

**A COMPARATIVE STUDY OF THE ROLE OF WOMEN IN AGRICULTURE IN  
COIMBATORE DISTRICT OF TAMIL NADU AND IN GUNTUR  
DISTRICT OF ANDHRA PRADESH**

**By  
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## I. INTRODUCTION

Agriculture has been of fundamental importance for India for centuries. An ancient scripture says; "Grow more food". It should be a real vow. The earth is anna (food) ... He who knows this secret knows the real truth. He is blessed with a happy family and with cattle; he shines, becomes famous and great". Even today, more than three-fourths of India's population is made up of village people. The country's prosperity depends on what the peasant can take out of the land.

Until very recently, most of India's farmers were tilling the soil behind slow-moving bullocks, with kinds of tools used in biblical times. By necessity, both farming and research were primarily defensive, aimed at reaping atleast some harvest under even the most unfavourable set of conditions; they were neither aggressive, expectant nor innovative.

Then, in two successive years came the terrible droughts of 1965-66 and 1966-67, the worst in 40 years. They had to be fed from government food stores, which were supplied out of 10 million tons of grain rushed from the United States and other developed countries. And this all came on top of the war with Pakistan, which drained the resources of the country still further.

But today, only two to three years later, India has more than beaten back the threat of hunger; she is now producing close to enough of the major cereal crops to supply her daily needs and is even trying to build a buffer supply. The Green revolution has raised new hopes and

aspirations for millions of people and generated a progressive approach towards agricultural development, Parmer (1970).

India's food supply is currently gaining at the rate of 4 percent a year, with 5 percent well within grasp, while her population is increasing at the rate of 2.5 percent a year.

India's turn-around year in agriculture occurred in the season of 1967-68, but this did not happen overnight. It was built on a decade and a half of good planning by the government of India, on the occasionally brilliant, though often times isolated work of her scientists; on the development of her new Agricultural Universities on the help of outside agencies such as the U.S. Agency for International Development, some of the American land-grant colleges and the Rockefeller and Ford Foundations and not least on the enterprise of her own farmers.

India's farmers have begun to move from the level of subsistence farming to that of commercial agriculture. They are moving from existence to living. Throughout rural India millions of men, women and children are spending countless hours, days, years, alongside their bullocks and water buffalo doing the farm work of the country.

The amount of human toil involved in transplanting rice or millet, one plant at a time, the work and sweat expended by the army of harvesters who inch along on their haunches cutting the crops with a hand sickle, and all the other stoop labour that still goes into farming in that part of the world, are almost beyond comprehension. Apart from that India's

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farm is a family farm. It is the working place, as well as the 'living place' for the family. All the members share in its work and are responsible for the well being of the family and farm. Therefore a small increase in the efficiency of the individual farms can have great impact on the level of national production (Arundekar, 1965).

#### Women's Participation:

The women in India have been participating in all national and social activities along with men from early days. Women are the pivot around whom the family, the society and the whole humanity move.

According to ILO Report on working women in changing India, out of 39, 401, 700 women employed till 1965, 33, 103, 198 were agriculturists and 14,170,831 were agricultural labourers. Further more, 82.20 percent of women workers in the rural sector are employed in primary production as family helpers on the farm. These are indications of the important role of women in farm work.

Although the Indian economy is rapidly getting transformed, for decades to come, a very large majority of women workers will still be engaged in the traditional self-employment sector in the rural areas. Their role in farming, farm management and agricultural research and their contribution towards increasing food production are significant and their involvement depends the success or failure of the farm.

In modern agriculture, women share in a number of farm operations with men. Activities such as seed selection, storage, sowing, dibbling and

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planting, field irrigations, weeding and cleaning of grains, collection and storage of manure and most of other farm operations are mainly carried out by women. Feeding cattle, looking after the milch cattle and poultry keeping are also entirely the job of farm women. In all the states of the Indian Union several women manage large farms of many acres by themselves.

In family farms, the greater portion of farm labour is supplied by the farmer, his wife and other members of the family reducing considerably the cash costs of cultivation. The closest associate of the farmer is his wife; she shares with her man the arduous burden of farm work in addition to her major responsibility as homemaker working harder and for longer hours than he does. She takes more than an equal share of the family privations in lean months, providing the best possible to her husband and children. Women can thus influence their families towards increased food production and income.

In addition to participation in farm activities and the physical work, women also help in decision-making with regard to farm practices and operations. Women, as wives and mothers, have a considerable part in decision-making in the farm and the home. Decision-making is important, because much of the success of farming depends upon how well the family makes decisions, (Singh, 1969).

In joint families, not only the wives but also the mothers have a large part in decision-making. Only when the women in the family are convinced about the efficacy of new ideas in agriculture; they would be implemented on a large scale, Devadas (1969).

### Scope and Need of the Study:

This investigation is a comparative study of the role of women in agriculture in Andhra Pradesh and in Tamil Nadu. This study aims at highlighting the importance of women in the basic and most important profession - agriculture and producing food for mankind. In agriculture an overwhelming majority of females carry out agriculture manuring, weeding, hoeing, harvesting, thrashing, preparation of the produce for marketing, etc., The investigator hopes that the findings of this study would be of help to Government officials, research scholars, extension personnel who involve in the dissemination of information towards the betterment of agricultural production in our country.

### Objectives of the Study:

The study aims to find out the extent of participation of women in agriculture, the various farm activities in which they involve themselves in different capacities such as participation, supervision and advisory and to compare their roles in Andhra Pradesh and in Tamil Nadu, their future ambitions in performing the farming in an effective manner and the impact of the participation of women in agriculture.

### Limitations of the Study:

Unlike many research studies, the present study is limited to the study of role of women in six villages in Guntur district of Andhra Pradesh and six villages in Coimbatore district of Tamil Nadu due to limited time and other factors. The sample was limited to 150 farm women in Andhra Pradesh and 150 women in Tamil Nadu.

Organisation of the Thesis:

The thesis on 'Role of Women in Agriculture' is discussed under five chapters.

The first chapter gives an introduction on the importance of agriculture, role of women in agriculture, scope and need of study, objectives of the study, limitations of the study and organisation of the Thesis.

The second chapter, gives a detailed review of the related literature.

The third chapter, gives a detailed account of the different methods suitable for the study and the methodology followed for the present study.

In the fourth chapter, the results are consolidated and discussed in detail with tables and inferences drawn. Graphical representations are given, wherever needed.

The fifth chapter gives the summary of findings, recommendations and suggestions and conclusions followed by the bibliography and Appendices.

## IX. REVIEW OF LITERATURE

The available literature regarding this study has been reviewed under the following headings.

- A. Importance of Agriculture
- B. Role of women in Agriculture
- C. Impact of the role of women in agriculture
- D. Studies on the role of women in agriculture.

### A. Importance of Agriculture:

The importance of agriculture to India can hardly be exaggerated. It is the very backbone of her economic system and is her premier, national key industry. In fact, the prosperity of agriculture is synonymous with the prosperity of India. Also agriculture is assuming even greater importance with the passage of time (Dewett, 1946).

In the development of Indian economy, agriculture plays a special important role. In the words of the First Five-Year Plan; "In any scheme of planned economic development of the country, agricultural reorganisation and reform hold position of basic importance. While the several parts of the nation's economy are mutually interdependent and they must all receive their proper share of attention from the economic planner, the success of the whole plan will vitally depend upon the results achieved in making the most advantageous use of the land and labour resources engaged in agriculture. In this sense the importance of agriculture is both basic and vital".

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Progressive agriculture will give progressive outlook, new motivations and new values. These are essential for economic development. Hence there must be revolutionary changes in Indian agriculture to set a stage for rapid economic development.

Farlok Singh's article on "Planning and Productivity in Agriculture" traces, "In a growing economy, the role of agriculture is much wider than the problem of meeting the requirements of food and raw materials. As development proceeds, agriculture and industry come to be more and more closely linked. Increasingly adequate availability of industrial inputs, such as chemical fertilizers, pesticides, implements and various forms of machinery and equipment become a necessary condition for rapid increase in agricultural production. Rise in incomes and the changing needs of the rural population provide the greater part of the demand for the products of industry, specially of consumer and intermediate goods..... agriculture releases new man power and enterprise for industrialization, for the growth of towns and cities and for developing a wide range of processing and other activities allied to agriculture. In time with a stronger economic base and greater diversification, the rural areas should also contribute increasingly to capital formation and provide surpluses for investment in industry".

The rapid development of agriculture which is indispensable not only for producing food, producing raw materials for some industries and providing employment but also, in the case of exporting countries, as a means of earning foreign exchange, is an essential part of general economic and social development. Agricultural and industrial development are inter-dependent. This

interdependence calls for the balance and integrated growth of the various sectors of the economy, coupled with a dynamic growth and parallel social progress.

Thus the greatest need for the improvement of economy of the country and for bringing prosperity to the nation would be considerable increase in agriculture production together with production of manufactured goods.

Realising this crucial need, the framers of Indian Constitution have given due recognition to agriculture in the "Directive Principles of State Policy", State shall endeavour to organise agriculture on modern scientific lines.

India is today at the threshold of a farm revolution, namely, the Green Revolution, Jha (1968). The Prime Minister, Srimathi Indira Gandhi (1975) opines that "our farmers have made good use of agricultural inputs provided to them. Higher yields have not been the result of good rains alone. The revolution in agriculture will impart strength to our economy".

The First Five-Year Plan naturally gave top priority to agriculture. As the First Plan observed, "For the immediate five-year period agriculture, including irrigation and power, must in our views have the topmost priority".

The Second Five-Year Plan was "intended to provide adequate food to support the increased population and the raw materials needed for a growing industrial economy and also to make available larger exportable surpluses of agricultural commodities".

The Indian Society of Agricultural Economics (1970) states that agriculture was given priority in the Plans. The production potentials have promised improvements during the Fourth Plan Period, agricultural output is expected to grow at the rate of 5 per cent as against very low in the previous Plan.

From the end of the Third Plan to the commencement of the Fourth Plan, have been years of great significance for Indian agriculture. It was during this period that the new agricultural strategy was tried out and the beginnings of what has come to be known as the 'green revolution' were made.

World Food Charter - The United Nations Conference on Trade and Development (Document, New Delhi, Feb-March, 1968) recognises that: the rapid development of agriculture, which is indispensable not only for producing food, producing raw materials for some industries and providing employment but also, in the case of exporting countries, as a means of earning foreign exchange, is an essential part of general economic and social development. Agriculture and industrial development are inter-dependent. This inter-dependence calls for the balance and integrated growth of the various sectors of the economy, coupled with a dynamic growth and parallel social progress.

Frankel (1971) states, the economic aim of achieving maximum increase in agricultural output is to support rapid industrialisation and the social objective of reducing disparities in rural life.

The Planning Commission thought that, "the increase in agricultural production had helped to end inflation, stabilise the economy and prepare

the way for a higher rate of development during the Second Five Year Plan". Mohd Fasal, Managing Director, Hindustan Insecticides Limited, New Delhi (1975) states, the greatest need for the improvement of economy of the country and for bringing prosperity to the nation would be considerable increase in agriculture production together with production of manufactured goods.

To rejuvenate the Indian economy in general and agricultural production in particular, Prime Minister, Indira Gandhi has given the 20-Point programme, wherein it has emphasized the need for more production in all fields.

The key to our progress lies in increasing agricultural production and productivities. The discoveries of scientists and the achievements of many of our progressive farmers show that there is vast scope for achieving this aim. (Fakruddin Ali Ahmed, President of India, 1975 Sept. 16).

Adequate attention is also being paid by Indian Council of Agricultural Research for improvement of pulse and oil seed crops and their production technology through coordinated research project. New production technologies for rainfed areas have also started coming up from agricultural research institutions and universities - Dr. K.E. Singh (1973).

As a result of break-through in agricultural research and availability of large number of scientific findings in India, several new programmes have been initiated; they are;

- I. High Yielding Varieties Programme
- II. Pilot projects for potentially viable small farmers known as SFDA projects

- III. Pilot projects for marginal farmers and agricultural labourers known as MFAH projects
- IV. Tribal development projects
- V. Drought-prone area programmes
- VI. Crash scheme for rural employment farming projects
- VII. Dry land farming projects
- VIII. Pilot multiple cropping schemes
- IX. Intensive cotton development project and agro service centres.

#### B. Role of Women in Agriculture:

Manu says, "Where women are respected, there the Gods delight and where they are not, there all work and efforts come to naught". Swami Vivekananda says, "the real shakti-worshipper is he who knows that God is omni-present force in the universe, and sees in women, the manifestation of that force".

Gandhiji, said in 1918, "Women is the companion of man, gifted with equal mental capacities. She has right to participate in the minute details of the activities of man and has the same right of freedom and liberty as he". As a co-partner in her husband's enterprise, she can use improved methods of agriculture and animal husbandary for solving the economic and nutritional problems of India.

Behru (1963) said, "In order to awaken the people, it is the women who have to be awakened. Once they are on the move, the household moves, the village moves and the economy moves". Gulati (1956) explains that a well-organised home is the strong foundation of nation. If women are left

out of national plans, the chariot of progress will not move. Khan (1963) since it cannot move on one wheel, this is particularly significant in agriculture. Cousins (1947) is of the view that the development of Indian women-hood could be prophesied in terms of the masses of village women engaged in agriculture. The FAO (1962) claims that farming is not only an occupation and a business, but it is also a family enterprise in which the homemaker needs to adjust to all aspects of the operation. Agriculture is the oldest and most important of all primary industries because it satisfies our most vital needs, namely food. In this industry the farmer's wife is an equal partner of the farmer taking her full share in the cultivation of the field.

As the economic partner of man, woman shares with him the arduous life he leads, often working harder and for longer hours than he does. At harvest time, often the first crops has been cut, it is the woman who brings a handful of the newly reaped grain before the deity to be blessed, Hanavathy (1957). Women who are inclined to be more conservative and resist change in their traditional ways, not only influence the men in their own families, but also influence the women in their own families and neighbourhood, once they are convinced that increased food production is possible, The Ministry of Community Development, Government of India (1958). In the family, the closest associate of the farmer is his wife. Therefore, the farm women play an effective role in improving farming, Singh (1969). Women can influence their families towards increased food production to bring added income to improve family living, health and education. In view of the fact that farm women exercise a vital influence on the farmers decision-making process,

it is necessary that they are given training in agriculture. Biddy (1958).

According to Dr. Krishna Bai Ninkhar (1958), the several functions that the rural women fulfil, such as;

1. House keeper;
  2. Manager for her domestic budget;
  3. A teacher to educate her children;
  4. A wife, mother and hostess of her home;
  5. A toiler in the fields along with her man;
  6. A worker at a supplementary industry, at cottage craft or at possessing work of agricultural produce of attending to work on the farm like the care of live stock, milking of milk cattle, disposal of farm products, etc.;
- and
7. As a sanitation worker, in charge of the cleanliness of her home and surroundings.

She is living goddess functioning in the household. Swami . . . . Ranganathananda (1966). As a bird cannot fly on one wing, so no nation can march forward if its women folk do not share the responsibility and initiative in every walk of life. Fortunately for us, Indian women have tradition of standing by the side of men in all activities by political, economic and social. Sinde, Minister of State for Agriculture and Irrigation (1975).

Women's primary function in the management of household affairs is certainly a vital one; but this does not mean that her work and contribution should not spread in all other fields of our national activity, Fakruddin Ali Ahmed (1975, March). Devadas (1965) has stressed that women determines

the goals and values of their families. Since a farmer is exposed to and influenced greatly by his mother in his childhood, and wife later, proper education of the farm women to the guidance and help in agricultural operations is important in the home and on the farm. Farm women can be instrumental to inculcate the right attitudes towards agriculture in their families and to get them educated adequately for the profession. As early as 1930, Gunnar and Alva Myrdal in their book "The Population Crisis", expressed the view that the theory of "Women's place being the home" was a product of the industrial revolutions and was meaningless in agrarian societies where agriculture was carried on by the whole family men, women and children.

#### C. Impact of the Role of Women in Agriculture:

In agrarian economies all over the world, particularly in Asia and Africa, women have always played a major and integral role in the process of production as well as marketing of agricultural products.

Indian Farming (1975 16th June), there are few countries in the world where women have contributed so much to increase agricultural production and improvement of supply of food and agricultural raw material, as in India, their role as the labour force and the "brain" behind most of the agricultural operations from sowing and transplantation, to harvesting and the post-harvest processing. Care of the grain, in the case of the farm animals, and support to the male agricultural labour population is well known. While the agricultural scientists developed the high yielding varieties, the Indian house wife made them acceptable and even popular as food, by her cooking and readiness to experiment with new food articles and recipes.

Jagannathan (1975) says that women account for 200 million of the rural population. Born to toil, they begin working from a tender age in the field and home learning their lessons in the hand that sows the seed, harvests the grain, stores the food, tends the livestock, nurses the children and keeps the home-fires burning in times both good and bad. Yet they make no demands, their claim is the labour of love.

In the National Committee on International Women's Year held (its first meeting) on December, 10<sup>th</sup>, 1974, Prime Minister Smt. Indira Gandhi emphasised the vital role women have to play in shaping the destiny of the nation and indeed of mankind. Especially in today's world the changes are so vast that half the population, the men-folk, cannot deal with them without the co-operation of women. The mother, the sister, the daughter, the wife each has a specific role to play, but each besides this role, is an individual. Each one is a citizen, a citizen here in India and at the same time a citizen of the world, Indira Gandhi (1975). Devadas (1968) reveals that India has progressed greatly in the field of women's education and development. They are rendering valuable services in all fields, education, social welfare, health and community development.

#### Studies on the Role of Women in Agriculture:

Sachdeva (1957) estimated that women workers numbered about 12 millions which was 36.5% of the total worker population employed in agriculture. This enquiry revealed that they worked on an average for 31 days on agricultural labour of the total men days worked by the casual women workers, who formed 33% of the total estimated labour accounted for not less than 34% of the total men days worked in different occupations.

Sangupta (1960) reported that women participated in harvesting crops, weeding, planting, threshing, manuring and field irrigation and also at times helped in terracing fields on slopes of hills.

Broadfield (1965) estimated that women did a large amount of farm work in producing the main crops and that they were responsible for storing and cooking family food.

Nainie et al (1968) conducted a study on the preferences of 60 randomly selected farm women towards food related tasks. Their data reveals that the educational level, caste and land holdings did not affect the preferences of the respondents.

According to Singh (1968), in the family the closest associate of the farmer was his wife. Therefore the farm woman would play an effective role in improving farming.

According to Singh and Sinha (1970) types of family had non-significant in between on the patterns of decision-making process with regard to artificial fertiliser and vegetable cultivation.

Sharma and Singh (1970) investigated the problem of participation of rural women in decision making process related to farm business. They indicated that the women participated fully in the farm operations and decision making along with the farmers. They further observed that rural women participated in larger proportions in seed storage, winnowing, care of animals and harvesting in comparison to other farm operations. They added

that involvement of house wives was relatively large in case of those farm operations which were confined to home sphere and which were largely carried out by house wives.

According to Thangamani (1971), farm women participated in all agricultural activities. The extent of their usual participation was higher in transplanting and hoeing than in others. She also observed that women were consulted in all the activities pertaining to decision making. She concluded that the extent of decision making was not affected by income, education, community, size of holding, location of the house and type of family.

Another survey done by Sashi Puri (1971) clearly indicated that there is differential pattern of decision making. In some cases, like marriage, farm related tasks and expenditure pattern, the heads of the households are the main decision makers; where as in other cases, such as, education of children, selection of occupation for children, the whole family takes decisions. Women make decision independently in some areas and jointly in many others.

Gopal (1975) viewed that some working ladies used to do agricultural work at the farms of their husbands from morning till evening. They used to attend to many odd jobs, for example, taking meals to their husbands in the farms, drying of grains, grinding etc.,

Bhatt (1975) stated that in the rural areas, many women work as helpers of men or independently on the farms. In agriculture, an overwhelming majority of females carry out agricultural operations like planting, manuring,

weeding, hoeing, harvesting, threshing, preparation of the produce for marketing, etc.,

Prebha Rai (1975) stated that as a practice women are employed on jobs such as sowing, weeding, transplanting, winnowing, threshing and harvesting which are considered less skilled jobs.

Vidyarthi (1975) reported that in India rural women spend 50-60% of their time on agricultural operations on an average. However, besides her role in economic activities, she is the pivot of family exercising her influence on husband and children.

Chakravarty (1975) stated that women participate in most of the agricultural operations like sowing of seeds, transplanting, weeding, harvesting, preparation of compost and manure pits, application of manures, storage of seeds and food grains. As a wife or a mother, a farm woman takes and carries out the decisions regarding development of farm and home.

Sohgal (1974) stated that in the arts and professions, in laboratories, factories, and on farms, Indian women are making their contribution towards the country's progress.

Krishna (1975) revealed that, some of the important agricultural operations like weeding, sowing, transplanting, harvesting, threshing, storing etc., are performed more or less exclusively by the women. In the hilly areas, women play a more active part in the agricultural operations than the menfolk. And then looking after the dairy and the poultry in the house is generally,

women's responsibility. Also, women have the additional responsibility of running the home and proper maintenance of family life.

Randhawa, Sivarama and Vaidya (1961) stated that in Andhra Pradesh women do all the cooking, cleaning of the house, and in their spare time help their menfolk with farm work also. They generally do the planting, hoeing, hulling and filling the grain, winnowing stores. They also milk the cows and the buffaloes and clean the cattle sheds.

The potentiality of the farm women in the rural sector is very great. They not only make the home living a comfortable one, or increase the food production, but can even change the rural profile (Asuri, 1975).

Other branches of agriculture are fuel and food production, growing of fruit and vegetables and beekeeping. Women are employed in these pursuits. (Sengupta, 1960).

Chakravarty (1975) states, the role of farm women in agriculture can be classified as follows;

1. Contributor of labour in agriculture production
2. Responsible for the storage of seeds and food grains
- and 3. Responsible for the management of cattle and other farm animals.

Indira Gandhi (1975) reported that in agricultural communities, women have always worked in the field along side their menfolk. They have tackled some of the most labourious tasks. Yet their contribution to farming and to rural life has not been fully appreciated. It will benefit greatly for growing things.

Swaminathan (1975) revealed that, from ancient days, women have played a pivotal role in our agriculture. They have not only attended to various field operations like transplanting of rice, weeding crops and scaring birds, but have also been practically in complete charge of many operations like reaping, winnowing, threshing and storage. Much of the work in plantation crops like plucking tea is done by women. The tending of farm animals and saving farm-yard refuse for use either as fuel or manure have all been predominantly women's occupation. Thus, they have provided much of the unpaid family labour in agriculture.

### III. METHODS OF INVESTIGATION

To study the role of women in agriculture, there are four methods of collecting information. They are:

- 1. Case study
- 2. Direct Personal Investigation
- 3. Interview schedule and
- 4. Observation Method.

#### 1. Case Study:

The case study method may be defined as an all-inclusive and intensive study of an individual, in which the investigator brings to bear all his skill and methods, or as a systematic gathering of enough information about a person to permit one to understand how he or she functions as a unit of society.

The case study not only reveals characteristics which are typical or representative of a group, it also seeks the variations of these common attributes within a group; but it looks above all for the unique aspect of an individual case which distinguishes it from others within the group.

#### Direct Personal Investigation:

In this method the investigator collects the necessary data personally. He goes to the spot, personally meets the persons from whom the information is to be collected. He asks them questions related with the enquiry and

collects the required information. This method is adopted for local confined and intensive type of enquiries.

#### Method Adopted for the Present Study:

The investigator has chosen interview schedule with observation method because of limited resources like time, money, etc., and they are the appropriate methods to study the role of women in agriculture.

#### Interview Schedule:

The interview is a technique of field work which is used to watch the behaviour of an individual or individuals, to record statements, to observe the concrete results of social or group interaction. It is therefore, a social process, it usually involves interaction between two persons. In the course of an interview, the interviewer interrogates his subject to obtain the particular data wanted. Having this in view and because of the problem of illiteracy, the interview method was chosen to collect the information from the rural farm women.

Beatrice Webb regarded the interview as an instrument of research and discovery a device for investigation, most useful to the Sociologist. This device compensates for the inability to use the chemists test-tube or the biologist's microscope (Young, 1949).

Rangaswamy (1969), Campbell and Katona (1953) and Cannel and Kalm (1953) have recommended the interview as one of the means of collecting data in social research.

A schedule is a blank form with blank space in the form itself for recording the answers. A schedule is ordinarily filled in by the interviewer from the informant's replies.

A schedule enables the observer to enter the concrete details regarded as essential factors in the study; to accumulate large quantities of accurate data; and to ensure standardization; thus helping each observer to provide uniform data (Young, 1949)

So the investigator chose the schedule with observation method for collecting the data.

#### Evolving the interview schedule:

The interview schedule was prepared so as to call the information on the general back-ground of the village, family background of the sample, information regarding the activities in which farm women take part, reasons for their participation in agriculture, how the household activities and participation in the farm activities are interrelated, the difficulties experienced in farm work, interest and knowledge of agriculture and awareness about the innovations in agriculture and the effect of their participation in agricultural operations.

#### Pilot Study:

Chowdhari (1969) suggests that in matters where literature is scanty and doubtful, a pilot study, and one or two pretests and a final version of the questionnaire are essential. The empirical checks must cover all points, the logic of the items, the structure of the schedule and the phrasology.

The schedule was prepared and its suitability to elicit the required information was pretested by administering it to ten farm women in Coimbatore district and ten farm women in Guntur district.

Tool for the final study:

The tool for the final study was modified in the light of the pilot study findings deducting two questions and adding three questions. (APPENDIX)

Sample for the final study:

The following villages were selected in Tamil Nadu and Andhra Pradesh.

Tamil Nadu (Coimbatore)

A. Thondimuthur Panchayat Union

1. Arunaga Goundanoor
2. Kalampalayam
3. Madampatti

B. Perur Panchayat Union

1. Kovil medu
2. Kumarapalayam
3. Ramisettipalayam

Andhra Pradesh (Guntur)

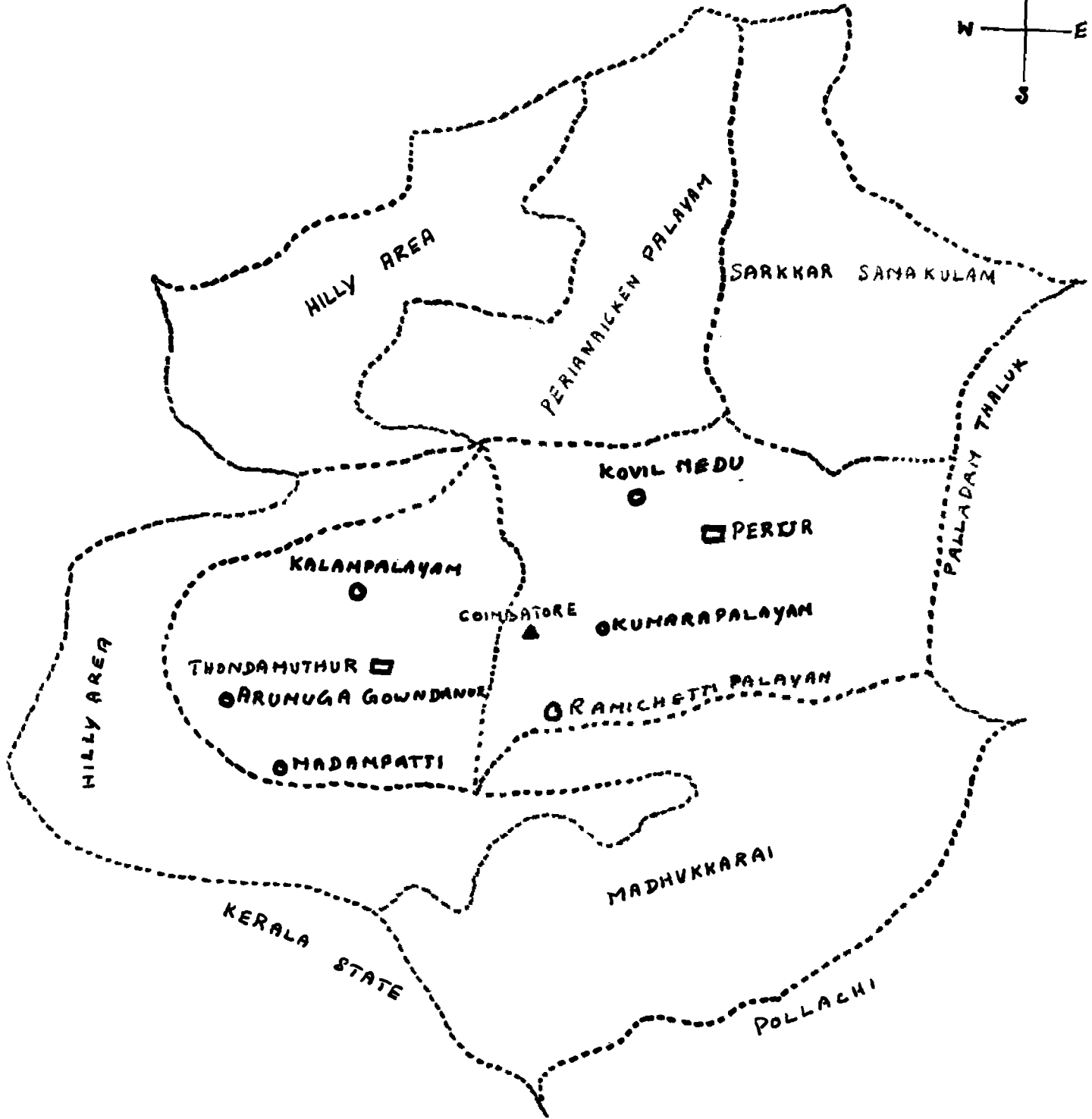
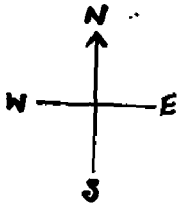
B. Bapatla Panchayat Union

1. Jammalapalem
2. Kankatapalem
3. Bapatla

Ponnur Panchayat Union

1. Appapuram
2. Estur
3. Kasukurru

The investigator personally interviewed 150 farm women in Coimbatore and 150 farm women in Guntur taking 25 farm women from each of the 6 villages for the final study.



**MAP SHOWING THE GEOGRAPHICAL DISTRIBUTION OF THE SELECTED BLOCKS IN COIMBATORE.**

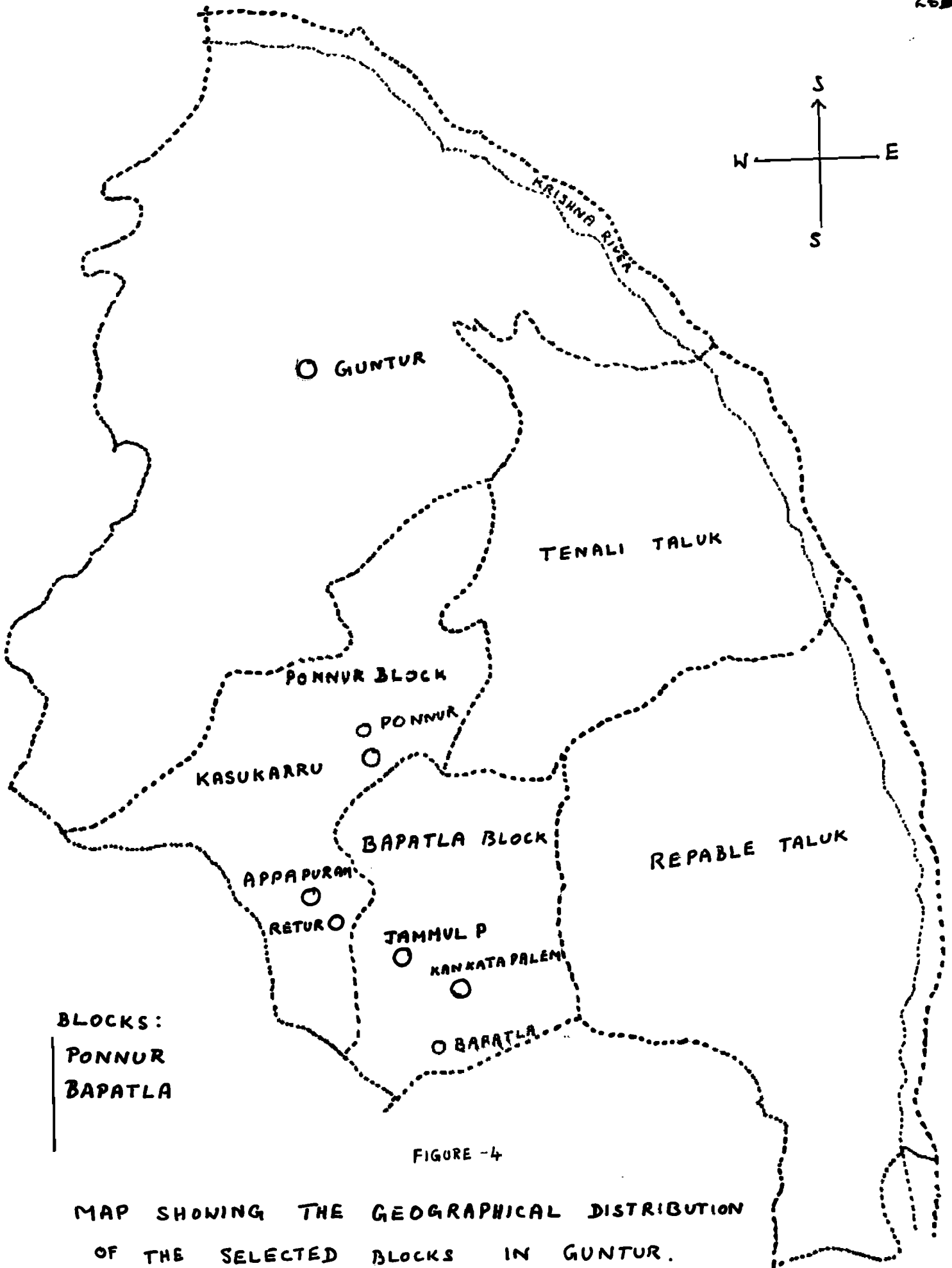


FIGURE -4

MAP SHOWING THE GEOGRAPHICAL DISTRIBUTION OF THE SELECTED BLOCKS IN GUNTUR.

### Administration of the Final Study:

The investigator established good rapport with the village leaders and the respondents by visiting them frequently before conducting the final survey. Then the schedule was administered personally by the investigator after informal talks explaining the purpose of the study. The interviews concluded after expressing gratitude to the respondents for extending their co-operation. Even though it was a time, energy and money consuming one, it has given relevant and useful information.

### Analysis of the data:

The information collected was consolidated, tabulated and analysed statistically using the appropriate tests. The scores were the number of activities in which every farm women had participated or supervised or taken part in the decision-making process. The total of individuals were summed up to have the scores in each area, according to the factors considered.

### Observation:

Field enumeration depends on observation to obtain facts. The entries in the schedules usually have to be checked by direct observation to determine their reliability. The interview, too depends on personal observation.

Most people rely on uncontrolled observation for knowledge about social situations. It consists of the simple forms of looking and testing which not only contribute to the basic, varied stock of knowledge about social relations but which also afford the principal techniques for gathering data in many modern investigations (Good and Hatt, 1952).

The investigator made casual observation of the extent of involvement of women in agricultural operations which facilitated the investigator to establish better rapport with the Farm women to get valid and reliable responses from them. The results are presented and interpreted in the following chapter.

#### IV. RESULTS AND DISCUSSIONS

The results of the study are presented and discussed under the following headings.

- a. Family background of farm women
- b. General information of farming
- c. Role of women in the farm
- d. Participation of women in agricultural operations
- e. Interest and knowledge of women in agriculture
- f. Farm women's role in community activities.

##### I. Family background of farm women:

Family background comprises aspects such as caste, type and size of family, income and educational status and age of members.

##### Caste:

The castes of the selected families are presented in Table 1.

TABLE 1

## CASTE OF THE SELECTED FAMILIES IN COIMBATORE

S.No.	Caste	Number of families	Percentage
1.	Gounder	106	70
2.	Naikar	9	6
3.	Kamma Naidu	10	7
4.	Pandaram	2	1
5.	Nadar	3	2
6.	Konar	13	9
7.	Pattani Talaka Thalukka	1	1
8.	Muppar	2	1
9.	Chettivittar	1	1
10.	Devendrakulam	2	1
11.	Idangam	1	1
Total		150	100

In Coimbatore the majority 70 percent of the respondents belonged to gounder caste and konar came next constituency 9 percent.

In Guntur the religions of the selected families were Hindus, Christian and Muslim. There were 139 Hindu families, 10 Christian and 1 Muslim families. The caste of selected families are presented in Table 2.

**TABLE 2**  
**CASTE OF THE SELECTED FAMILIES IN GUNTUR**

S.No.	Caste	Number of families	Percentage
1.	Kamma Naidu	92	60
2.	Mala	28	19
3.	Yadava	4	3
4.	Dasari	1	1
5.	Pattani Muslim	1	1
6.	Yasa	3	2
7.	Rajaka	2	1
8.	Yerukula	2	1
9.	Telaga Naidu	12	7
10.	Reddy	7	5
	Total	150	100

In Guntur the majority (60 percent) of the respondents were Kamma Naidu and 19 percent were Mala.

Comparing the two selected areas, in Coimbatore the Gounder caste was a major constituency and in Guntur, Kamma Naidu was the major caste whose primary occupation is agriculture.

**2. Type of family:**

The type of the selected families is presented in Table 3.

**TABLE 3**  
**TYPE OF THE FAMILY IN COIMBATORE**

S.No.	Type of family	Number of family	Percentage
1.	Nuclear	132	88
2.	Joint	18	12
	Total	150	100

It is evident from the above table that out of 150 families studied, 132 families (88 percent) were having nuclear families whereas 18 families (12 percent) lived in joint families.

**TABLE 4**  
**TYPE OF THE FAMILY IN GUNTUR**

S.No.	Type of family	No. of family	Percentage
1.	Nuclear	105	70
2.	Joint	45	30
	Total	150	100

In Guntur 70 percent of the families belonged to the nuclear type and 30 percent were the joint families.

Comparing the two selected areas, the nuclear families were more in Coimbatore district.

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Size of the families:

The size of the selected families is presented in Table 5.

TABLE 5

## SIZE OF THE FAMILY IN COIMBATORE

S.No.	Family members Range	No. of families	Percentage
1.	1 - 2	15	10
2.	3 - 4	53	35
3.	5 - 6	57	38
4.	7 and above	25	17
	Total	150	100

Out of 150 families 38 percent were having 5 to 6 members, 35 percent 3 to 4 members and 17 percent were having 7 and above number of members in their families.

TABLE 6

## SIZE OF THE FAMILY IN GUNTUR

S.No.	Family members range	No. of families	Percentage
1.	1 - 2	8	5
2.	3 - 4	51	34
3.	5 - 6	74	50
4.	7 and above	17	11
	Total	150	100

Out of 150 families, 50 percent were having 5 to 6 members, 34 percent 3 to 4 members and 11 percent were having 7 and above number of members in their families.

The above two tables reveal that almost higher number of members in 5-6 were there in the families studied in Coimbatore as well as Guntur, which means that the family size was the same in both the cases.

### 3. Income:

The income levels of the respondents are given in Table 7.

TABLE 7

ANNUAL INCOME OF THE SELECTED FAMILIES IN COIMBATORE

S.No.	Annual income level range in Rs.	Number of families	Percentage of families
1.	below 5,000	15	10
2.	6,000 to 10,000	41	27
3.	11,000 to 25,000	50	34
4.	26,000 to 1,00,000	35	23
5.	1,00,000 and above	9	6
	Total	150	100

In Coimbatore 10 percent belonged to the low income group (Rs.5,000 and below) 27 percent belonged to the middle income group (Rs.16,000-10,000) majority (63 percent) belonged to the high income group. (Rs.11,000 and above).

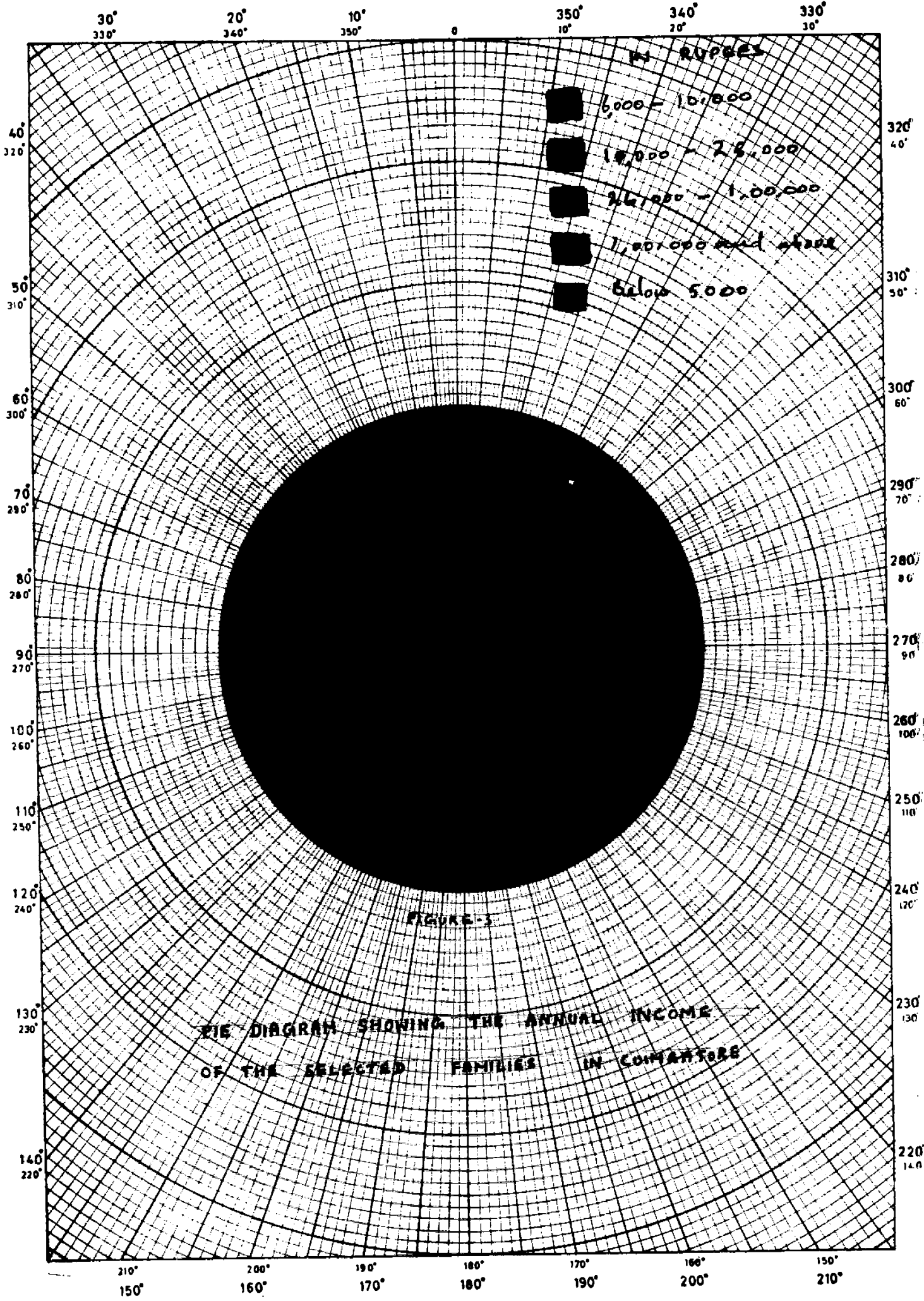


FIGURE - 3

PIE DIAGRAM SHOWING THE ANNUAL INCOME OF THE SELECTED FAMILIES IN COMPARTERS

30°  
330°

20°  
340°

10°  
350°

0

350°  
10°

340°  
20°

330°  
30°

33b

IN RUPEES

- 6,000 - 10,000
- 11,000 - 25,000
- 26,000 - 1,00,000
- Below 5,000
- 1,00,000 and above

40°  
320°

320°  
40°

50°  
310°

310°  
50°

60°  
300°

300°  
60°

70°  
290°

290°  
70°

80°  
280°

280°  
80°

90°  
270°

270°  
90°

100°  
260°

260°  
100°

110°  
250°

250°  
110°

120°  
240°

240°  
120°

FIGURE 4

PIE DIAGRAM SHOWING THE ANNUAL INCOME OF THE  
SELECTED FAMILIES IN GUNTUR.

130°  
230°

230°  
130°

140°  
220°

220°  
140°

210°  
150°

200°  
160°

190°  
170°

180°  
180°

170°  
190°

160°  
200°

150°  
210°

TABLE 2

## ANNUAL INCOME LEVEL OF THE SELECTED FAMILIES IN GUNTUR

S.No.	Annual Income level range in Rs.	Number of families	Percentage
1.	below 5,000	15	10
2.	6,000 to 10,000	57	38
3.	11,000 to 25,000	42	28
4.	26,000 to 1,00,000	32	21
5.	1,00,000 and above	4	3
	Total	150	100

In Guntur 52 percent belonged to the high income group (Rs.11,000 and above). Only 10 percent belonged to the low income group (Rs.5,000 and below).

It is clear from the above table that in both the areas, majority of respondents belonged to the high income group of Rs.11,000 and above per annum.

#### 4. Educational status:

Table below gives the educational status of the selected farm women.

TABLE 9

## EDUCATIONAL STATUS OF THE FARM WOMEN IN COIMBATORE

S.No.	Educational status	Number of women	Percentage
1.	Illiterates	111	74
2.	Primary school	9	6
3.	High school	23	18
4.	P.U.C.	1	1
5.	Degree	1	1
	Total	150	100

Majority (74 percent) of the respondents were illiterates, 18 percent had studied upto high school level and one of the respondents was a degree holder. in Coimbatore.

TABLE 10

## EDUCATIONAL STATUS OF THE FARM WOMEN IN GUNTUR

S.No.	Educational status	Number of farm women	Percentage
1.	Illiterates	48	32
2.	Primary school	40	27
3.	High school	55	37
4.	P.U.C.	5	3
5.	Degree	2	1
	Total	150	100

In Guntur 32 percent of the respondents were illiterates and 2 were degree holders.

Comparing the educational status of the selected farm women, in Guntur educational status was higher than Coimbatore.

5. Age levels of the samples:

In Coimbatore with regard to age, the respondents age level was 18 to 35 the major constituency. In Guntur the majority of the respondents age was between 25 to 40 years. Thus the majority of farm women involved in agricultural operations in Coimbatore as well as Guntur were in the age group 18 to 40 years.

6. Marital status of the selected farm women:

In Coimbatore, majority of them (96 percent) were married and in Guntur 99 percent of the respondents were married. Thus in both areas, the majority of the farm women were married.

B. General information of farming:

The information noted under the general details of farming were: size of land holdings, crops cultivated in the farm and home, involvement of the family members in agricultural operations.

1. Size of land holdings:

Tables 11 and 12 present the size of the land holding of the selected families.

TABLE 11

## THE SIZE OF LAND HOLDING OF THE SELECTED FAMILIES IN COIMBATORE

S.No.	Size of holding	Number of families	Percentage
1.	below 5 acres	38	25
2.	6 to 10	60	40
3.	11 to 15	27	18
4.	16 to 25	15	9
5.	26 to 50	9	6
6.	51 and above	3	2
	Total	150	100

The small land (below 5 acres) holders constituted 25 percent. The majority (58 percent) possessed the average land (6 to 15 acres) only 2 percent families owned large (above 51 acres) farms. in Coimbatore.

TABLE 12

## THE SIZE OF LAND HOLDING OF THE SELECTED FAMILIES IN GUNTUR

S.No.	Size of land holding	Number of families	Percentage
1.	below 5 acres	36	24
2.	6 to 10	45	30
3.	11 to 15	20	13
4.	16 to 25	26	17
5.	26 to 50	9	6
6.	51 and above	14	10
	Total	150	100

In Guntur, the small land (below 5 acres) holders were 24 percent. The large land (above 5½ acres) holders constitute 10 percent.

Comparing to Coimbatore, there were more families in Guntur who had large (above 5½ acres) holdings.

2. Crop cultivated in the farms:

The following table presents the pattern of crops cultivated in selected farm area.

TABLE 13

PATTERN OF CROPS CULTIVATED IN GOIMBATORE

S.No.	Pattern of crop	Number of families
1.	Paddy	71
2.	Commercial crops	104
3.	Grains and cereals	115
4.	Pulses	72
5.	Vegetables	21

In Coimbatore, the main crops cultivated on the farms were grains and cereals such as cholam, ragi and maize. The other items cultivated were commercial crops such as sugar-cane, cotton. 71 families cultivated paddy as the main crop. Kitchen garden was maintained by 131 families. Greens, vegetables and flowers were the common products from the kitchen garden. The produce are consumed by the majority of the families (87 percent).

**TABLE 14**  
**PATTERN OF CROPS CULTIVATED IN GUNTUR**

S.No.	Pattern of crop	Number of families
1.	Paddy	150
2.	Commercial crop	20
3.	Grains & Cereals	1
4.	Pulses	159
5.	Vegetables	6

In Guntur all the families were cultivating paddy as main crop. At the same time they were cultivating pulses.

In Guntur only 6% families were maintaining kitchen gardens.

Comparing to Coimbatore, only a few of the respondents were maintaining kitchen gardens in Guntur. The pattern of crops also differs. In Coimbatore most of the families were cultivating grains, sugar cane, cotton as the main crop but in Guntur all the families were cultivating paddy as the Main crop. After the harvest of the paddy, they are cultivating blackgram dhal, vegetables and greens.

### 3. Involvement of family members in agriculture:

The type of participation of the members of the selected families in farm are listed in Tables 15 and 16.

TABLE 15

## INVOLVEMENT OF FAMILY MEMBERS IN COIMBATORE

S.No.	Members	Number of families	Percentage
1.	Head	70	70
2.	Wife	35	24
3.	Son	8	5
4.	Others (Son inlaw brother)	2	1
	Total	150	100

The management of the farm was the sole responsibility of the head of the family in 70 percent of the households. In all these households, the farm women assisted the head of the families in shouldering the responsibilities. However, only in 24 percent households, the farm women manage the farm by themselves.

TABLE 16

## INVOLVEMENT OF FAMILY MEMBERS IN GUNTUR

S.No.	Members	Number of families	Percentage
1.	Head	92	92
2.	Wife	7	5
3.	Son	3	2
4.	Others	2	1
	Total	150	100

In Guntur, the main responsibilities of the management of the farm was the head of the family (92 percent). But the farm women assisted the head of the families in all activities.

#### 4. Farm women's involvement in agricultural operations:

Both in Coimbatore and in Guntur, all the farm women were involving regularly in agricultural operations. In Coimbatore 92 percent of the respondents were spending their full time in agricultural fields. Only 8 percent were spending a few hours daily in agricultural operations.

#### 1. Nature of participation in agricultural activities:

The following table gives an idea of the nature of the participation of the selected farm women in agricultural activities in Coimbatore.

TABLE 17

#### NATURE OF PARTICIPATION IN AGRICULTURAL ACTIVITIES IN COIMBATORE

S.No.	Nature	No. of farm women
1.	Participation	129
2.	Supervision	146
3.	Advisory	142

In Coimbatore almost all the farm women were participating, supervising and advising in all most all agricultural activities as revealed by the above table.

TABLE 19

## NATURE OF PARTICIPATION IN AGRICULTURAL ACTIVITIES IN GUNTUR

S.No	Nature	No. of farm women
1.	Participation	94
2.	Supervision	139
3.	Advisory	94

In Guntur, supervision was the main activity for the agricultural farm women. At the same time 94 farm women were participating and at the same time advising matters related to the agricultural activities.

The agricultural activities commonly taken up by the women and their nature of involvement in agricultural activities are presented in tables 19 and 20.

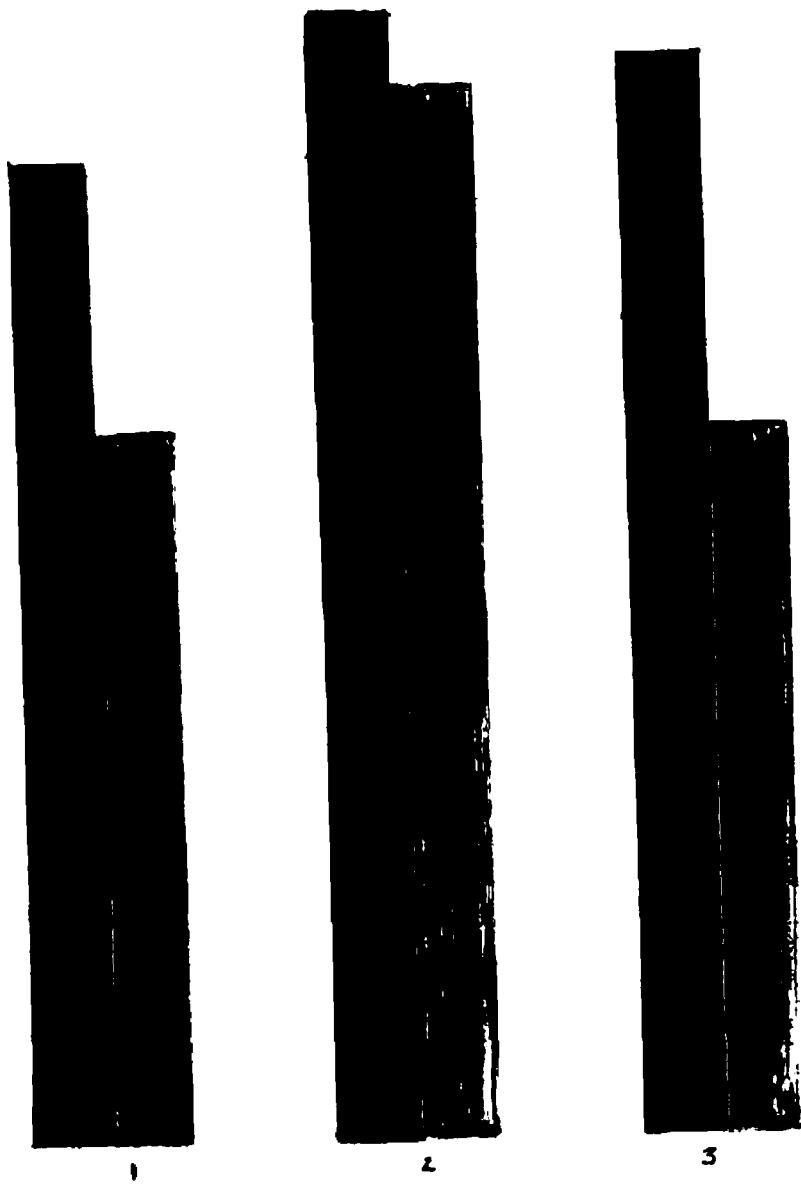


FIGURE-5

BAR DIAGRAM SHOWING THE COMPARISON OF THE PARTICIPATION IN AGRICULTURAL ACTIVITIES IN COIMBATORE AND IN GUNTUR.

- COIMBATORE
- GUNTUR
- 1. PARTICIPATION.
- 2. SUPERVISION.
- 3. ADVISORY.

TABLE 19

ACTIVITIES AND THE NATURE OF INVOLVEMENT IN AGRICULTURAL  
OPERATIONS IN COIMBATORE

S. No	Farm Activities	Participation		Supervision		Advisory	
		Regul- arly	Occasi- onally	Regul- arly	Occasio- nally	Regu- larly	Occasi- onally
1.	Preparing the seed bed	109	8	73	2	14	-
2.	Ploughing	2	4	84	14	18	-
3.	Sowing	117	5	86	1	9	2
4.	Planting	99	1	55	1	5	1
5.	Transmitting water	52	30	7	-	21	-
6.	Transplanting	90	1	59	1	3	-
7.	Application of fertiliser	52	57	74	2	23	-
8.	Hoeing and weeding	122	1	127	1	3	-
9.	Harvesting	119	1	119	-	4	1
10.	Hand threshing	93	1	14	-	2	-
11.	Winnowing	118	5	99	1	4	-
12.	Scaring the birds	91	6	12	-	3	-
13.	Bundling	124	-	117	2	3	1
14.	Cutting the vegetables	33	-	22	1	4	-
15.	Collecting cotton	41	-	13	-	3	-

Contd.....

S. No	Farm Activities	Participation		Supervision		Advisory	
		Regul- arly	Occasio- nally	Regul- arly	Occasi- onally	Regul- arly	Occasi- onally
16.	Pounding	99	3	2	1	2	-
17.	Preparing the marketing	127	14	6	-	7	-
18.	Actual mar- keting	62	85	4	-	9	-
19.	Keeping accounts	31	24	3	1	83	1
20.	Giving wages	82	40	1	1	6	-
21.	Care of cattle and milking them	127	14	-	1	7	-
22.	Selection of seeds	16	34	2	1	74	1
23.	Care of poultry	4	-	1	1	4	-
24.	Buying the cattle	13	15	2	1	112	-
25.	Buying addi- tional land	3	5	1	1	118	1
26.	Selling the land	13	4	1	1	116	1

From the above table, it is clear that in Coimbatore the number of farm women participation, supervision and advisory in agriculture field varied from activity to activity. The extent of usual participation was regular and higher (127 women) "in preparing the marketing" and "care of cattle and milking them", followed by bundling, hoeing and weeding, and harvesting etc. The

extent of supervision also was regular and higher (127) in "hoeing and weeding" followed by "harvesting and bundling". But the extent of advisory was higher in other activities, such as "buying additional land, selling the land, buying the cattle". Therefore, it is clear that the farm women were advising to their partner only in buying and selling activities.

Comparing the nature of involvement in agricultural activities "participation and supervision" play important role and among those activities the major participation were higher in "hoeing and weeding, harvesting, bundling, sowing and winnowing".

TABLE 20

ACTIVITIES AND THE NATURE OF INVOLVEMENT IN AGRICULTURAL OPERATIONS  
IN GUNTUR

S. No	Farm Activities	Participation		Supervision		Advisory	
		Regul- arly	Occasio- nally	Regul- arly	Occasio- nally	Regul- arly	Occasi- onally
1.	Preparing the seed bed	38	24	20	47	20	8
2.	Ploughing	20	6	19	48	23	11
3.	Sowing	36	20	18	49	16	7
4.	Planting	19	4	4	3	10	6
5.	Transmitting water	22	15	8	20	25	19
6.	Transplanting	79	17	77	22	40	14
7.	Application of fertiliser	21	11	19	29	47	24
8.	Hoeing & weeding	79	15	72	15	39	16

Contd.....

S. No	Farm Activities	Participation		Supervision		Advisory	
		Regul- arly	Occasio- nally	Regul- arly	Occasio- nally	Regul- arly	Occas- ionally
9.	Harvesting	75	17	80	56	34	17
10.	Hand thre- shing	37	9	20	8	7	2
11.	Winnowing	54	38	56	28	9	8
12.	Soaring the birds	25	9	78	3	18	3
13.	Bundling	66	36	82	23	18	3
14.	Cutting the vegetables	13	2	2	2	2	-
15.	Collecting cotton	11	1	1	2	-	-
16.	Pounding	37	-	3	-	1	2
17.	Preparing the marketing	91	26	15	11	13	14
18.	Actual mar- keting	69	54	11	19	14	13
19.	Keeping accounts	10	19	14	88	9	56
20.	Giving wages	69	47	58	7	5	7
21.	Care of cat- tle & milk- ing them	112	20	30	20	10	7
22.	Selection of seeds	15	60	5	29	18	11
23.	Care of pou- ltry	42	55	4	42	25	6
24.	Buying the cattle	121	61	1	51	20	9
25.	Buying addi- tional land	26	59	1	48	20	11
26.	Selling the land	41	11	2	45	23	11

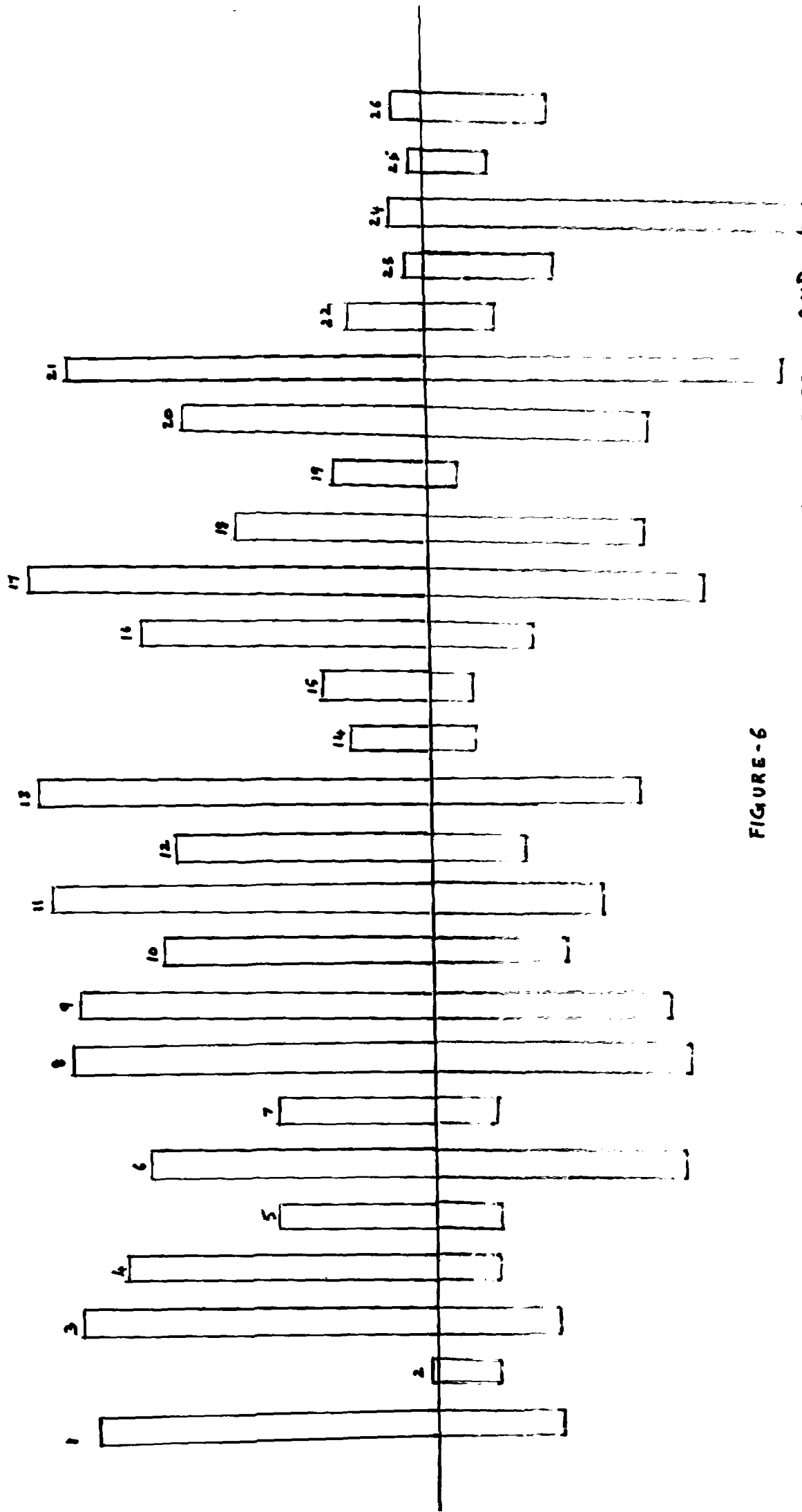


FIGURE-6

BAR DIAGRAM SHOWING THE COMPARISON OF THE ACTIVITIES AND THE NATURE OF INVOLVEMENT IN AGRICULTURAL OPERATIONS IN COIMBATORE AND IN GUNTUR

# INDEX FOR FIGURE FARM ACTIVITIES

1. PREPARING THE SEED BED
2. PLOUGHING
3. SOWING
4. PLANTING
5. TRANSMITTING WATER
6. TRANSPLANTING
7. APPLICATION OF FERTILIZER
8. HOEING
9. HARVESTING
10. HAND THRESHING
11. WINNOWING
12. SCARING THE BIRDS
13. BUNDLING
14. CUTTING THE VEGETABLES
15. COLLECTING COTTON.
16. POUNDLING
17. PREPARING THE MARKETING
18. ACTUAL MARKETING
19. KEEPING ACCOUNTS
20. GIVING WAGES
21. CARE OF CATTLE AND MILKING THEM.
22. SELECTION OF SEEDS
23. CARE OF POULTRY
24. BUYING THE CATTLE
25. BUYING ADDITIONAL LAND
26. SELLING THE LAND

Scale  
 COIMBATORE ICM - ICMEMBERS  
 GUNTUR

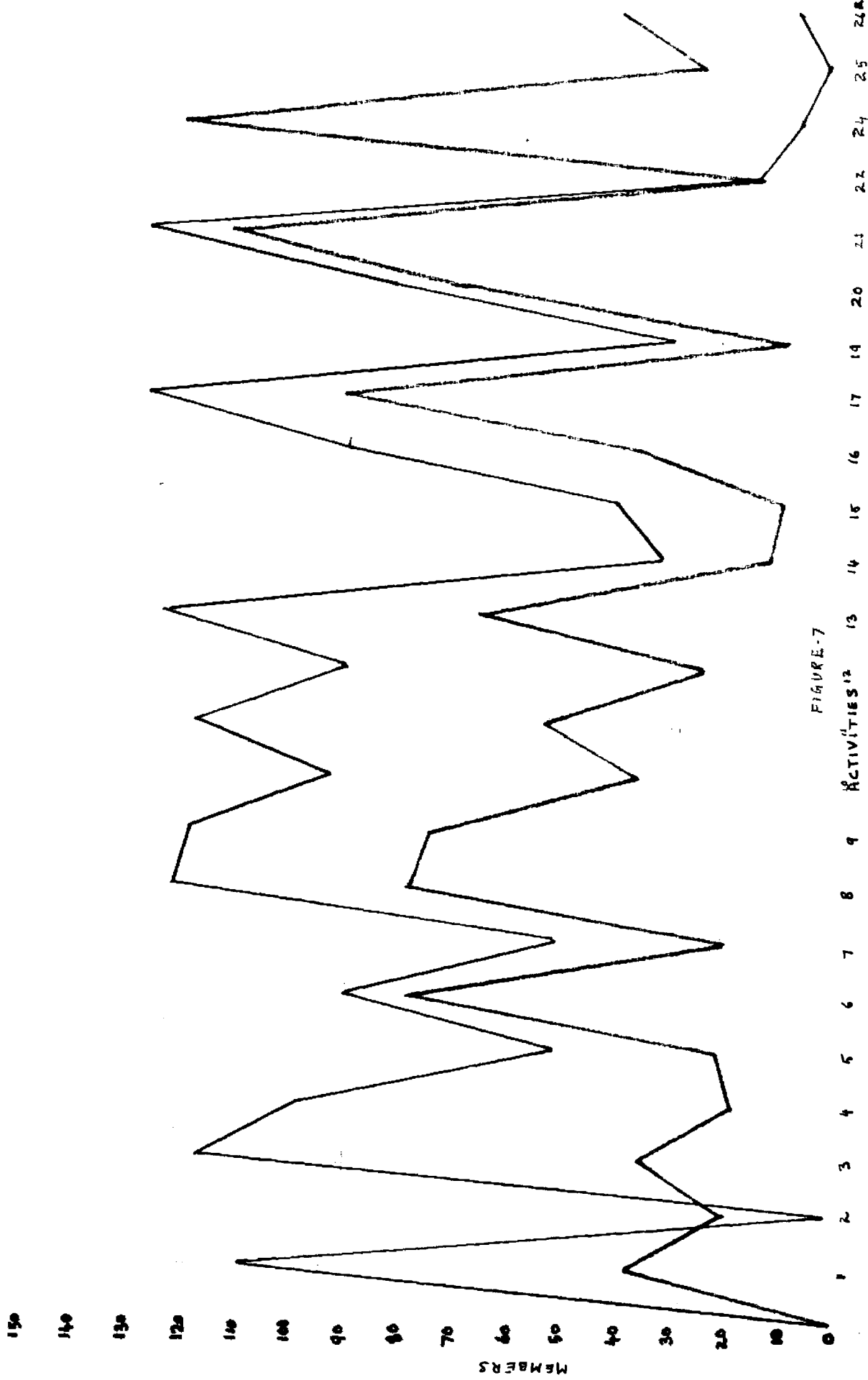


FIGURE-7

GRAPH SHOWING THE COMPARISON OF THE ACTIVITIES AND THE NATURE OF INVOLVEMENT IN AGRICULTURAL OPERATIONS IN COIMBATORE AND IN GUNTUR

It is evident from the above table that the women's involvement in the farm operations in the capacity of participation, supervision and advisory varied from activity to activity related to agriculture.

The extent of the participation was higher (112) in "care of cattle and milking them" followed by "Transplanting (79) and Hoeing and weeding". Here women play an important role in the production of animal husbandry products also. Their supervision was higher in the activities such as bundling (82) and harvesting (80). Minority of farm women were advising in regarding agricultural activities.

Comparing Guntur, in Coimbatore the women's nature of involvement was higher in agricultural activities such as "preparing the marketing, care of cattle and milking them, hoeing and weeding, harvesting and winnowing". They were interested in animal husbandry also which yielded a major income for their family.

In Guntur, the nature of participation, supervision were not as high as in Coimbatore.

The responses of the 150 farm women from each state to question relating to the activities in which they involved relating to farm operations, were analysed. The number of persons involving themselves in the farm operations with particular reference to item 21 "Care of cattle and milking them", under participation regularly in Coimbatore (Tamil Nadu) was 127 out of 150 and 112 out of 150 in Guntur (Andhra Pradesh). The percentages of these responses were statistically analysed. In order to find out whether there is

significant difference in the participation of these two groups, the standard error formula (S.E) was used.

$$\text{S.E. percent} = \sqrt{\frac{PQ}{N}}, \text{ where}$$

P = Percent occurrence of the behaviour.

Q = I-P and N is the size of the sample

A pooled estimate of P is obtained from the equations

$$P = \frac{N_1 P_1 + N_2 P_2}{N_1 + N_2}$$

Where  $N_1$  represents the number of participants from Coimbatore and  $P_1$  its percentage and  $N_2$  represents the number of participants in Guntur and  $P_2$  its percentage.

Then the formula

$$OR = \frac{P_1 - P_2}{\sqrt{P_1 - P_2}} \text{ was used to find 't' ratio.}$$

Substituting these in the formula,

$$P = \frac{127 \times 84.66 + 112 \times 74.66}{127 + 112} = \frac{19113.74}{239} = 79.97 \text{ per cent}$$

$$Q = (I-P)$$

$$Q = 100 - 79.97 = 20.03 \text{ percent.}$$

$$\begin{aligned} \sqrt{P_1 - P_2} &= \sqrt{P \cdot Q \left( \frac{1}{N_1} + \frac{1}{N_2} \right)} \\ &= \sqrt{79.97 \times 20.03 \times \left( \frac{1}{127} + \frac{1}{112} \right)} \\ &= \sqrt{1601.7991 \times \frac{1}{239}} = \sqrt{6.7901} = 2.6. \end{aligned}$$

$$\sqrt{P_1 - P_2} = 2.6.$$

$$t^* = GR = \frac{P_1 - P_2}{\sqrt{P_1 - P_2}}$$

$$t^* GR = \frac{10}{2.6} = 3.84$$

$$t^* = 3.84$$

The GR exceeds 2.62 at .01 level. So the obtained difference is highly significant at .01 level of confidence.

## 2. Reasons for their participation in agricultural activities:

The reasons given by the individual members for participating in agricultural operations are presented below in Tables 21 and 22.

TABLE 21

### REASONS FOR THEIR PARTICIPATION IN AGRICULTURAL ACTIVITIES IN GOIMBATORE

S.No.	Reasons	No. of farm women
1.	To help husband, father, son	109
2.	To have satisfaction in looking after the farm	17
3.	To increase the income	52
4.	To spend time usefully	3
5.	To supervise the workers	15
6.	To avoid wastage in the field	12
7.	To lessen expenditure of labour cost	16
8.	To permit the children to attend the school	5
9.	To send the products to the market in time	6
10.	To finish the work in time	111

The satisfaction gained in finishing the work in time and in helping their male counterparts, scored maximum in Coimbatore. To spend the time usefully, to permit the children to attend the school and sending the products to the market in time, received the least scores.

TABLE 22

## SEASONS FOR THEIR PARTICIPATION IN AGRICULTURAL ACTIVITIES IN GUNTUR

S.No.	Reasons	No. of women
1.	To help the husband/father/son	150
2.	To have satisfaction in looking after the farm	45
3.	To increase the income	61
4.	To spend time usefully	26
5.	To supervise workers	130
6.	To avoid wastage in the field	45
7.	To lessen expenditure on labour cost	47
8.	To permit the children to attend school	25
9.	To send the products to the market in time	13
10.	To finish the work in time	96

The main reason given was to help in the activities of their male counterparts. Supervision of workers also received, the maximum scores and sending the products to the market in time, to permit the children to attend the school received least scores.

It is clear from the above illustrations that there is a similarity between Coimbatore and Guntur in giving the reasons for the farm women's participation in agricultural activities. Both the samples were gaining their full satisfaction in helping or in assisting their more counterparts in the agricultural field.

In Coimbatore 114 farm women had no leisure time and 36 women who had time, cared for children or just took rest. The same similarity could be seen in Guntur, where 138 farm women had no leisure time.

#### B. Interest and knowledge of farm women in agriculture:

In Coimbatore the knowledge of the women regarding agriculture was found to be fairly good, by knowing the names of varieties of seeds and had a knowledge of the implements in use. All the samples were not accustomed to use the new implements. Only 55% were using the new implements. 92 respondents were accustomed to the use of hybrid seeds and fertilizer. The women respondents were able to name some of the fertilizers, like sulphate, phosphate, urea and pesticides like furadan, folidol and masco enderin. The new variety of paddy, I.E.S, I.E.20, Karuna, Pusa-33, Bhavani, Jaya etc., was known to all of them. In Guntur only 26% of respondents were using the new implements but all of the 150 women were not accustomed to use the fertilizers and pesticides.

In Coimbatore, 76 farm women were collecting the Hybrid seeds and other fertilizers from the market. But in Guntur only 28 women were collecting hybrid seeds from the market.

In Coimbatore, most of the farm women were highly enthusiastic about discussing new farming methods. In that 149 farm women were discussing the improvements in agriculture with their family members. In Coimbatore 144 farm women were discussing the improvements in agriculture with their family members.

2. Listening to the radio programmes:

In Coimbatore, 98 of the respondents listen to the radio agricultural programme regularly and 79 of the respondents implemented the listened items to a certain extent.

In Guntur, 83 respondents listen to the radio agricultural programmes regularly and among them 76 of the respondents were applying the suggestions broadcast through the radio.

There is similarity in listening to the agricultural programmes of the radio as well as in its implementation in Coimbatore and Guntur.

F. Details regarding live stock:

The Table below gives the clear evidence regarding the respondents livestock and poultry in Coimbatore.

TABLE 23

## DETAILS REGARDING LIVESTOCK AND POULTRY IN GUNTUR

S.No.	Items	No. of families
1.	Cow	95
2.	Ox	109
3.	Milch buffalow	110
4.	Sheep	15
5.	Piggery	3
6.	Poultry	5
7.	Bee-keeping	5

The above table shows the details of the livestocks, maintained by the farm families. Majority of the farm families (110) had milch buffaloes, 109 families possessed 109 oxen, whereas only 3 families maintained piggery.

TABLE 24

DETAILS REGARDING LIVESTOCK AND POULTRY  
IN GUNTUR

S.No.	Items	Number of families
1.	Cow	30
2.	Ox	25
3.	Milch buffaloes	145
4.	Sheep	12
5.	Piggery	3
6.	Poultry	107
7.	Bee-keeping	14

The above table shows the details of the live stocks, maintained by the farm families in Guntur. Majority of the farm families (145) had milch buffaloes, 107 families possessed poultry, whereas only 3 families maintained piggery.

While comparing it could be seen that more oxen used for ploughing purposes were maintained by the farm families of Coimbatore. In Guntur the ploughing was done by Tractors. In both the areas the milch buffaloes were large in number and they were used for milking. There were only 5 families having poultry in Coimbatore whereas 107 families in Guntur maintained poultry.

#### G. Farm women's role in household activities:

The study revealed that almost all the women (99 percent) involved themselves in the household activities such as cooking, serving, cleaning the vessels, care of children, marketing, washing the clothes, attending the functions and receiving the guests in Coimbatore as well as Guntur, even though many expressed their difficulties in carrying on the household and farm duties during peak agricultural seasons.

TABLE 25

FARM WOMEN'S ROLE IN COMMUNITY ACTIVITIES IN COIMBATORE		
S.No.	Items	No. of women
1.	Mahila mandal	36
2.	Youth club	8
3.	Village panchayat	-
4.	Co-operative society	12
5.	Women farm discussing group	6
6.	Rural radio forum	21

It could be seen from above table that 146 out of 150 farm women in Coimbatore were members of the different organizations like Mahilamandal, youth club, village panchayat, co-operative society, Women Farm Discussion group and rural radio forum and 104 were not members and the reasons given by them for not being members was that they were not interested in them and they do not get time.

TABLE 26

FARM WOMEN'S ROLE IN COMMUNITY ACTIVITIES IN GUNTUR

S.No.	Items	Number of women
1.	Mahilamandal	25
2.	Youth club	24
3.	Village panchayat	5
4.	Co-operative society	96
5.	Women farm discussion group	5
6.	Rural radio forum	-

There were 125 farm women who were members of the organisations like, Mahilamandal, youth club, village panchayat, co-operative society and Women Farm Discussion group. Only 25 of the farm women were not members of the organisations and <sup>the reasons</sup> given by them were: not interested in them and were illiterates.

There were more number of farm women who were the members of Mahila mandal compared to Guntur - in Coimbatore (36) compared to Guntur (23). 5 farm women were the members of village panchayat in Guntur whereas no farm women, taken for study was a member of village panchayat in Coimbatore. More of farm women were members of co-operative society in Guntur (96) than Coimbatore (12).



FIGURE 11

*Farm women of Coimbatore District busily engaged in weeding*



women picking betel leaves  
in Guntur District.



FIGURE-7

*Chillies Plucking at one of the farms by  
Farm women of Coimbatore District*



Women hoeing in turmeric  
field in Guntur District.



FIGURE 12  
*A cooperative endeavour of farm women of  
Coimbatore District*



Women harvesting the paddy in  
Grantur District

## V. SUMMARY OF FINDINGS

### Introduction:

This investigation was undertaken in order to study the role of women in agriculture in Coimbatore and Guntur, through interviewing 150 selected farm women in Coimbatore and 150 selected farm women in Guntur.

### Findings:

Comparing the two selected areas, in Coimbatore the Gounder Caste was a major constituency (70%) and in Guntur, Kamma Naidu was the major caste (60%) whose primary occupation is agriculture. The number of members were similar in the families studied in Coimbatore as well as Guntur, which means that the family size was same in both the cases. It is evident that in both areas majority (60%) of the respondents belonged to the high income group. The educational status of the selected farm women in Guntur was higher than in Coimbatore. The majority (80%) of farm women involved in agricultural operations in Coimbatore as well as Guntur were in the age group 18 to 40 years. In Coimbatore 96 percent were married and in Guntur 99 percent of the respondents were married.

Comparing to Coimbatore, in Guntur there were more families (46%) who had large size of land holdings (11 to 50 acres). In Coimbatore most of the families were cultivating grains, paddy, sugar cane, cotton as main crops. But in Guntur all the families were cultivating paddy as the main crop.

In Coimbatore the management of the farm was the sole responsibility of the heads of the family (70%). In all the agricultural activities, the farm women assisted the heads of the family in shouldering the main responsibilities. But in Guntur the head of the family takes the main responsibility of the farm (92%). But the farm women assisted the head of the family in all activities. In Coimbatore 92% of the respondents were spending their full time in agricultural fields. In Guntur only 78% were spending their full-time in agricultural activities.

In Coimbatore all the farm women were participating, supervising and advising in almost all agricultural activities. In Guntur supervision was the main activity for the farm women. And 94 percent farm women were participating and advising in agricultural activities.

The farm women participated in all the agricultural activities in Coimbatore and the extent of their usual participation was higher in activities such as preparing for marketing, care of cattle and milking them followed by bundling, hoeing, weeding and harvesting. In Guntur the extent of participation was higher in: care of cattle and milking them, preparing marketing and transplanting.

The role of farm women in agriculture both in Coimbatore and Guntur can be classified as follows:

- a. Contributor of labour in agriculture production
- b. Responsible for the management of cattle and farm animals
- c. Responsible for the storage of seeds and food grains
- d. Advisor.

A close observation of the role of farm women and young girls both in Coimbatore and Guntur in farm families during peak agricultural seasons reveals that an active female member in a farmer's family spends 8 to 9 hours on the farm and 7 to 8 hours in taking care of the cattle and attending to household activities.

In Coimbatore the farm women supervised usually all the agricultural activities such as hoeing and weeding, harvesting and bundling. In Guntur farm women were being consulted in all the activities pertaining to advisory. Besides, in both the areas women have some indirect influence on the agricultural production too. The food production pattern in the community is largely determined by its consumption pattern and consumers' demand. The home maker determines the type of food to be consumed by the family and thus she indirectly influences the production pattern of the community.

By and large the women were sharing more and more responsibilities in agriculture with rapid urbanisation and with spread of school education the younger male generation is moving out of the land, and the responsibilities of farming and farm management is shifting more and more on to the women. It is only in hand-ploughing where women cannot still claim any contribution. No other field in agriculture has remained untouched by them.

Women had some knowledge of agricultural implements and they evinced interest in knowing more. In Coimbatore a majority of the respondents have expressed the need for an agriculture training course and camp in their village to learn modern improvements in agriculture.

In Coimbatore the respondents used radio and were implementing the listened programmes and in Guntur 96 of the respondents were the members of the co-operative societies. But however in both areas the farm women need social education to improve their social sense to the community.

The Farm women found it difficult to combine household work with farm activities. Majority of the farm women had no leisure time.

Thus these data shows that farm women's role in agricultural operations are essential for success.

#### Suggestions and recommendations:

Farm and home are inseparable in both the areas. Since a vast majority of women workers are engaged in agricultural work and participate in decision making, they need to be taught modern methods of agricultural production and better methods of post-harvest, storage and newer techniques in processing. Education in general and skilled training in particular, must be imparted in order to make them play an effective role in modern agriculture. Therefore farmers training should be provided for the training of farm women also. The new concept of Krishi Vigyan Kendras to be established by the Indian Council of Agriculture Research can meet this need.

Organised training of farm women is a new venture. The different facets and process of farm women need to be identified. Seven broad areas, namely, crop farming, livestock keeping, nutrition, child care, arts and crafts, clothing and family planning should be selected to identify the relative importance of the farm women attached to the different subject matter areas,

knowledge of which, is usually needed for bringing improvement in the farm and home. The training could be imparted through practicals, educational films, demonstrations and their different combinations along with some group discussion situations.

In order that rural women can play a decisive role in accelerating the pace of green revolution, appropriate provision should be made to increase their knowledge regarding new farm technology through formal and informal training programmes. Functional literacy classes should cover agricultural aspects also. Only by improving the skills of the farm women, planned change can be brought about in the rural areas. This training and education should be imparted through village camps, which may include lectures and demonstrations on the subjects of agricultural technology, dairy farming, animal husbandry, poultry farming, bee-keeping, etc. To follow up these programmes, there should be occasional group discussions and exhibitions arranged in the villages through the organized Mahila Mandals and Youth Clubs. These Mandals and Clubs should be formed from amongst the participants in the seven day training programmes at the village level. Active farmers discussion groups should be initiated at the village level, to listen to and discuss about the regular agricultural programmes broadcast by the A.I.R. There should be regular film shows and slide projections about the latest techniques of agriculture and altered operations.

Women should be encouraged to go out to the neighbouring states to learn about the agricultural methods of technology used by the states concerned. This could be done through the exchange of farm women programmes.

Today there is need to focus all efforts in an integrated form by various agencies such as Home Science Colleges, Agricultural Colleges, Extension Agencies and Voluntary Agencies for developing the farm women. It will not be difficult to change the farm women in their knowledge, skill and attitude as they are very simple, innocent and hard working.

A rural woman needs training in almost all the agricultural operations. She needs to be made familiar with all modern techniques in agriculture, in order to revolutionize Indian agriculture. Her training in agriculture needs stressing on the new seeds coming up, their requirements for increased production, methods of irrigation and harvesting and preservation and storage of the produced grains. She also requires good knowledge about care of both farm and milch animals, specially with regard to their nutrition for obtaining the maximum benefits.

The women's role does not stop at farm. She has to <sup>take</sup> care of her children and family. She has dual roles to play. The future citizens are in her hands and grow from her lap. Hence, it is very essential for her to know about child care, personal hygiene, sanitation, nutritional requirements and their fulfilment at different age groups, all of which play an important role in making up of a good citizen.

At present most of the lady workers are not trained in agriculture, animal husbandry or nutrition which is an important part of health education.

Hence, Home Science Colleges should take up on priority basis the training of all the existing personnel in Home Science Education including Agriculture, Animal Husbandry so that they can play their roles efficiently. This training can be at the Institution itself of atleast one month's duration.

The Home Scientists with their background of natural and social sciences will be able to act as efficient transmitters of knowledge necessary not only for the improvement of the family but also of the farm, to the rural women. The scope of Home Science Colleges in serving the rural women in various production activities are further strengthened by their location in the agriculture and veterinary faculties from which they can draw interdisciplinary programmes. Since the character of the agricultural universities is the integrated approach by the agricultural extension personnel for obvious reasons, they can serve as the training base for the farm women by conducting short term courses to impart the knowledge and skills developed in the field of agriculture.

If Home Science colleges can take up this responsibility in collaboration with the agricultural and veterinary faculties, they will be able to fulfil the needs of the women, by inculcating the skills necessary for the performance of the other role as a house wife which is equally important. Such an integrated approach to provide skills necessary for producer as well as consumer can ensure the total development of rural families which is necessary for improving the quality of rural life.

Colleges of Home Science should plan out a number of short-term courses on various topics based on the interest and need of the rural community at rural areas. A few important topics are:

1. Feeding the family
2. Kitchen gardening
3. Baby care
4. Sanitation

5. Personal Hygiene
6. Grain storage
7. Saving time, energy and money
8. Preservation of fruits and vegetables
9. Vulnerable group and their care
10. New practices in agriculture
11. Care of animals
12. Use of co-operatives and credit society
13. Establishment and running of consumer co-operatives
14. Share and share programmes
15. Leisure-time activities - vocational training such as in tailoring, weaving, candle making, packaging, pickling, spinning and in other local arts and crafts.

Each one of the above plan can be planned as a week's training programme. Subject - matter training can be given to the women in their slack time and the vocational training may be organised during off season for longer hours.

She can do her best as an innovator in adopting new methods and techniques in the farm and home technology such as processing high yielding varieties and using them by preparing palatable recipes.

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**APPENDIX**

**APPENDIX**

**A QUESTIONNAIRE TO BE ADMINISTERED TO A COMPARATIVE STUDY OF  
THE ROLE OF WOMEN IN AGRICULTURE IN COIMBATORE  
AND GUNTUR DISTRICTS**

1. Name of the interviewee: Date:
2. Name of the village:
3. Name of the block:
4. Name of the district:
5. Name of the state:

**I. A. Details of the family background:**

1. Name of the head of the family:
2. Type of the family: Joint Nuclear
3. Caste Religion



**C. Details regarding lands**

1.

S.No.	Land	Acres
1.	Wetland	
2.	Dryland	

**2. Pattern of the crop and cultivation:**

**Last year cultivation:**

S.No.	Name of the crop	Name of seed	The area of the cultivable land	Yield	Value of produce
1.					
2.					
3.					
4.					

**II. A.**

**Details about the role of women in the farm:**

1. Who takes the main responsibility in the farm?

2. Are you taking part in the agricultural farm activities/operations

Yes  No

3. Do you go to agricultural farm regularly?

Yes  No

4. What is the nature of your job in the field?

- a. Participation
- b. Supervision
- c. Advisory
- d. Any others (specify)

**XII. A. Nature of involvement in agricultural activities:**

No.	Farm activities	Participation		Supervision		Advisory		Any other specify
		Regul- arly	Occas- ionally	Regul- arly	Cooper- atively	Regul- arly	Occas- ional- ly	

1. Preparing the seed bed
2. Ploughing
3. Sowing
4. Planting
5. Transmitting water
6. Transplanting
7. Application of fertilizers
8. Hoeing and weeding
9. Harvesting
10. Hand threshing
11. Winnowing
12. Scaring the birds
13. Bundling
14. Cutting the vegetables
15. Collecting cotton
16. Pounding
17. Preparing the marketing
18. Actual marketing
19. Any others

Contd....

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S.No.	Farm activities	Participation		Supervision		Advisory		Any other Specify
		Regul- arly	Occasi- onally	Regul- arly	Occasi- onally	Regu- larly	Occas- ionally	

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Other activities

1. Keeping accounts
  2. Giving wages
  3. Care of cattle and milking them
  4. Selection of seeds
  5. Care of poultry
  6. Buying the cattle
  7. Buying additional land
  8. Selling the land
- 

**B. Reason for your participation**

1. To help husband/father/son/brother
2. To have satisfaction in looking after the farm
3. To increase the income
4. To spend time usefully
5. To supervise the workers
6. To avoid wastage in the field
7. To lessen expenditure on labour cost
8. To permit the children to attend the school
9. To send the products to the market in time
10. To finish the work in time

G. Details regarding agricultural activities:

1. Time spent on agricultural activities during seasons

IV. Details regarding new implements and hybrid seeds:

1. Are you using new implements?

Yes  No

2. If yes

S.No.	Items	Number	Operation		
			Head	Wife	Cooli

3. Are you using hybrid seeds?

Yes  No

4. If yes, please give details:

S.No.	Seeds col- lected from farms	Who is collecting the seeds			Seed bought from market or agricul- tural college	Who is col- lecting		
		Head	wife	cooli		head	wife	cooli

5. Do you listen to agricultural programmes in the radio?

Yes  No

6. Are you applying the information received from the radio in your agricultural practice?

Yes  No

V. 1. Details regarding livestock and poultry:

-----

S.No.	Items	Number	Consumed by the family	Sold out	Income/Year
1.	Cow				
2.	Ox				
3.	Milch buffaloes				
4.	Sheep				
5.	Piggery				
6.	Poultry				
7.	Bee keeping				
8.	Others (specify)				

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2. Who sells the produce?

3. Do you have a kitchen garden?

Yes  No

4. If yes, please give details:

-----

S.No.	Product of kitchen garden	Consumed by family	Sold out	Shared with others

-----

5. Who is incharge of selling the kitchen garden produce?

VI. Farm women's role in household activities:

S.No.	Activities	Doing	Helping somebody	Not at all doing
1.	Cooking			
2.	Serving			
3.	Cleaning the vessels			
4.	Care of children			
5.	Marketing			
6.	Washing the clothes			
7.	Attending the functions			
8.	Receiving the guests			

VII. Farm women's role in community activities?

1. Are you participating in the following programmes?

S.No.	Items	Yes	No	Reason
1.	Mahilamanal			
2.	Youth club			
3.	Village panchayat			
4.	Co-operative society			
5.	Women farm discussion group			
6.	Rural radio forum			
7.	Any others (Specify)			

2. Do you spend enough time to do your household and domestic activities?

Yes  No

3. Are you discussing about the farm activities with the family members at home?

Yes  No

4. Do you get leisure time?

Yes  No

5. If so, how do you spend the leisure time?