8	November	267 50	87 50	355 00
9	December	167 50	140 00	307 50
10	1996 January	255 00	420 00	675 00
11	February	177 50	240 00	417 50
12	March	75 00	762 50	837 50
Average annual income (Rs)		2695 00	3327 50	6022 50
Average income/day(Rs)		7 38	9 12	16 50

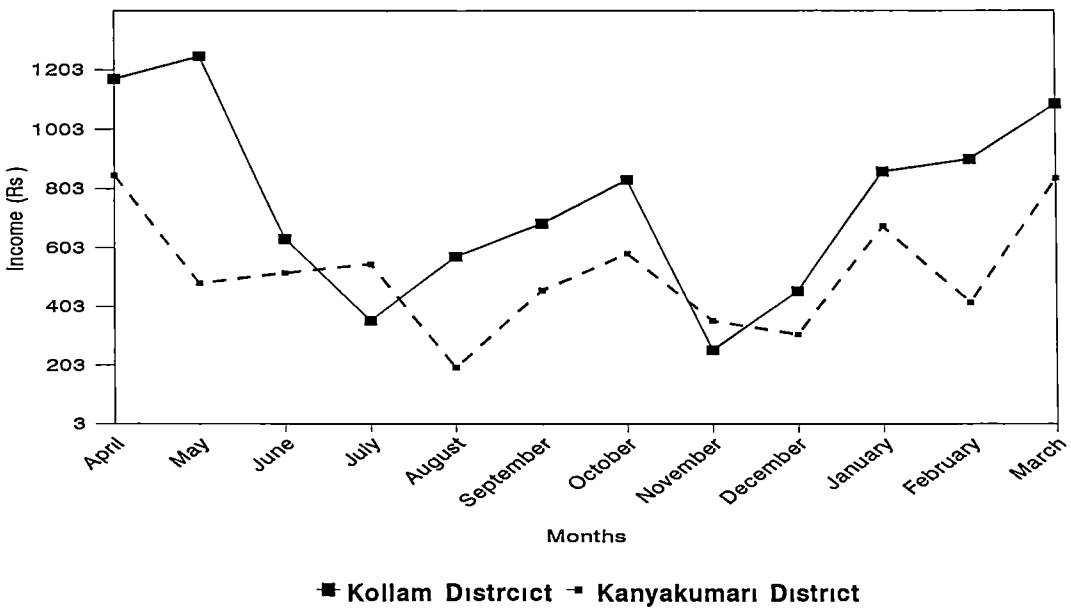


Fig. 6. Monthwise income of women agricultural labourers in Kollam and Kanyakumari Districts

Table 27 Wage rates for various agricultural and non agricultural operations (in Rupees per head per day) in Kollam and Kanyakumari districts

Sl No	Name of operations	Wage rates (in Rs)	
		Kollam	Kanyakumari
1	Transplanting	40/ to 50/	35/ to 40/
2	Weeding	35/- to 50/-	25/- to 30/
3	Carrying manure	50/- to 60/	35/ to 40/
4	Harvesting	40/ to 50/	45/ to 50/-
5	Transporting harvested produce	35/- to 45/-	15/ to 20/-
6	Plaiting coconut leaves	35/- to 50/-	15/- to 20/
7	Cashew factory work	30/- to 35/-	35/- to 40/-
8	Cashew grading	15/- to 20/-	
9	Brick kiln work	55/- to 70/-	50/ to 60/-
10	Mat and basket making from palmyra leaves	-	15/ to 20/
12	Agave fibre extraction		20/ to 25/

It could be seen that for almost all operations both agricultural and non agricultural the wage rates were higher in Kollam district compared to that in Kanyakumari district Among agricultural operations wage rates in both the districts were found to be higher for transplanting carrying manure and harvesting Brick kiln work was found to provide higher wages among the non agricultural operations to the labourers

4 6 5 Discussion on employment pattern and wage pattern

4 6 5 1 Employment pattern

The results of the analysis of employment pattern of women agricultural labourers in Kollam and Kanyakumari districts in terms of total number of days of employment in agricultural and non agricultural labour are given in Tables 22 and 23

Women who are generally conservative by nature are satisfied in having a sphere of activity at home But poverty and low levels of living leave no alternative for women agricultural labourers but to work hard for wages This necessitous nature of the household economy makes it imperative for women workers to seek employment mainly in casual occupations in order to supplement their meagre family earnings Women from rural communities and even households of marginal cultivators seek wage employment During the months of May June and September to November the women agricultural labourers get more

employment In Kollam and Kanyakumari districts agriculture is mainly dependent on monsoon It is mainly during the onset of South West monsoon (May-June) and North East monsoon (September October) various agricultural operations are being done Regarding paddy land preparation for first crop starts during last week of April-May Land preparation application of fertilisers and sowing are the operations in paddy cultivation during April May During June land preparation of main field transplanting and top dressing are done During July month second top dressing plant protection and weeding are the main works in paddy fields During September October months harvesting of first crop will be over Simultaneously till November land preparation and transplanting for the second crop will be started By January February months the second crop will be ready for harvest During these months fertiliser application weeding and plant protection as done in the first crop are to be done here also Atleast in 10 00 per cent of the total rice area of both the districts after the harvest of second crop pulses like blackgram cowpea are sown

Rice farming system has traditionally involved women for various crop care practices Their participation differs from state to state and country to country depending on the intensity of cropping and mechanization of the farming system (Roy 1990) In the present study it was found that most women who were compelled to work as agricultural labourers were able to

find work atleast during the peak season i e during transplanting and harvesting Generally women did not take to ploughing but they worked mainly in sowing transplanting weeding and harvesting operations Transplanting being a rush work accounted for the largest number of mandays worked followed by harvesting and it is in these operations that women were mostly employed though weeding and transporting manure and harvested produce also emerged as predominantly women s work as shown by the number of working days But by no means the women agricultural labourers found as much work as they wanted Even when they were getting work for most of the time they were underemployed as they get very low wages or get work for a few hours in a day

Agriculture being seasonal and mostly rainfed the labourers were found to have gained more days of employment in the field of non agricultural labour than agricultural labour especially during the lean season During January to April there was relatively more unemployment in the field of agriculture and naturally the agricultural labourers go for non agricultural works Such employment in productive non agricultural occupations was generally meant for supplementing family income The major avenue for non-agricultural employment in both the districts was in cashew factory followed by brick kiln work and plaiting coconut leaves Mat and basket making from palmyra leaves and agave fibre extraction are the other lucrative

non agricultural employment avenues available for women agricultural labourers in Kanyakumari district Agave a hardy xerophytic spiny plant grown along the edges of fields is a good source of fibre used for making ropes bags, dolls etc Women agricultural labourers reported that though they were interested in fibre extraction due to non availability of agave leaves could hardly get productive employment in this work However it served as a leisure time activity providing additional income with no extra investment

Among the various crops cultivated in Kollam and Kanyakumari districts paddy is the labour intensive crop which requires continuous management right from the beginning till the end when compared to perennial crops Even though paddy crop provides maximum number of days of employment to the women agricultural labourers as compared to other crops women labourers are not needed for all operations in paddy cultivation Their demand is at the peak only during the periods of transplanting weeding and harvesting So during the lean seasons the women agricultural labourers find wage employment in all possible non-agricultural sectors This might be the possible reason for the results inferred from Tables 22 and 23

4 6 5 2 Income and wage pattern

There has been inadequate understanding and evaluation of women s contribution to the economy in the farm sector More

so when the wages earned by the women labourers in agriculture are concerned In view of the important role of women in agriculture, the present study is undertaken to bring to light the extent of economic contribution by women from agricultural and non-agricultural activities Proverbially wages paid to women agricultural labourers are low and meagre and many times not even enough to support a subsistence living It is irony that in spite of the arduous nature of jobs needing a variety of skills, wages continue to be poor

Agricultural wages vary from region to region depending upon nature of work standard of living and supply and demand of labour There are different modes of wage payment which also widely vary from region to region The factors that determine modes of wage payment are mainly tradition and custom and lack of adequate cash with the employers Present study revealed that in Kollam and Kanyakumari districts wages for agricultural labourers were paid as cash or kind or both It has been noticed that particularly in the case of paddy harvesting the wage was paid mainly as kind This was given after harvesting and threshing Harvesting was mainly done by the women labourers in Kollam district whereas in Kanyakumari district both women and men labourers were engaged in paddy harvesting For threshing in both the districts women as well as male labourers were found to be engaged After threshing and winnowing the wages in kind were given at the time of measuring the harvested produce

It was noticed that in Kollam district wages for harvesting were paid in kind at the rate of thirty to forty five 'pakka for every paranilam (14 cents) This is shared among the labourers engaged in harvesting Usually for harvesting one 'paranilam', two labourers are needed The payment as kind for harvesting was found to vary with respect to the distance between the paddy field and the threshing yard In some areas of kollam district wages for harvest is paid as cash at the rate of Rs 40 to Rs 50 per labourer

In Kanyakumari district also, the wages for harvesting are mainly paid as kind They are paid generally at the rate of forty naazhi (approximately 12 kg) for every kooru (4 cents) One labourer can harvest at a maximum of one and a half kooru per day However this wage rate varies with the distance of the threshing yard from the paddy field if the harvested produce has to be carried by head load If the distance between the threshing yard and paddy field is more the harvested produce is usually transported in lorries

Wages paid per head per day for agricultural and non agricultural operations in Kollam and Kanyakumari districts as revealed from the study are presented in Table 27 It could be seen from the table that on the whole the wage rates of women agricultural labourers in Kanyakumari district are comparatively lower than in kollam district The difference is not the result

of any economic factor but is the influence of labour attachment practices and bargaining power It was observed that trade unionism among the agricultural labourers of Kerala strengthens their bargaining power thereby enabling them to obtain higher wage rates It is viewed that the condition of women agricultural labourers cannot be improved unless they are organised Organizations of the agricultural labourers would be essential to protect them from the exploitative forces in the rural scene to improve their bargaining power and also to act as pressure groups for an efficient delivery of the benefits of the development programmes

Tables 25 and 26 revealed that in the case of female agricultural labourers the average daily income was less from agricultural labour than from non agricultural labour This might be due to the fact that the number of days of employment in agricultural labour was much lesser than the number of days of employment in non agricultural labour It could also be seen that the total income during January-May was higher compared to other months This was due to the fact that during these months the women agricultural labourers could get more employment in non agricultural sector As the wage rates for employment in non agricultural sector is higher as compared to agriculture women agricultural labourers preferred such jobs Moreover in most of the occupations like brick kiln cashew factory and

plaiting coconut leaves the wage will be based on the quantum of work done So the women agricultural labourers were comparatively at ease in the work situation and could work according to their capacity

Thus it could be seen that the women agricultural labourers apart from agricultural work were found to be engaged in some other jobs in the off seasons However they were found to get employment to a maximum of only seven months a year The situation of women agricultural labourers in Kanyakumari district is relatively poor compared to Kollam district with a meagre average income of Rs 16 50 the reason being low wage rates So the major problem of women agricultural labourers though employed is low wage rate which needs further more towards action

4 7 Labour efficiency of women agricultural labourers A cursory glance

The essence of the result on labour efficiency of women agricultural labourers is epitomized in the empirical model diagrammatically (Fig 7)

The model depicted in Fig 7 has three segments The dimensions of labour efficiency derived empirically are given in the central segment They are determination in work situation 'inter-personal relationship confidence adjustability

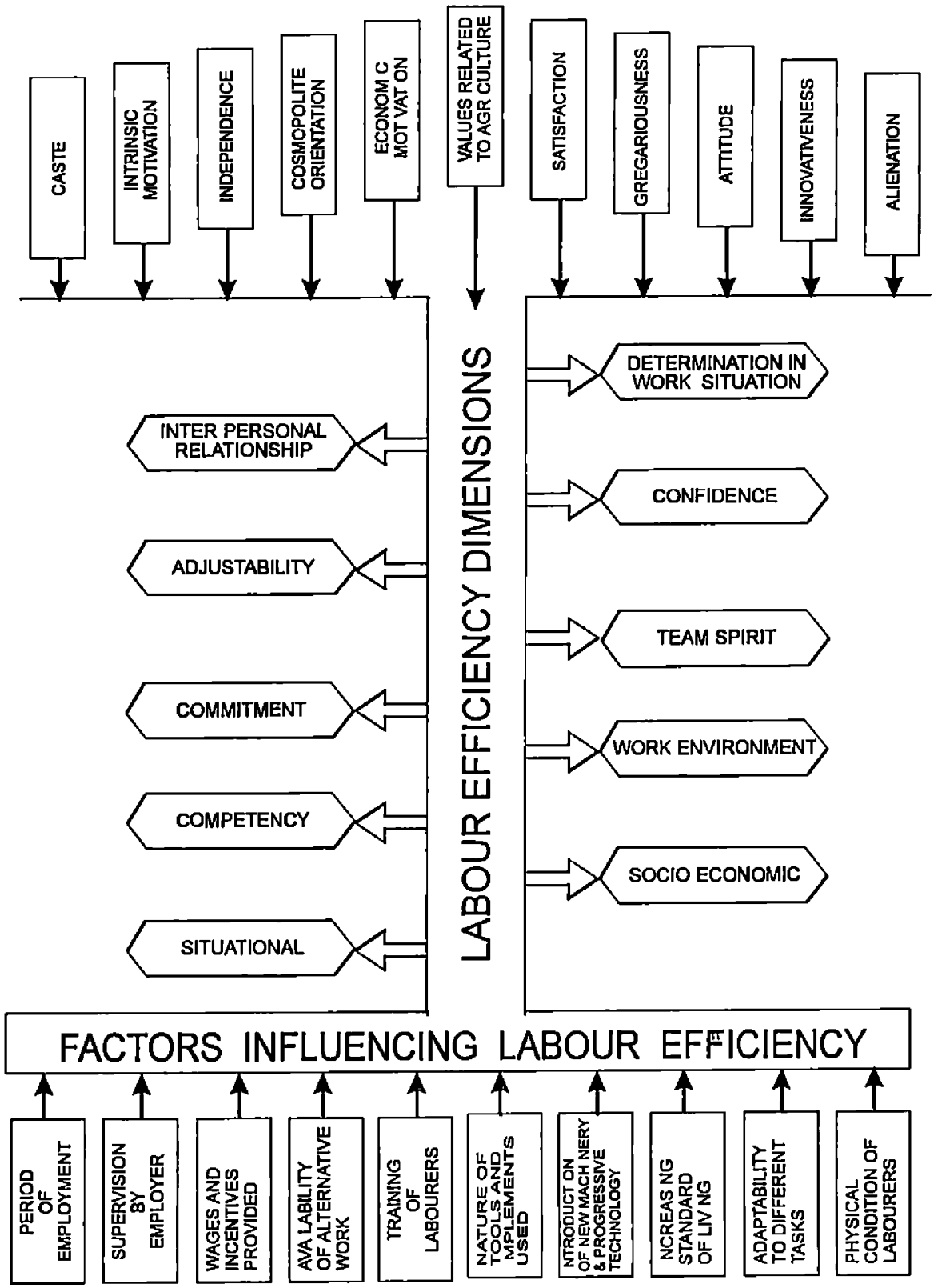


Fig 7 Empirical model of the study

team spirit commitment work environment competency socio economic and situational The upper segment indicates the socio personal and psychological variables of the women agricultural labourers which was found to have a significant contribution towards their labour efficiency The above segments are connected to the labour efficiency by arrows indicating that these variables influence labour efficiency

The socio personal and psychological characteristics of women agricultural labourers which significantly influence labour efficiency are caste intrinsic motivation independence cosmopolite orientation economic motivation values related to agriculture satisfaction gregariousness attitude towards scientific agriculture innovativeness and alienation

The segment factors influencing labour efficiency is divided into ten parts The factors are arranged rank-wise from left to right The factors influencing labour efficiency in their order of importance are 'period of employment , 'supervision by employer 'wages and incentives provided 'availability of alternative work', 'training of labourers nature of tools and implements used 'introduction of new machinery and progressive technology' increasing standard of living adaptability to different tasks and physical condition of labourers

4 8 Strategic model to improve the standard of living of women agricultural labourers

Development is one of the highest relevance in the country where the biggest problem is still poverty Current framework of national development recognises women as a unique power unit and a potential resource which needs to be developed for the all round development of the society This is much more true in case of rural women

Status of women agricultural labourers has been continuously hammering the society in different forms from the primitive communities to this present cosmopolitan-modern life Visualizing the paradox of unemployment on one side and scarcity of labour during peak seasons in agriculture attempts are needed to wisely bridge this gap Any attempt to improve the plight of the agricultural labourers calls for both the creation of additional rural employment opportunities and increasing their income

In view of above a strategic model depicting the ways of improving the standard of living of women agricultural labourers in rice farming system was developed (Fig 8)

4 8 1 Generation of continuous employment

In farming the nature of work is such that it is generally impossible to avoid a considerable amount of

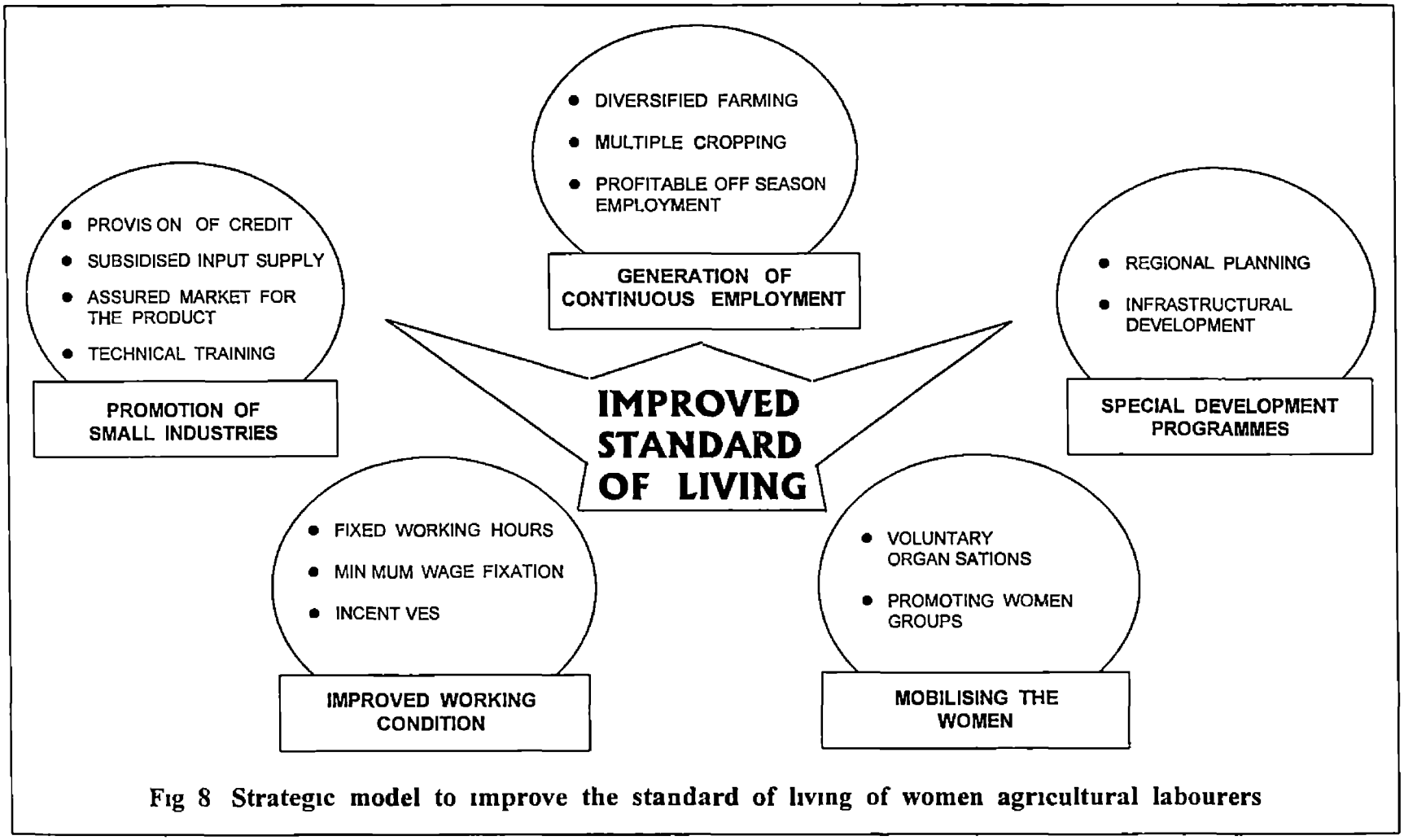


Fig 8 Strategic model to improve the standard of living of women agricultural labourers

unproductive labour It should be eliminated as far as possible Diversified farming and multiple cropping are more helpful than the specialized types of farming in making the labour demand more even during the year Since agriculture is seasonal the next alternative is to develop profitable off-season employment in non farm rural sectors To increase the productivity of women workers and to make them economically independent subsidiary indoor works such as weaving knitting and embroidery can be popularised

4 8 2 Promotion of small industries

Small scale industries which are dependent on the raw materials available in the rural areas must be developed so that more meaningful employment can be created Providing credit at preferential interest rate and organizing co-operatives to ensure regular supply of needed inputs and guaranteeing market for the produce makes women agricultural labourers venture into such activities Systematic training to enhance women s skills in such activities should also be arranged

4 8 3 Improved working condition

Improved working condition in terms of fixed working hours minimum wage fixation and incentives help the women agricultural labourers work at ease and with interest Better wages and incentives help to increase their income which have a direct impact on their standard of living

4 8 4 Mobilizing the women

It can be done through self-initiated efforts power of persuasion as in voluntary organisations and developing means for group dynamism and participation The strategy to mobilise women by promoting women groups can generate awareness among women create leadership qualities and help them to gain self esteem Women groups can also be very effective in securing proper enforcement of law to protect their rights

4 8 5 Special development programmes

All development programmes aimed at rural employment and income generation should be based on regional planning and be rationalised so as to create productive assets and generate permanent employment opportunities

Thus the above mentioned five fold measures can safeguard the interest of the agricultural workers and can ensure a sound income base thereby improving their standard of living

Summary

5 SUMMARY

Women play a vital role in the society It is primarily the economic reason that compels women to come out of home for manual labour works The agricultural labourers form a significant section of the work force in a village on whom the cultivators are dependent for getting the work done on a farm Indian women in the recent past have been increasingly resorting to productive occupations and paid employment in the modern sector as well Agricultural labour income depends upon the vagaries of the monsoon as also the peculiar characteristics of the agriculture prevailing in the region where the village is situated In so far as the output per labour is one of the major determinants of the general level of economic welfare, labour efficiency is a significant yardstick of economic progress No specific study on this aspect has been attempted so far So an exploratory study on labour efficiency and factors associated with it is expected to be helpful from the academic point of view and for policy decisions Considering the importance of labour efficiency, the present study was taken up with the following objectives

5 1 Objectives

1 To develop and standardise a scale to measure labour efficiency of agricultural labourers

2 To measure the labour efficiency of women agricultural labourers in Kollam and Kanyakumari districts with the developed scale

3 To identify the factors influencing labour efficiency of women agricultural labourers

4 To study the relationship of socio-personal and psychological characteristics with the labour efficiency of women agricultural labourers

5 To analyse the employment and wage pattern of women agricultural labourers in Kollam and Kanyakumari districts

5 2 Methodology

The study was conducted in Kollam district of Kerala and Kanyakumari district of Tamil Nadu Two blocks each from the two districts and three panchayats each from the two selected blocks were selected at random A total of 300 women agricultural labourers were selected at random from the two study districts at the rate of 25 each from the selected panchayats

Labour efficiency, the dependent variable of the study was measured with the help of a scale developed for the study The item generation activity based on review of literature and expert discussion resulted in 115 items reflecting various

aspects of labour efficiency These items were subjected to relevancy rating by judges and 58 items were retained after judges rating These 58 items were administered to 100 women agricultural labourers of non-sample villages and their response was got on a five point continuum with scores 5, 4 3 2 and 1 Item analysis was performed on the 58 items Thirty two items which had shown significant discrimination index 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

Sixteen factors influencing labour efficiency were collected by review of literature and discussion with experts Based on judges rating ten factors viz , availability of alternative work adaptability to different tasks increasing standard of living period of employment, training of labourers supervision by employer, introduction of new machinery and progressive technology physical condition of labourer nature of tools and implements used and wages and incentives provided were selected for the study Employment and wage pattern were studied from the sub sample by keeping a register with each respondent and the same was verified at fortnightly intervals for one year from April 1995 to March 1996 Then the month wise employment pattern total number of days engaged in different operations and wage pattern were analysed

Nineteen socio personal and psychological variables namely age, education, caste, experience in rice farming, mass media participation intrinsic motivation, competition orientation independence knowledge of paddy, cosmopolite orientation economic motivation values related to agriculture satisfaction gregariousness attitude towards scientific agriculture innovativeness religiosity political awareness and alienation were selected based on relevancy rating to find out the influence of these variables on labour efficiency These variables were measured using the already available scales either as such or with slight modification

The data were collected using a pre-tested and structured interview schedule during December 1995 to February 1996 Mean simple percentage percentage mean score, student's t test regression analysis and path coefficient analysis were the statistical tools used to analyse the collected data in this study

The salient findings of this study are summarised as follows

5 3 1 Cluster analysis of the 32 items included in the scale resulted in the formation of ten different dimensions

5 3 2 The dimensions of the scale identified based on cluster analysis were determination in work situation inter personal

relationship , confidence , 'adjustability , team spirit 'commitment 'work environment 'competency , socio-economic and 'situational'

5 3 3 The analysis of overall labour efficiency of the women agricultural labourers indicated that majority of them (63 00 per cent) were under low efficiency group

5 3 4 There was significant difference between the women agricultural labourers of Kerala and Tamil Nadu with respect to their overall labour efficiency level

5 3 5 The district category-wise analysis indicated that in both the districts nearly 60 00 per cent of the respondents were under low efficiency category

5 3 6 Dimension wise analysis of labour efficiency showed that majority of them belonged to the high group under the dimension 'adjustability and competency' whereas majority had low efficiency with respect to dimensions such as 'determination in work situation', inter personal relationship , 'team spirit 'commitment 'work environment' 'socio-economic and 'situational The respondents were observed to have neither high nor low efficiency in case of 'confidence dimension

5 3 8 The proportion of respondents of Kollam and Kanyakumari districts with respect to the factors introduction of new machinery and progressive technology' and nature of tools and implements used differed significantly

5 3 9 The factors influencing labour efficiency in the total sample in their order of importance were period of employment supervision by employer, wages and incentives provided availability of alternative work training of labourers, nature of tools and implements used introduction of new machinery and progressive technology increasing standard of living adaptability to different tasks and physical condition of labourers

5 3 10 The multiple regression analysis revealed that the 19 independent variables put together contributed significantly to the labour efficiency of women agricultural labourers and explained 75 92 per cent of the variation in labour efficiency

5 3 11 The variables namely economic motivation intrinsic motivation attitude towards scientific agriculture caste cosmopolite orientation innovativeness, gregariousness and values related to agriculture were found to have significant contribution and direct effect on labour efficiency and were considered to be related to the labour efficiency of women agricultural labourers

5 3 12 Women agricultural labourers of Kollam district were found to get employment for 207 days 82 days as agricultural labour and 125 days as non agricultural labour

5 3 13 Total number of days of employment of women agricultural labourers in Kanyakumari district was 182 78 days as agricultural labour and 104 days as non-agricultural labour

5 3 14 During the months of January-March and May there was more employment for women agricultural labourers of Kollam district and during July August and November December there was relatively slack in employment

5 3 15 For women agricultural labourers in Kanyakumari district the maximum number of days of employment was in January and March and the least during August September and December

5 3 16 In both the study districts the highest number of working days in agricultural labour was spent for transplanting and in non agricultural labour it was in cashew factory followed by brick kiln work

5 3 17 The average annual income from agricultural and non agricultural labour was Rs 3610 00 and Rs 5447 50 in Kollam district, whereas it was Rs 2695 00 and Rs 3327 50 in Kanyakumari district respectively

5 3 18 The average income per day was Rs 9 81 and Rs 14 92 from agricultural and non agricultural labour in Kollam district and it was Rs 7 38 and Rs 9 12 in Kanyakumari district respectively

5 3 19 The wage rates for both agricultural and non agricultural operations were in general higher in Kollam district compared to Kanyakumari district

5 4 Implications of the study

5 4 1 The labour efficiency scale developed in this study can be used to assess the labour efficiency of agricultural labourers in any single crop enterprise as the items of the scale were so chosen to suit various crop enterprises The scale has been deliberately made simple so that the scale could be easily used in recording the response of the agricultural labourers as well as in computing the labour efficiency score

5 4 2 The efficiency scale having clear cut empirically derived dimensions can be used to measure the labour efficiency on these dimensions

5 4 3 This empirically derived dimensions can be the foundation based on which necessary programmes for development of labour efficiency of agricultural labourers can be laid upon

5 4 4 The study has pointed out that the labour efficiency in general of both the districts were poor Hence greater attention is to be given focusing on the factors bound to influence their efficiency

5 4 5 It was revealed from the study that economic motivation intrinsic motivation and attitude towards scientific agriculture

were the important variables of women agricultural labourers in influencing their efficiency Hence special emphasis is to be laid out on these variables while planning future labour development programmes

5 4 6 It was observed from the study that the maximum period of employment available for a woman agricultural labourer was 7 months and the remaining 5 months go unproductive Hence it is suggested that more avenues of employment has to be created for the agricultural labourers

5 5 Suggested lines of future research

5 5 1 The present study has been undertaken to assess the labour efficiency in rice production system only Hence it is suggested that similar studies may be taken up in future to access the labour efficiency of agricultural labourers involved in other crop cultivation

5 5 2 The present study was conducted in the state of Kerala and Tamil Nadu To know whether regional differences exist within the State studies may be undertaken in future to analyse the labour efficiency of women agricultural labourers within the states as well

5 5 3 Sexual discrimination regarding labour efficiency need to be analysed under different regions

5 5 4 The study revealed that labour efficiency is low in both the study districts In depth studies may be carried out to explicit the possible reasons so that action can be carried out in these lines

5 5 5 The intra household distribution of labour and time use and the influence it makes on their efficiency reserved for farm work need to be studied

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* Original not seen

Appendices

APPENDIX I

KERALA AGRICULTURAL UNIVERSITY

Dr B Babu
Professor and Head

Department of Agricultural Extension
College of Agriculture
Vellayani 695 522

Dear Sir/Madam

Mrs T Rajula Shanthy, Ph D Scholar in this Department has taken up a research study on Comparative analysis of characteristics of women labourers engaged in rice farming in the social systems of Kollam and Kanyakumari districts One of the objectives of the study is to find out the relationship between labour efficiency and socio personal and psychological characteristics of women agricultural labourers

For this purpose twenty nine socio personal and psychological variables have been identified based on review of literature and discussion with experts which are listed in the Appendix

In view of your expert knowledge and experience I request you to offer your valuable rating of the relevancy of these variables in the five point continuum of Most relevant to Least relevant Please put a tick mark against each of the variables to indicate your judgement or the degrees of relevancy of the variables

Further you are welcome to add additional variables if any relevant to the study Kindly rate all the variables and return the proforma to the researcher in the stamped envelope enclosed at the earliest

Yours sincerely
Sd/
B BABU

APPENDIX II

Independent variables with their mean percentage scores

Sl No	Variables	Mean percentage score
1	Annual income	52 7
2	Type of house	71 7
3	Type of family	65 0
4	Material possession	51 7
5	Marital status	56 0
6	Dependency	57 0
*7	Mass media participation	79 7
8	Family background	68 0
9	Social participation	68 3
10	Place of working	74 3
*11	Intrinsic motivation	85 0
*12	Cosmopolite orientation	81 3
*13	Economic motivation	76 6
*14	Attitude towards scientific agriculture	87 3
15	Credit orientation	71 7
*16	Gregariousness	81 3
*17	Age	77 3
*18	Education	78 0
*19	Caste	77 7
*20	Experience in rice farming	77 0
*21	Competition orientation	80 7
*22	Independence	77 6
*23	Knowledge of paddy	81 3
*24	Values related to agriculture	80 7
*25	Satisfaction	80 3
*26	Innovativeness	75 3
*27	Religiosity	78 3
*28	Political awareness	75 3
*29	Alienation	82 3

* variables selected for the study

APPENDIX - III
KERALA AGRICULTURAL UNIVERSITY

Dr B Babu
Professor and Head

Department of Agricultural Extension
College of Agriculture
Vellayani 695 522

Dear Sir/Madam,

Mrs T Rajula Shanthy Ph D Scholar in this Department has taken up a research study on Comparative analysis of characteristics of women labourers engaged in rice farming in the social systems of Kollam and Kanyakumari districts under my guidance, the objectives being development of a scale to measure labour efficiency identifying the factors affecting labour efficiency

In view of your high academic qualification and vast experience in the field of Agricultural Extension/Management we request you to act as one of the judges

Labour efficiency is the physical and mental ability of an individual to do productive work in the right and just manner to achieve the desired result

Items presumably related to labour efficiency selected from related literature and discussion with experts are provided in the appendix

You are requested to kindly spare a few minutes of your valuable time and express your frank opinion about the items presented Please put a tick mark against each item to indicate your judgement on the degree of relevancy of items to labour efficiency of agricultural labourers Also offer your rating for the factors influencing labour efficiency

Care has been taken to make the list exhaustive Still there may be scope for addition Please do that if you think it necessary

Please send the appendix duly filled up to the researcher in the self addressed stamped envelope enclosed

Thanking you in anticipation

Yours sincerely
Sd/
B BABU

APPENDIX IV

Items generated with mean percentage scores based on judges rating

Sl No	Items	Mean per centage score
	PSYCHOLOGICAL DIMENSION	
*1	When you are with a group which is assigned to do a specific task you take the initiative to get things done	82 80
2	You prefer to do your work in a new manner	75 00
3	You search new ways for overcoming difficulties in the farm	75 50
4	You tend to form small groups to effectively influence decisions	76 10
5	You look for support for your action and proposals	71 10
*6	You prefer to do things on your own drive	84 40
7	You feel confident to do things when others prompt you	70 50
8	You prefer to follow the leader rather than lead the group if an option is given	71 10
9	You are always punctual in your work	69 40
10	You prefer to have neatness in the work you do	63 30
11	You have interest to work in the field	76 10
*12	You are sincere in doing the allotted work	88 90
13	You voluntarily report the mistakes committed by you	79 40
14	You work with patience even in a disturbed situation	73 30

Appendix IV contd

Sl No	Items	Mean percentage score
*15	You like doing something difficult to prove that you can do it	84 30
16	You prefer such works which provide opportunities of increasing competence	72 70
17	You are faithful to the interests of the farm	71 10
18	You want to maintain a high level of performance in your work	67 20
19	You have favourable attitude towards agricultural labour	70 00
20	You get satisfaction in doing agricultural work	70 50
*21	You feel no obstacle can stop you from achieving your final goal	86 10
*22	You are generally confident of your own ability	85 60
*23	You are bothered by inferiority feelings	83 30
*24	You usually work out things for yourself rather than get someone to show you	85 00
*25	You do not get discouraged easily	84 40
*26	You find yourself working about something or other	85 00
*27	Life is a strain for you in much of the time	80 00
*28	You feel that if you do not perform well you have to bear the ocnsequences in your next birth	89 40
29	You want work irrespective of its nature	56 70
*30	You work with full dedication	87 20
31	Time is valuable You feel uneasy when it is wasted	77 70

Appendix IV eontd

Sl No	Items	Mean percentage score
32	You do not postpone for tomorrow what you can do today	75 50
33	You believe in goal setting and its attainment	71 10
*34	You feel responsibility in work	83 80
35	You feel meaningless because of non sharing of profits by farmers	65 50
	WORK DIMENSION	
36	If you become 15 years old and start life over again you will choose the same occupation	76 10
37	You do your work just mechanically	67 20
38	You get affected by the drudgery involved in working in the farm	78 80
39	You are able to carry instructions in your mind	68 30
40	You are able to apply instructions with discretion to the varying conditions	62 20
41	You are capable of making suggestions to improve the quality of work you are doing	71 10
42	You are committed to work because of living in the same village	71 10
*43	You have alternatives to avoid stress and strain	82 70
*44	You are willing to do any type of work at any time	83 80
45	You spare enough time for bringing up your family	73 30
46	You think of doing other work when under strain	77 70
*47	You have entertainment in work	80 80
48	You know about the extent of work	66 70

Appendix IV contd

Sl No	Items	Mean percentage score
*49	You get time for relaxation while working	83 80
*50	Work should come first even if you cannot get rest	85 50
*51	You try to excel in the work you set to do	91 10
*52	Whenever a work is given to you you like to begin it at once and continue it till it is done	82 20
*53	You enjoy work as much as play	80 00
*54	You succeed in your occupation even if you have been neglectful of your family	77 50
*55	You work like a slave, at everything you undertake to get a result	88 90
*56	You have determination and driving ambition to achieve certain things in life even if these qualities make you unpopular	84 40
*57	You can learn a new work easily	83 80
*58	You can operate all implements used in rice farming	88 90
*59	You have the ability to perform any type of work	83 30
*60	Ability to learn from experiences makes you produce quality work	80 50
*61	High retention of work procedures makes you work with perfection	84 40
*62	You have adequate knowledge to produce quality work	85 00
	SITUATIONAL DIMENSION	
63	You get fair wages for the work performed and would never leave for another job	79 40
*64	Incentives given to the best workers makes you work hard	85 00

Appendix IV contd

Sl No	Items	Mean percentage score
65	You expect appreciation from the employer for your work	78 30
*66	Reasonable assurance that in the event of injury or disablement your dependents would be suitably provided for makes you give your best	84 40
*67	Wages that are sufficient to meet minimum physical and social needs make you work with satisfaction	90 00
*68	You can work continuously for more than six hours	85 00
*69	You never get tired of working in the farm	87 80
*70	Small working hours with tea and lunch break and rest makes you put in more work	88 90
*71	You can work with the same efficiency throughout the working time	87 20
*72	You are least affected by the time of working	91 10
*73	You have inconvenience in starting work in early morning	68 30
*74	More travel time between home and place of working makes you tired soon	76 40
*75	Proper location of the farm/farm house makes your work easier	80 00
*76	Frequent interruption in your regular work makes you work less than your capacity	91 10
*77	You are least affected by the necessary amenities (food water etc) provided in the field	85 00
78	You prefer to work in places which are near to your residence	73 80
*79	You can work effectively even if you travel more	88 90
80	The wage obtained will not be sufficient after meeting the travel expenses along with other personal expenses if working place is far	73 30

Appendix IV contd

Sl No	Items	Mean percentage score
81	You can bestow more attention to your family if your working place is near	75 00
	SOCIAL DIMENSION	
*82	You can work with all types of fellow workers	86 60
*83	You have good relation with other labourers at work	83 00
*84	Team spirit makes you work with excellence	91 10
85	You prefer to work with people of your own caste	65 50
*86	You co operate easily with others to get a work done	88 90
*87	You feel embarassed while working with new groups	83 30
*88	Competitive spirit among labourers makes you to excel in your work	88 90
*89	You can work with any type of employer	90 00
*90	Good rapport with the farmer makes you work hard	88 90
*91	You feel as if you are working on your own farm when your employer considers your suggestions	89 40
*92	You are reluctant to work when the farmer himself works in the field	83 80
*93	An otherwise efficient labour may be no good if management is not competent enough to make the best use of him	77 70
*94	You voluntarily help others in completing a work	70 50
*95	You have the ability to work without supervision	83 30
96	You need better understanding of the employer to work well	67 20
*97	You usually remain cheerful in spite of trouble	83 90
98	You always freely express your ideas	76 10

Appendix IV contd

Sl No	Items	Mean percentage score
*99	Criticism disturbs you very little	82 10
100	Your mood gets easily influenced by people around you	83 30
101	You tend to tolerate discomfort for the sake of others	74 40
102	You try to influence other people and be friendly	70 00
*103	You remain in uniform spirit most of the time	90 00
104	Your working capacity gets influenced by your family life	76 60
105	It makes you no difference if people agree with you or not	78 30
106	You feel that people are talking about you	73 00
107	You easily become angry even if a minor thing is not done systematically	75 50
108	You never get satisfied with whatever the employer does	77 20
109	You argue with your employer even for petty matter	77 70
110	You have difficulty in expressing negative feeling to others	71 60
111	It is human warmth and feelings for each other that makes a farm successful	73 80
112	You used to help the farmer by giving your opinion	69 40
113	You work well when you get fair treatment by the farmer	66 70
114	You readily obey the instructions given by the farmer	71 60
115	The farmer gives due weight to your opinion	84 40

* Items selected

APPENDIX - V

Item analysis Discrimination index and total score correlation of items

Sl No	Item	Discrimination index	Total score r
1	When you are with a group which is assigned to do a specific task you take the initiative to get things done	2 08*	0 1374
2	You prefer to do things on your own drive	2 43*	0 1395
3	You are sincere in doing the allotted work	1 50	0 1526
4	You like doing something difficult to prove that you can do it	1 58	0 1670
*** 5	You feel no obstacle can stop you from achieving your final goal	5 07**	0 6583**
*** 6	You are generally confident of your own ability	9 08**	0 7438**
7	You are bothered by inferiority feelings	0 62	0 1247
8	You usually work out things for yourself rather than get someone to show you	2 07*	0 1743
9	You do not get discouraged easily	0 32	0 1221
***10	You find yourself working about something or other	11 09**	0 5787**
11	Life is a strain for you in much of the time	0 32	0 1127
***12	You feel that if you do not perform well you have to bear the consequences in your next birth	5 10**	0 1987*
***13	You work with full dedication	7 11**	0 6920**

Annexure V contd

Sl No	Item	Discrimination index	Total score
***14	You feel responsibility in work	8 79**	0 4236**
15	You have alternatives to avoid stress and strain	4 09**	0 1258
***16	You are willing to do any type of work at any time	6 59**	0 4723**
***17	You have entertainment in work	7 35**	0 3291**
***18	You get time for relaxation while working	6 91**	0 7258**
19	Work should come first even if you cannot get rest	1 57	0 1827
***20	You try to excel in the work you set to do	5 23**	0 3179**
21	Whenever a work is given to you you like to begin it at once and continue it till it is done	0 52	0 1071
22	You enjoy work as much as play	1 83	0 1123
***23	You work like a slave at everything you undertake to get a result	5 05**	0 4237**
24	You have determination and driving ambition to achieve certain things in life even if these qualities make you unpopular	1 47	0 1918
***25	You can learn a new work easily	4 39**	0 5739**
26	You can operate all implements used in rice farming	2 80**	0 1159
27	You have the ability to perform any type of work	0 59	0 1342
28	Ability to learn from experiences makes you to produce quality work	1 87	0 1469

Appendix V contd

Sl No	Item	Discrimination index		Total score r	
29	High retention of work procedures makes you to work with perfection	1 62		0 1291	
***30	You have adequate knowledge to produce quality work	5 07	**	0 6619	**
***31	Incentives given to the best workers make you work hard	3 84	**	0 8304	**
***32	Reasonable assurance that in the event of injury or disablement your dependents would be suitably provided for makes you give your best	6 89	**	0 7214	**
33	Wages that are sufficient to meet minimum physical and social needs make you work with satisfaction	1 74		0 1901	
34	You can work continuously for more than six hours	1 23		0 1237	
35	You never get tired of working in the farm	2 14	*	0 1753	
***36	Small working hours with tea and lunch break and rest makes you put in more work	8 18	**	0 7238	**
***37	You can work with the same efficiency throughout the working time	10 06	**	0 7321	**
***38	You are least affected by the time of working	8 96	**	0 3247	**
***39	Proper location of the farm/farm house makes your work easier	5 81	**	0 4281	**
***40	Frequent interruption in your regular work makes you work less than your capacity	10 65	*	0 5623	**
***41	You are least affected by the necessary amenities (food water etc provided in the field	11 09	**	0 2891	**

Appendix V contd

Sl No	Item	Discrimination index		Total score r	
***42	You can work effectively even if you travel more	5 38	**	0 2940	**
***43	You can work with all types of fellow workers	4 21	**	0 6281	**
***44	You have good relation with other labourers at work	10 74	**	0 7238	**
***45	Team spirit makes you work with excellence	9 03	**	0 2219	*
46	You co operate easily with others to get a work done	3 44	**	0 1211	
47	You feel embarassed while working with new groups	1 43		0 1728	
***48	Competitive spirit among labourers makes you to excel in your work	10 88	**	0 6502	**
***49	You can work with any type of employer	7 92	**	0 6243	**
***50	Good rapport with the farmer makes you work hard	8 53	**	0 7213	**
***51	You feel as if you are working on your own farm when your employer considers your suggestions	3 88	**	0 4237	**
***52	You are reluctant to work when the farmer himself works in the field	5 31	**	0 2321	*
53	You have the ability to work without supervision	1 80		0 1357	
***54	You usually remain cheerful in spite of trouble	5 54	**	0 2691	**
55	Criticism disturbs you very little	1 27		0 1359	
56	Your mood gets easily influenced by people around you	1 47		0 2138	*

Appendix V contd

Sl No	Item	Discrimination index	Total score 'r
***57	You remain in uniform spirit most of the time	5 08**	0 2962**
58	The farmer gives due weight to your opinion	2 49*	0 1379

*** Items selected
** Significant at 0 01 level
* Significant at 0 05 level

APPENDIX - VI

Factors influencing labour efficiency with their mean percentage scores

Sl No	Factors	Mean percentage score
*1	Availability of alternative work	80 0
*2	Adaptability to different tasks	85 0
*3	Increasing standard of living	91 7
*4	Supervision by employer	91 7
5	Size of the family	71 6
*6	Training of labourers	90 0
7	Size of farm business	71 6
8	Leisure time activities	65 0
*9	Period of employment	83 3
10	Family responsibility	76 6
11	Labour union practices	68 3
12	Migratory character	66 6
*13	Introduction of new machinery and progressive technology	88 3
*14	Physical condition of labourer	93 3
*15	Nature of tools and implements used	87 1
*16	Wages and incentives provided	83 4

* Factors selected

APPENDIX - VII

Employment and wage pattern for the fortnight (from to)

Sl No

Name and address
of respondent

Sl No	Name of operation	Place	No of days worked	Wages earned per day

APPENDIX VIII

D matrix of 32 items of labour efficiency scale

1 1484									
1 2396	1 1428								
1 1156	1 3605	1 3405							
1 2993	1 4628	1 4312	1 1421						
1 2963	1 4298	1 4441	1 2277	1 1447					
1 2901	1 3364	1 3847	1 3016	1 2773	1 2976				
1 3337	1 3175	1 3908	1 3476	1 3275	1 3577	1 3256			
1 3684	1 3081	1 3677	1 3780	1 3496	1 4160	1 3705	1 2982		
1 3465	1 3406	1 3506	1 3658	1 4180	1 4004	1 4619	1 3925	1 3588	
1 2816	1 3137	1 3272	1 3527	1 4557	1 4350	1 3812	1 4522	1 4029	
1 3576	1 3282	1 3615	1 3701	1 3735	1 4131	1 3698	1 4143	1 4405	
1 3016	1 4271	1 3933	1 3166	1 2752	1 3000	1 3349	1 3569	1 4507	
1 3067	1 3556	1 4241	1 3070	1 2843	1 3257	1 3052	1 4456	1 3549	
1 2953	1 3425	1 4080	1 3072	1 3003	1 3162	1 4276	1 3375	1 3986	
1 2953	1 2744	1 3458	1 2022	1 2567	1 3220	1 3064	1 3628	1 4235	
1 3748	1 3627	1 4463	1 3726	1 4032	1 4252	1 3696	1 3445	1 4546	
1 4518	1 3804	1 4488	1 3725	1 4074	1 3112	1 3867	1 3811	1 3539	
1 3919	1 4043	1 3785	1 4004	1 3833	1 3845	1 4210	1 4705	1 3490	
1 2503	1 3399	1 3636	1 3085	1 3377	1 2962	1 3763	1 3693	1 3926	
1 3303	1 3652	1 3962	1 3039	1 3146	1 3234	1 3402	1 2993	1 4343	
1 3512	1 3607	1 3522	1 3599	1 3350	1 3169	1 3831	1 2785	1 4083	
1 3952	1 3662	1 4053	1 4303	1 3892	1 3860	1 3536	1 3372	1 3680	
1 3475	1 3878	1 3598	1 3925	1 4167	1 3909	1 3756	1 3279	1 3006	
1 3793	1 3850	1 4419	1 2948	1 3797	1 2666	1 3331	1 3944	1 3892	
1 4526	1 4180	1 4481	1 3488	1 3463	1 3745	1 4118	1 4652	1 3767	
1 4130	1 4214	1 4304	1 3527	1 3315	1 3780	1 3971	1 3393	1 440	
1 3370	1 3745	1 4146	1 3074	1 3459	1 3434	1 3433	1 3935	1 3722	
1 4317	1 4074	1 5012	1 4363	1 4582	1 3655	1 3971	1 3736	1 3459	
1 1910	1 2769	1 3511	1 1827	1 3232	1 2905	1 2904	1 2701	1 3851	
1 1697	1 2953	1 3821	1 1811	1 2619	1 2636	1 2497	1 2432	1 3087	
1 2206	1 3886	1 4101	1 2121	1 2259	1 3093	1 2654	1 3533	1 3491	

Appendix VIII contd.

1.2437											
1.3197	1.2723										
1.4675	1.3355	1.2130									
1.4375	1.4896	1.3692	1.2384								
1.3789	1.4376	1.3522	1.3553	1.2709							
1.3637	1.3929	1.3931	1.3589	1.3093	1.1529						
1.3455	1.3957	1.3618	1.3694	1.4288	1.3499	1.2043					
1.3921	1.4207	1.3435	1.3866	1.3898	1.3707	1.3149	1.1840				
1.3767	1.2585	1.3846	1.3466	1.4008	1.4089	1.3436	1.3692	1.2424			
1.3172	1.2652	1.3235	1.2559	1.3321	1.3550	1.3397	1.4392	1.3952	1.3188		
1.3777	1.3816	1.4343	1.3667	1.3784	1.3646	1.3334	1.3605	1.3845	1.4429		
1.4032	1.4297	1.3642	1.3337	1.3658	1.3540	1.3868	1.3660	1.3782	1.4400		
1.3011	1.4444	1.3414	1.3298	1.4527	1.3542	1.3563	1.2968	1.3363	1.4503		
1.4375	1.3564	1.3816	1.4414	1.4288	1.4014	1.3024	1.3483	1.3775	1.4145		
1.3677	1.3393	1.3828	1.3662	1.3720	1.3959	1.2852	1.3268	1.3274	1.3377		
1.3749	1.3627	1.3675	1.3797	1.3734	1.3766	1.3920	1.3146	1.3238	1.3784		
1.3136	1.3964	1.3543	1.3333	1.3845	1.2897	1.3297	1.2525	1.3010	1.4020		
1.3292	1.3611	1.3107	1.3651	1.3323	1.3600	1.2851	1.2365	1.3498	1.3792		
1.3601	1.4094	1.4101	1.4583	1.4445	1.4297	1.4289	1.3156	1.3311	1.4203		
1.3905	1.4462	1.3437	1.3436	1.3427	1.3006	1.3350	1.3956	1.4135	1.3790		
1.3483	1.3637	1.3444	1.3015	1.3005	1.3290	1.2303	1.2726	1.2793	1.3189		
1.3693	1.3229	1.3940	1.3233	1.3586	1.2966	1.2593	1.3152	1.2990	1.3460		

1.2356											
1.3119	1.1641										
1.4173	1.3859	1.2578									
1.4297	1.4253	1.3034	1.2620								
1.3535	1.4435	1.4856	1.3911	1.2942							
1.3810	1.4200	1.3913	1.3926	1.4034	1.2435						
1.3011	1.3813	1.3367	1.3849	1.3897	1.4294	1.2758					
1.2961	1.2887	1.3552	1.3879	1.4014	1.3989	1.3753	1.1012				
1.4028	1.3659	1.3868	1.3915	1.3966	1.3793	1.4066	1.3246	1.1702			
1.3309	1.3615	1.3546	1.3513	1.3814	1.3343	1.4062	1.4081	1.3778	1.3842		
1.3226	1.3658	1.3509	1.2538	1.3374	1.3227	1.4222	1.3484	1.2958	1.3870	1.0568	
1.3168	1.3380	1.3564	1.3314	1.3670	1.3252	1.3718	1.3250	1.3123	1.3577	1.1805	0.9508

APPENDIX IX

A General

1 Name of the respondent
2 Name of the village
3 Name of the block and District

B Specific

1	Age	Years
2	Education	Illiterate/Can read and write
3	Caste	
4	Experience in rice farming	Yes/No
5	Mass media participation	

A	1	Do your family own radio/TV	Yes/No
	2	Do you listen to radio/TV	Yes/No
	3	Do your family subscribe newspaper	Yes/No
	4	Do you read newspaper	Yes/No

			Regularly	Occasionally	Never
B	1	Listen/Watch women s programme			
	2	Listen/Watch agrl programme			
	3	Read news relating to farm women			
	4	Read news relating to agriculture			

	SA	A	UD	DA	SDA
6 Intrinsic motivation					
a) Doing my work well increase my feeling of self esteem (think favourably of himself)					
b) When I do work well it gives me a felling of accomplishment					
c) I feel a great sense of personal satisfaction when I do my work well					
d) When I perform my work well it contributes to my personal growth and development					

Appendix IX contd

Agree / Disagree

7 Competition orientation

a) The key points of success should not be divulged to other woman agrl labourers

b) It is of no use to keep information on what other WAL are doing

c) Crop competitions should be organised

d) Through better working one gets recognition from the farmer

e) It is not good for a women agrl labourer to become too ambitious in life

Agree / Disagree

8 Independence

a) If an agrl labourer wants a thing to be done she must do it herself

b) Independence in decision making is the most important quality of a successful agrl labourer

c) A financially successful women agrl labourer is one who stands on her own

d) Women agrl labourer should teach her children to be able to make their decision independently

e) A women agrl labourer is at her best when she is free self reliant and avoids all outside help

f) Now a days women agrl labourers can no longer afford to be independent

9 Knowledge of paddy

a) Name of a high yielding variety
b) Seed rate recommended/acre
c) How to raise nursery
d) Spacing recommended while transplanting
e) Manurial recommendation/acre

Appendix IX contd

f) Fertilizer recommendation/acre

Basal	N	P	K
Top dressing	N	P	K

g) Common pest of paddy
h) Common disease of paddy
i) Insecticide recommended for controlling pests of paddy
j) Fungicide recommended
k) Irrigation frequency and depth of water in the fields
l) Weeding frequency and time of weeding
m) Time of harvest

10 Cosmopolite orientation — Agree/Undecided/Disagree

a) A woman agrl labourer can learn everything she needs only through experience in her own village

b) All the things that a woman agrl labourer needs to know for her own benefit are not necessarily found in her own village

c) All the needs of a woman agrl labourer can be entirely met with in her own village

d) In the present days of increased transport and communication facilities women agrl labourer should know more about the things happening outside the village

11 Economic motivation — SA A UD DA SDA

a) A woman agrl labourer should work towards larger economic profits

b) The most successful agrl labourer is the one who makes the maximum profit

c) A woman agrl labourer must earn her living but the important thing in life cannot be defined in economic terms

Appendix IX contd

	SA	A	UD	DA	SDA
d) It is difficult for the women agrl labourer s chıldren to make good start unless she provides them with economic assistance					
e) In addition to the job as an agrl labourer I lıke to take up some other enterprise to earn more money					
f) I would work hard without rest ın order to earn maximum money to run my family					
g) All I want from my job is to make just a reasonable living for the family					

12 Values related to agriculture	Agree/Dısagree
a) God s blessings ıs the most important condition necessary for a good crop	
b) An agıl labourer should not be sentimental ın selling away old cattle	
c) It is below the dignity of a person of good social standing to engage in activities such as raising poultry even though they can be profitable	
d) It is below the status of a woman belonging to a respectful family to work as a labourer in another man s farm	
e) Only those persons whose occupatıon by tradition is the keeping of animals would succeed in dairy	
f) It is below the dignity of an educated young woman to do field work	
g) One should try to start important agrl work during auspicious periods	
h) It ıs due to dıspleasure of God on human beings that ıt does not rain regularly ın some occasions	

Appendix IX contd

13 Satisfaction	LTS	LS	S	MS	MTS
a) To what extent does your prestige and status satisfy you					
b) To what extent are entertainments present for your satisfaction					
c) How much satisfied are you with your housing facilities					
d) To what extent are you satisfied in fulfilling your aspirations to achieve better and higher					
e) How much are you satisfied in terms of assistance from state or any agency of state					
f) How satisfactory is your financial condition					
g) How satisfied are you with your work					
h) To what extent are you satisfied with the educational facilities available to you and your family					

14 Gregariousness	Most freq	Freq	Less freq	Rare
a) I stay at home during the social affairs in my village				
b) I enjoy social gathering first to be with people				
c) I like working with many people around me				
d) It is very difficult to adopt scientific cultivation by an ordinary farmer				
e) It will be possible to solve all our food problem if all the farmers adopt scientific cultivation				

Appendix IX contd

16 Innovativeness	Yes	Undecided	No
a) Do you want to learn a new way of farming			
b) If the Agrl Extn workers gives a talk on cultivation aspects would you attend			
	Yes	Undecided	No
c) If the Govt would help you to establish a farm elsewhere would you move			
d) Do you want a change in your life			
e) Do you want your children to be agrl labourers			
f) It is better to enjoy today and let tomorrow take care of itself			
g) One should try to farm the way his parents did			
h) A man s future is in the hands of God			

17 Religiosity	Yes	No
a) You believe in fate		
b) You believe in hell heaven		
c) Work does not create any hindrance in religious affairs		
d) You work only due to the fear of God		
e) You give donation to religious places		
f) You start work only after praying		
g) You pray to God everyday		
h) You go to religious places		

18 Political awareness	Correct / Incorrect
a) Who is the Member of Legislative Assembly of your area	
b) Who is the Member of Parliament of your area	

Appendix IX contd

c) Who is the Chief Minister of India

d) Who is the Prime Minister of india

e) Who is the President of India

19 Alienation Agree / Disagree

a) I feel I am not happy as others are

b) I feel it is safer not to confide in anyone

c) I fell disgusted to see others success as I know I could be far more successful had I been treated fairly

d) I feel one can be more contented by withdrawing from situations that are full of risks and uncertainties

e) I feel I am good for nothing

f) I feel love and affection doesn t matter as much in life as working relationships

g) I feel there are no well-defined objectives to guide me

h) I feel dissatisfied even with my best performance

i) I feel one is free to adopt her own way of life

j) I think I am the best judge of my actions

k) I like to do things all on my own

l) I feel it is not difficult for me to take a decision in the face of moral conflict

Appendix IX (contd)

PART B

20 Items to measure labour efficiency

	1 Determination in work situation	SA	A	UD	DA	SDA
1	You work with full dedication					
2	You feel responsibility in work					
3	You are willing to do any type of work at any time					
4	You feel no obstacle can stop you from achieving your final goal					
5	You usually remain cheerful in spite of trouble					
6	You remain in uniform spirit most of the time					
7	You feel that if you do not perform well you have to bear the consequences in your next birth					
8	You are reluctant to work when the employer himself works in the field					
9	Small working hours with tea and lunch break and rest makes you put in more work					
	2 Inter-personal relationship					
10	You can work with any type of employer farmer					
11	Good rapport with the employer farmer makes you work hard					
12	You feel as if you are working on your own farm when your employer considers your suggestions					
13	You can work with the same efficiency throughout the working time					
14	You are least affected by the time of working					

Appendix IX contd

3 Confidence

15 You are generally confident of your own ability

16 You find yourself working about something or other

4 Adjustability

17 Frequent interruption in your regular work makes you work less than your capacity

18 You are least affected by the amenities (food water etc) provided in the field

19 You cannot work effectively if you travel more

5 Competency

20 You can learn a new work easily

21 You have adequate knowledge to produce quality work

6 Team spirit

22 Competitive spirit among labourers makes you excel in your work

23 Team spirit makes you work with excellence

7 Commitment

24 You try to excel in the work you set to do

25 You work like a slave at everything

8 Work environment

26 You have entertainment in work

27 You get time for relaxation while working

Appendix IX contd

9 Socio economic

28 You have good relation with other labourers at work

29 You can work with all types of fellow workers

30 Reasonable assurance that in the event of injury or disablement your dependents would be suitably provided for makes you give your best

31 Incentives given to the best workers makes you work hard

10 Situational

32 Proper location of the farm/farm house makes your work easier

2 State whether the following factors influencing labour efficiency Yes / No

a) availability of alternative work

b) adaptability to different tasks

c) increasing standard of living

d) supervision by employer

e) training of labourers

f) period of employment

g) introduction of new machinery and pro gressive technology

h) physical condition of labourer

i) nature of tools and implements used

j) wages and incentives provided

Abstract

COMPARATIVE ANALYSIS OF CHARACTERISTICS OF WOMEN LABOURERS ENGAGED IN RICE FARMING IN THE SOCIAL SYSTEMS OF KOLLAM AND KANYAKUMARI DISTRICTS

BY

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ABSTRACT OF THE THESIS

Submitted in partial fulfilment of the requirement

for the degree

DOCTOR OF PHILOSOPHY

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DEPARTMENT OF AGRICULTURAL EXTENSION

COLLEGE OF AGRICULTURE

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1996

ABSTRACT

The study aimed at analysing the labour efficiency of women agricultural labourers The study was conducted in Kollam district of Kerala and Kanyakumari district of Tamil Nadu A total of 300 women agricultural labourers were selected, 150 from each district using random sampling

The labour efficiency was measured with the help of a scale consisting of 32 items developed for the study The data on the labour efficiency of women agricultural labourers and on the nineteen socio-personal and psychological characteristics of the women agricultural labourers were collected using a structured interview schedule

The dimensions of labour efficiency identified empirically were 'determination in work situation inter personal relationship' 'confidence', 'adjustability', team spirit 'commitment work environment , 'competency 'socio economic and situational

In general the women agricultural labourers of both the districts were low in labour efficiency

The dimension wise analysis of labour efficiency showed that majority of them belonged to high group under the dimensions 'adjustability' and competency' whereas majority had low efficiency with respect to the other dimensions

The factors influencing labour efficiency was in the order of period of employment supervision by employer wages and incentives provided availability of alternative work training of labourers nature of tools and implements used introduction of new machinery and progressive technology, increasing standard of living adaptability to different tasks and physical condition of labourers

The variables namely caste intrinsic motivation independence cosmopolite orientation economic motivation values related to agriculture, satisfaction, gregariousness attitude towards scientific agriculture, innovativeness and alienation were found to be significantly contributing to labour efficiency

Total number of days of employment of women agricultural labourers in Kollam district was 207 (82 as agricultural and 125 as non-agricultural labour) and in Kanyakumari district it was 182 (78 as agricultural and 104 as non agricultural labour)

The peak season of employment was January - March in both the districts There was relatively slack in employment during July-August and November December in Kollam district and during August-September and December in kanyakumari district

The average annual income from agricultural and non agricultural labour was Rs 3610 00 and Rs 5447 50 in Kollam district, whereas it was Rs 2695 00 and Rs 3327 50 in Kanyakumari district respectively