CHAPTER - II

REVIEW
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The present chapter deals with the brief review of relevant studies done by the past researchers relating to the present problem entitled “Role of farm women workers in agricultural economy in district Meerut (U.P.): with special reference to employment, wage structure and level of income”. A brief account of the work reported by the past researchers is given below:

Singh (1968) studied the participation of rural women in agricultural operation in the NES block of Jabalpur and revealed that a comparatively large proportion of women participated in seed storage, winnowing, harvesting and care of animals. It was observed that women belonging to the middle age group, having frequent urban contacts and with formal education, coming from lower castes and possessing small land holdings participated in agricultural operations in larger proportions than others. Social participation did not effect participation in agricultural operations,

Shukla and Chauhan (1970) observed that for landless labourers, employment is an important problem. They do not find full time employment on their holdings. Except for some peak seasons of sowing and harvesting when a hired labour get a chance to work on the farm. The possibility to provide adequate employment for landless workers at present seems to be out of question.
Singh and Kunwar (1974) reported that the annual earnings is of the casual labour (male, female and child) for the year 1973-74 in new technology and sub-technology areas were calculated at Rs. 1008.00 and Rs. 714.00. Rs. 72c. 60 and Rs. 585 Rs. 700.80 and Rs. 512.40, respectively.

Pandey (1975) reported that there is a wide spread discriminations against female workers. It is mainly due to the fact that female worker do not get equal pay for equal work, applied to even similar, manual jobs being done by males under similar conditions,

Paulilo (1976) studied to extent to which rural women are integrated into agricultural production process and found that women on small farms and wives of share croppers contributed production but received no remuneration, while on average and large forms, women also contributed but were usually paid and wives of wage earners rarely worked.

Brahme (1976) studied the economic contribution of agricultural labourer in Dhulia district of Maharashtra and found that in case of female workers the average number of days of work in agricultural ranged between 80 and 180 in different areas.

Miranda (1977) reported that women’s employment in agricultural sector is inversely related to regional development. Data on the labour force participation of Brazilian women in 1970 revealed that S per cent of the women in developed region were in labour-force
and in the intermediate region and less developed region this percentage was 24 and 36, respectively.

Ahooja and Patel (1979) concluded that in rural areas women work longer hours than men in all age groups. In many societies age over youth and male over female predominate in taking decisions on distribution of work.

International Labour Organization (1979) reported that if a total range of women’s actual economic activities were to be taken into account of all over India women work for very long hours, in market and non-market economy and more so in the rural India. It is the nature and type of their work and the long work hours, which raises fundamental economic and social issues. These issues are related to the stage of technological development of an economy as well as the existing division of labour between men and women in the society.

Bhatta (1980) Investigated into the employment and living conditions of rural women workers in Allahabad India, producing beads (popular cigarette substitutes) on a contract basis at home. The objectives of the study are defined as follows: (1) To make an empirical evaluation of the economic role of women with special reference to their contribution to household income as a result of their employment in making beedis and the allocation of their time between making beedis and house hold work. (2) To evaluate the prevailing organization of the beedis industry in rural areas and to
examine alternatives. (3) To evaluate the interaction of women’s economic role and their status in village society as well as within the family group in the context of the prevailing social customs and beliefs, specially with respect to Muslim women. It is a major industry-employing about 2.5 million workers - and it is expanding as Western export markets are established. But the workers largely remain at the mercy of contractors, and obtain less than the minimum wage. Among poor families - and 75% in the sample are below the Government’s poverty line- beedi-making is a major source of income.

**Andan and Islam (1981)** found that most of the women in Bangladesh spend their productive time working in the home and caring for their children or performing menial tasks such as fetching water and dehusking rice. For improving their situation they suggested that their time could be saved through the advent of simple technologies such as communal running water and dehusking machines.

**Kaur (1982)** conducted a study in eight villages of Haryana and revealed that 72.6 per cent of the females were participating in the work force and this participation was highest in backward regions and went on decreasing with the increasing progressiveness of the region. Educational status of women was most significantly related with participation of women in work force followed by level of agricultural mechanization, family income and caste. Farm work
consumed maximum time of women as average time devoted was 2.6 hours followed by food preparation, cleanliness, care of animals, clothing, child care, grain processing and flour grinding. Average working day for women came out to he 13.2 hours.

Singh and Singh (1982) concluded female employment in dairy enterprises in Uttar Pradesh is very limited because the present development of dairy farming is inadequate to absorb the available labour force, and there are no proper incentives for women to engage in dairy farming. Since only about 30% of the average total annual female employment is in dairying, there appear to be good prospects for increasing employment for women in the dairy sector, as a complementary source of income. The poor standard of education of women is also a major impediment.

Sethi (1982) concluded female agricultural labour in the Indian Punjab a region which has achieved almost optimum agricultural output with a negligible utilization of its women in the development process. The 8 chapters reveal: analytical sensitively in discriminating between the social characteristics of peasants and agricultural labour; a picture of female agricultural labour in India and the Punjab which raises the issue of why, in one of the most affluent states, based on prosperous agriculture, female participation in economic activities is low; the findings of detailed empirical inquiry with regard to female agricultural labour selected from certain regions and villages disclosing the social and family background of
these labourers; an informative picture of the wages, hours of work, discrimination in various aspects including payment of wages and hardships at work; the peculiar nature of tensions which these women workers experience at home; and an overall picture of the wretched existence of the female agricultural labourer.

Manoliar (1983) concluded on the basis of selected case studies and indicated that women had to do a large part of their domestic duties after returning home from work outside. As a result they were subjected to heavy physical strain outside their homes and mental strains inside their homes.

Sen (1983) examines some of the regional, dimensions of two aspects of paddy cultivation and processing in India which have traditionally been highly intensive of female labour. Although empirical evidence linking the practice of transplanting rice with the incidence of women agricultural labourers is not recent, the data indicate a strong relationship between irrigation; and inequality of landholding, and the presence of women labourers. To the extent that transplanting is predicated on irrigation (not true everywhere), it is inferred that transplanting is also linked to the presence of women labourers in the current period. Data on paddy processing indicate that milling paddy made considerable in roads into female employment in hand pounding in the main southern rice producing provinces, even prior to World War II. While government policies during the war speeded up the overall growth of mills and
accentuated regional differences, hand pounding had already been doomed by economic considerations. Regions where there is a high incidence of women labourers in paddy cultivation are also those where women’s role in paddy processing declined earliest. A much deeper analysis is required to study the possible interconnections between the two. The early presence of transplanting in the southern parts of the country and the consequent high demand for female labour may have reduced the supply of labour available for hand pounding, thereby tilting the relative costs in favor of milling once the technology became available. However, the increase in milling would probably have increased the supply of female labour for cultivation and depressed the wage there. To test these hypotheses better knowledge is required of the historical evolution of both technology and relative prices and wages.

Singh (1983) in a study concluded that casual labourers including women and child were in age group of more than 12 years, while permanent labourers including males only were in age group of more than 16 years: The form of wages mostly prevalent was that of “kind” which was quite low. The rate of cash wages was higher for male than female labourers.

Mencher (1983) presented detailed data on the involvement of women in the production and processing of paddy, activities in which large numbers of women have traditionally been engaged. The paper aims: (1) to fill a substantial gap in the data base on women’s
economic activities, and to document the contribution of women to the production of rice at different stages (2) to generate data which could be of use both to women workers themselves and policy makers in making decisions regarding women's work, wages, health care and other welfare measures: (3) to raise the question of whether the concepts and definitions evolved from studying male labourers would remain valid when making a specific study of the problems of women labourers.

Sen and Benerhi (1983) the study focuses on the effect of the transformation of agrarian structures and of technological change on labour requirements in agriculture and their impact on women in particular. More specifically, it focuses on the changes introduced by the Green Revolution in two region of India- Haryana/Punjab, a region with a powerful group of middle farmers, and Thanjavur region dominated by large landowners and with a long history of landless labour. Historically women's participation in agricultural work has been lower in Haryana/Punjab than in Thanjavur. The pattern that emerges in both regions is that of a process by which agrarian and technological change has a differential impact on agricultural workers by sex -women tend to be placed in the lower echelons of the labour hierarchy.

Kagbo (1983) reported that women form the highest proportion of the economically active population in rural West Africa and they play a significant role in agricultural activities particularly in
subsistence food crop production where they contribute an estimated 60 to 80% of the total labour used.

Agarwal (1984) found that the focus on the household as a sociological unit of analysis may hide complex infra-house interactions, because in a number of cases male and female members of a family are affected differently by work load and pattern of utilization of the additional income.

Gulati (1984) conducted a study in a Kerala village and observed that scheduled caste women carry out the physically exhausting field work, such as transplanting iii which high caste women rarely participate. However, scheduled and lower castes women are usually excluded from certain other tasks such as threshing and winnowing in which higher caste women usually participate.

Mies (1984) reported a detailed study of working, women in three villages in the state of Andhra Pradesh. The paper provides a survey of the socioeconomic and historical background of the region: the pattern, level and sources of women’s income and expenditure the processes of economic change and impoverishment, and the emergence and role of women’s organization. The research methodologies included participant observation, questionnaires, and discussions with the women workers. The main foci of analysis and description are: the economic roles of poor women as labourers petty producers, traders subsistence farmers, and household workers; the
changing relationships with men within the households and the impact of class, caste and sexual divisions of labour on working life the effects of development projects; the interaction between traditional cultural practices and work patterns and conditions; and the growth of collective consciousness in the emergence of women’s organizations. It finds that traditional male jobs have been destroyed and women’s work burden has been intensified without any transformation in the relations of production; that modernization does not undermine feudal and patriarchal modes of behavior; and that it is contradiction therein that produces a search for solidarity and joint action amongst women.

Chandra et al. (1985) reported that the modernization of agriculture has resulted into increased employment for all kinds of female labour. Wider application of new agricultural strategies has resulted into the reduction of differential in the wage rate of men and women and agricultural modernization has increased the share of women in agriculture.

Dey (1985) pointed out that the census of India estimated on all India economic participation rate of 21% for women and 53% for men in 1981. Nearly 63% of all economically active men were engaged in agriculture compared with 78% of women, Women did more field work than men.

Ray et al. (1985) found that the wage rate of female labour is comparatively lower than of male in all the states under study. In
fact, relatively low employment and low wage rates of female labour are indicative of the fact that the economic status of the female labour remains inferior to that of their male counterparts in India.

Sisodia (1985) reported that the employment of family female labour in field operations decreases with the increase in the size of holding, on the contrary, the employment of hired female labour increases with the increase in the farm size. Community wise women’s participation in agriculture was found highest among the backward classes and S.C 1 groups. It was the lowest among the upper classes.

Rani and Singh (1986) analyzed the contribution of weaker sections farm women in dairy enterprise on the basis of data from three villages of karnal, It was found that female labour utilization was higher than males and children in almost all the operations and; the women’s participation rate of 70 per cent in the category of landless labourers was the highest followed by marginal and small farmers.

Jah et al. (1986) argues that under circumstances of low subsistence wages and an acute scarcity of economic alternatives, manual workers on tea plantations, who are paid by the day, are able to survive only because there is a minimum of class-based difference among them. Men and women cooperate relatively equally induces the growth of proletarian homogeneity because they; must to survive and reproduce. Manual workers in a tea garden are shown to be
surrounded by an ideology of hierarchy, which is, however, not dominant in their internal relations, where egalitarianism prevails in most spheres of activity. This is illustrated by a case study of women workers in a tea garden in Assam, based on social anthropological fieldwork. The paper emphasizes that women's position in a society. The division of labour and cooperation between men and women and the care of children are based on reciprocal relationships rather than on domination or exploitation. Since the sexes are equal members of the group and both make a crucial contribution to its economic life, it is a matter of equal concern for both men and women as to what happens to those who are not able to find employment in the tea garden and at present there is no opportunity for either men or women don't find employment outside the garden.

**Mencher (1987)** concluded on the basis of studies covering several states of India and reported note worthy gender differences in households speeding patterns. He found that women's earning in poor households was going much more towards the family's basic needs than men's, with the absolute contributions 1w women being substantial in all cases.

**Samuel and Erappa (1987)** examine the impact of technological change in the silk reeling industry of Karnataka on the labour force participation of women. Data were collected during the 1981/82 year from 45 silk reeling factories in Kollegal, Raminagar and Sidlaghatta Taluks. Women workers were found to have a higher silk output but were paid less.
Mrs. Rajanimal et al. (1988) in their study at Coimbatore, reported that the rate of participation of women in farm operation (being 38 per cent), harvesting (34 per cent) and winnowing (23 per cent).

Lakshmi and Chari (1988) concluded that the tribal farm women generate income through their wages and through ancillary sources of home stead farming, mainly through poultry, goat, cattle and kitchen gardening to a small extent. She found that through adult education they should be motivated to take up the employment generating programs such as tailoring etc. But some women are poor without any source of ancillary income. They are also over burdened with farm operation and domestic operations such as fire wood collection and dung cake preparation. They lead a poor life in general.

Acharya and Panwalkar (1988) Considered the extent and nature of female labour force participation and wages in the context of the different agro-climatic regions, cropping patterns and population composition in rural Maharashtra, during the period from; early 1970s to the early 1980s. The aggregate labour participation rates have stayed unchanged over this decade but there are variations in the age-specific participation rates. A disaggregation of the workers by ‘main’ and ‘marginal’ categories shows that there has been a reduction in the female marginal workers. This is mostly concentrated in; the category of workers termed as ‘helpers’ who contribute to the labour process but they neither are distinct
owners/controllers of land nor are they wage workers. There has been a sharp reduction in the proportion of these workers, both male and female, due to increased articulation of property rights on land. The proportion of workers of both sexes employed in the capacity of ‘casual labourers’ has increased. The agrarian reforms and the demographic influences have atomized land, and in many areas, the ownership rights have been conferred to the erstwhile tenants. The land distribution has however, been restricted to certain middle castes. The lower castes, mostly labourers, have gained little. Across different regions women participate in larger numbers in the labour force in areas where the land distribution is skewed in favor of larger holdings and cash crops are significantly prevalent. The female work in these areas in concentrated in the category ‘casual labourers’. This feature is most striking in the commercial cotton growing areas hut in other areas too the typology holds. The wage data show that there has all longs been a gender wage gap, originating from segmented markets and allocation of work: e.g. ploughing a high wage work is always done by men.

Puajabi and Sadhu (1988) examine the impact of the New Agricultural-Strategy (NAS) on female work participation (hired female labour) on different sizes of holding; and consider the impact of the strategy on family female labour. Ghomanasa village, Jammu and Kashmir, was selected for the study. The impact of NAS has been to displace female from agricultural pursuits for two main reasons.
First, women workers have been more adversely affected by the mechanizing; of farm operations and second, as farm incomes of richer farmers have increased, the tendency has been to remove women from strenuous activities. Recommendations are made regarding the impact on women of modernization, credit, training and skill development.

Nayyar (1988) concluded sonic of the issues related to female participation rates in the labour force in rural India, noting that the relevant data are not as reliable as those for urban areas. Alternative estimates of female participation rates for the period 1961-81 are presented. The problems of data collection with respect to women workers and the errors that may be inherent in estimates of female participation rates are highlighted. Inter-state differences in female participation rates are analysed and the possible causal factors underlying these differences identified. The question of wage differentials between male and female workers and the imperfections of rural labour markets are considered.

Kalaimathi (1988) concluded the agriculture is the largest industry in India, contributing to the source of livelihood for over 70% of the population. According to the census of 1971, 80.1% of women workers are found in agriculture, and in rural areas they constitute 87% of the female work force. Women participate in all the agricultural operations. In the same way as general agricultural labourers, women agricultural labourers are also divided into female
cultivators, female agricultural labourers and other workers further subdivided into permanent labour and casual labour. The condition of women in the agricultural sector has remained the same over a long period. In the past they were either labourers or assisted their husbands in some agricultural operation. Today, in contrast, in addition to performing various agricultural operations, women are managing large farms of many acres by themselves. They are now consulted regularly on many aspects of agricultural marketing. A significant percentage of these jobs are filled by women drawn from lower castes and lower classes. Ignorance, traditional attitudes, illiteracy, lack of skills, seasonal nature of employment, heavy physical work of different types, long hours of work with limited payment, discrimination in wage structure, lack of job security, lack of comprehensive employment legislation, competition in employment and the resultant deprivation of real wages, lack of minimum facilities at the workplace, ill-treatment, migration and disintegration of family, bondage and alienation, etc. are the main problems faced by women workers in agriculture. It is important to ensure that technological change in agriculture also increases women's welfare not only in terms of their employment, but income, health and nutrition as well. It is necessary to adopt both a farming systems approach to agricultural development as well as a target group planning approach.
Shrivastava (1988) examines the trend of women’s participation in various economic activities in India, taking the 1971-81 decade as the focal period. Women’s participation is analysed in terms of rural/urban workforce; primary/secondary/tertiary workers; and agricultural/industrial workers. There are 44973 million women workers in India (1981) or 19.76% of the total female population of India, compared with 14.15% in 1971.

Jose (1989) analyzed that the studies assembled in this volume, pins an introduction, analyze the structure of women’s labour force: participation in India. They are part of the ARTEP research project on Labour force participation of women in India and were discussed at the South Asia regional consultants workshop on women in the labour force organized under a Network Project of the ARTEP in New Delhi during 1-2 September 1988. The starting point of analysis is the inordinately low level of women’s participation in the labour force in most parts of India: A general theme which runs through these studies is that the increase in worker participation rates of women, especially within the non-agricultural sectors of the economy, marks a major turning point in the evolution of labour markets and that such an increase is concurrent with a dynamic growth process within the economy. Parallel to the growth process there are also some pre-requisites, which set the stage for release of women into the visible labour force: improvements in female literacy and reduction in fertility rates. In so far as these pre-conditions
remain partial or inadequate in the Indian context, worker participation of women tends to remain confined to the agricultural and allied sectors of the economy. The main thrust of the studies is to identify factors and forces which impede the development of labour markets and thereby highlight the case for public policies which can promote the entry of women into the labour force, in particular into the more skill intensive sectors of the labour force.

Dwuvery and Jose (1989) examine the various facets of female work participation in India. The analysis showed that the lower level of female work participation compared to that of men is largely an outcome of definitional biases rather than some inexplicable social phenomenon. On the other hand, there has been an apparent decline in the percentage of economically active female population. Given the increased pauperization, the extent of forced or involuntary unemployment has probably significantly increased and workers may also be drifting more into marginalized occupations which are not easily captured by standard definitions of 'productive work'. While the overall division between agriculture and non-agriculture has remained basically stable, there have been definite changes within each sector. The agricultural policies since the 1960s have, on the one hand, expanded the supply of agricultural labourers via increased pauperization and, on the other, increased the demand for labour, though not at a rate to absorb the increased supply. The spatial pattern of the incidence of agricultural labourers cuts across
various agro-climatic zones, varied levels of productivity and agricultural growth.

Nayyar (1989) analyzed the census data for 1961, 1971 and 1981 indicate that in rural Haryana and Punjab a large number of women work in agriculture, but of these, the proportion of ‘marginal workers’ or helpers is particularly high. In Punjab they constituted 87% of total female workers, whereas in Haryana marginal workers were 43% of the total. In contrast for all-India, the proportion of marginal women workers was low, at 27per cent. In these two states, the proportion of ‘casual’ labour is small relative to the ‘self-employed workers, and the ‘casualization of female labour is between 3 as compared to the all India level of 12%. First, due to the increase in agricultural output and incomes, a consequence of the Green Revolution, there has been a withdrawal of female labour from the rural labour market. Secondly, the non-availability of labour could have provided an incentive for increased mechanization, leading to a further decline in the demand for labour, particularly female labour, and substitution of local labour by machines and/or migrant labourers. There is evidence to suggest that whenever there has been an increase in demand for labour, it is largely for male labour.

Mishra and Mishra (1990) concluded the occupational structure of women in Orissa both at the state and the district level is highlighted although the sex ratio in the state is almost equal, the ratio of women workers is very low, and has gradually declined over
time. A shift of female labour from non-agricultural activities to agriculture has been followed by a declining trend in the share of labour engaged in household industry. The wage rates of female agricultural labourers continue to be lower than those of male agricultural workers. At the district level, the work participation rate of female labourers shows wide variation among the different district. The participation rate is higher in some districts which have a high tribal population. The rising participation rate of female agricultural labour in the districts was uniform, irrespective of whether the district was agriculturally developed or not.

**Seema and Prasad (1991)** conducted a study among the farm women of Nador community Neyyatinkara taluk of Trivandrum district, study revealed that more than 50 per cent of women perceived six areas viz., decisions regarding, purchase and sale of land, storage and marketing of farm produce, care and management of animals, family budget and children’s education as very important areas. Farm women might have perceived only those roles in which their mothers and grand mothers were involved, as important.

**Nigani (1992)** concluded home-based women workers in the self-employed and informal sector play a crucial role in the development of the economy, both at the level of the family and at national level, These women are extremely vulnerable to exploitation, and are invisible to society and are therefore ignored by legislators, planners and policy makers. This paper examines the role of women
as household workers engaged in manufacturing activities, the kind of work they perform, the terms and conditions of this work, and the future these enterprises provide for women. It is shown that there are more women than men in household employment: rural areas account for more household employment; there is a concentration of women in low paid exploitative industries; wages are very low; middlemen sell the final products at very high prices; and women are prone to exploitation by lack of education and training. Organizing these workers and providing them with education and training are extremely important in ameliorating their conditions and improving their status.

Agrawal (1993) found that labour contribution of 0-85 per cent for weeding and over 60 per cent for harvesting is provided by women.

Uberoy (1995) reported that technical development during the Green Revolution had resulted in a decrease of women's involvement. This approach is to bring them back into the mainstream. The role of women in technical development in agriculture has only been receiving special attention recently. It had not surfaced in discussions, on development strategies earlier. The need for uplifting rural women can not be ignored or neglected any longer.

Jhamtaiii (1995) reported that according to Swaminathan (1982) some historians believe that it was women who first domesticated crop plants and thereby initiated that the art and
science of farming. While men started hunting in search of food, women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food, feed, fodder, fiber and fuel.

**Divakaran (1996)** attempt the extent of gender discrimination in urban India, using the human capital approach. Earning functions are estimated for males and females, correcting for selectivity bias, using data on a large sample from a primary household level survey of the Madras Urban Agglomeration. The parameter estimates of the wage equations are used to decompose male-female wage differentials into two components - one explain by productivity differences and the other, the residual attributed to discrimination. Correction for selectivity bias increases the discrimination coefficient to 21 per cent, while controlling for occupation using dummy variables further raises the discrimination coefficient to 31 per cent. Those male-female wage differentials are more across occupations than within occupations. Is confirmed by the use of the extended decomposition method which indicates job discrimination of 37.9 per cent and wage discrimination of 12.5 per cent.

Even though endowment differences account for about 50 per cent of the male-female gross wage differentials, there is clear indication of discrimination against women to quite a great extent in the labour market, in urban India, that any government committed to gender equality cannot ignore. This discrimination is found to be
more in the form of denied access to high paid jobs than in the form of lower wages within occupations.

Mukherjee (1996) concluded in his study although the gender bias is more likely to get reduced with the increase in participation of female in the labour force, it should not be assumed that the gender relations will change automatically as women become equal part in economic development. In many households of urban and rural India, the women labourers do not have control on their income and in same of the workplaces payment of equal wages to men and women is yet to become a reality. The gender based wages discrimination continues, even it identical tastes performed by men and women tasks such as weeding or even in a typical female labour intensive tasks such as transplanting.

Singh (1996) using data from the Indian Census report, the paper examines: how female workers are distributed among primary, secondary and tertiary occupations; their participation levels in these three occupation areas; variations among districts in participation; and changes that might have occurred in these three areas of occupation. The study focuses on Punjab and covers the period 1961 to 1981. The paper concludes that Ludhiana district in the largest contributor of women workers in all three occupations. The modern and mixed occupations witnessed a rise in female participation in most of the regions of Punjab during this period.
Parthasarathy (1996) concluded that in several centers female wage rate formed 80 per cent or male wage rate. With the sole exception of Palghat center, female wage rate fell behind male wage rate for the harvesting operations. Several reasons given for this, none of which is convincing. Female come late for work and go earlier. Their productivity is less than male productivity. The major reason for discrimination of female is traditional bias against female workers.

Visaria (1997) reviewed data and presents an assessment of the participation of Indian women in economic activities. The main sources of data are: the decennial censuses; successive rounds of the National Sample Survey beginning with April-September 1952; and, small-scale socio-economic surveys that portray the situation prevailing in specific local areas. The results of the surveys indicate that about 79-81 per cent of the working days of rural women workers were devoted to manual work relating to agricultural operations, whereas the corresponding proportion of male workers were 72-74 per cent. During 1987-88 there was an increase in the share of manual non-agricultural activities among female casual labourers. With the continuing sub-division of land holdings, the number of different activities taken up by both female and male workers is likely to go up.

Kishore et al. (1998) in their study that the more than 50 per cent of the women respondents dominant participation were in
decision making regarding marketing of farm produce, deciding family budget, children’s education, decisions regarding social religious and cultural program of society, purchase and sale of land and care and management of livestock etc.

**Saikia (1999)** seeks to study the role of women in agriculture including animal husbandry, sericulture and other allied activities and the involvement of farm women in the decision making process, based on analysis of data collected from a sample of 138 farm households randomly selected from three villages belonging to different blocks in Jorhat district of Assam. On an average, females were employed for 222.61 day in a year, of which 38 per cent was on crop production, 7 per cent on food processing, 15.2 per cent on handloom weaving while 33 per cent was on animal care activities under utilization of female labour existed in all size groups of farms and it was higher in marginal and small size-groups. There is much scope for increasing gainful employment opportunities for female through development of the if sector, allied agricultural activities, rural based industries etc.

**Tripathi (1999)** examine the level and pattern of women’s contribution in hill economy. The employment pattern of human labour revealed that annual contribution of women in crop production was 230 days / ha, accounting for about 80 per cent of total labour employment whereas men contributed 59 days / ha or just 20 percent. The contribution made by women for field
preparation, manuring and sowing was 41 percent higher over male contributions and it was as high as 142 percent in rice crop. Weeding and hocking accounted for 48 percent of the total human labour requirement for crop production, of which 45 percent was contributed by women and 3 per cent by men. Out of total human labour requirement of crop production as a whole, 13 per cent was on harvesting and digging, of which 10 per cent was contributed by women and 3 per cent by male workers. Female labour employment in fruit production accounted for 64 per cent of the total labour employed and male labour for 36 per cent. The labour contribution of women in milk production was more than 82 percent of the total labour employed. The participation of female labour was more in operations such as fodder collection, cleaning of cattle shed and in milking and preparation of milk products.

Chauhan and Sirohi (1999) studied the impact on female employment of Intensive Cattle Development Programme (ICDP), which was initiated for the development of dairying in rural areas. The results indicated that in the case of beneficiary households the female participation in daily forming was 108.50 man-days, 158.37 man days and 151.42 man days year for small, medium and large herd size farm categories, constituting about 50 per cent, 52 per cent and 42 per cent of total man-days of employment respectively. In these households, of the total time devoted to dairy farming, the contribution of females was about 47 per cent while that of males
was lower at about 43 per cent. The rest of the labour time was attributed to child labour.

Tripathi (1999) concluded a study on Uttarakhand region of Uttar Pradesh to examine the extent of women contribution in crop production in the existing pattern of hill farming system. The average annual contribution of female in crop production was about 230 days/ha as against 59 days of male, the highest contribution of women was in potato crop being 445 days/ha followed by rice (330 days/ha). The share of women in millets was more than 84 per cent of the total labour employment in the crop followed by rice (83%) the findings shows that contribution made by women for weeding and hoeing operation was 15 times higher, harvesting 3 times and for threshing and winnowing 251 per cent over contribution by male.

Pandey et al. (1999) examines the extent of temporal changes in the pattern of employment of rural women across crop and animal husbandry activities. The analysis of data revealed that the average levels of female labour employment varied across farm categories from 32 to 39 per cent in period I and from 31 to 37 percent in period H female labour employment increased with the increase in the size of holding in period. I but a reverse was trend observed in periods H cotton, paddy wheat and rabi fodder are the major crop while weeding and hoeing harvesting/picking, threshing and winnowing as well as transportation are the major operation which absorbed female labour in Haryana. Temporal changes in the female labour
employment in oilseeds has considerably increased across from categories due to greater emphasis being given to yellow revolution in Haryana during the nineties. A typical wife of the Haryana farmer associates herself with animal husbandry more particularly in dairying, and she considers owning a mulch buffalo as a prestige so as to serve the guests milk and ghee which are not borrowed or purchased. Rural women's participation in making of agricultural decisions has substantially changed over the period.

Singh, et al. (1999) it seeks to examine the socio-economic structure of the selected from worker's households and the rate of participation of form women workers in various field operations. The total employment of agricultural labourers in 1993-94 worked out at 176.36 days per farm, which increased to 236.29 days in 1998-99. The share of female workers in the total employment increased from 84 days to 112 days per farm during the corresponding periods. The higher employment in the latter period was due to increase in intensity of cropping and production of new crop like sunflower, late potato and late wheat in the cropping pattern of farms. As regards different farm operations, participation of females was the highest in sowing, interculture, threshing and winnowing and harvesting. It was higher than that of male workers in sowing (78 per cent) and interculture operation (62 per cent) in 1993-94 and 79.23 per cent and 63 percent in the corresponding operation in 1998-99. The female labour employment in the cultivation if maize, potato, wheat
and sunflower varied from 45 to 49 per cent of the total labour days employed. Sowing, interculture and harvesting were the main farm operations. The rate of participation of female workers was higher than that of male workers for both the period. The study concludes that with the increase in intensity of cropping and introduction of labour intensive crops in the cropping pattern of the farmers, the rate of participation of female workers has increased to considerable extent.

Singh et al. (1999) attempts to examine the pattern of employment and participation of women in agricultural activities in Maharashtra. The study revealed that women labour both owned and hired had contributed 61.58 per cent of the total employed days required in the process of crop production per farm at the state level. Among the various regions of the state, it was noted that Western Maharashtra region provided the highest per farm employment of 311 days during the year for both the male and female workers. The proportion of family women labour was the highest, being 14.20 per cent of the total labour use in Western Maharashtra as compared to the other regions, while the proportion of hired women labour was the maximum at 65 per cent in Vidarbha region. Women accounted for 18 per cent of the total labour employment in livestock management in the state as a whole and their contribution was the highest (31.42 per cent) in Western Maharashtra. The share of women in total employment under special activities such as wage
earning, incidental farm work, farm work other than crop production etc. was about 35 per cent. It was found maximum at 49 per cent in the Vidarbha region, followed by Marathwada and western Maharashtra regions. On the whole, nearly 50 per cent of the labour requirement for agricultural activities was contributed by women in the study area.

Singh et al. (1999) to examine the nature and pattern of employment of men and women farmers in rice wheat production system. The gender division of labour as well as participation in rice wheat farming is not pronounced. Women farmers were intensively involved in crop and livestock production and in processing of farm produce such as cleaning, drying, and grinding and shelling of rice and wheat. The off farm employment pattern reveals that outside village employment is negatively associated with the size of holding. The introduction of technology in rice- wheat farming system has led to a reduction in the male labour demand and increased the use of hired female labour, The differential pattern of wage structure between women and men was largely determined by the nature and duration of agricultural task. The study suggests that there is a need to evaluate technologies for reducing women’s drudgery and to increases labour saving-gender- adjustable technology in agricultural development in future.

Kumar et al. (1999) examines the existing female labour force its status and utilization in dairy enterprises and other activities in
the middle Gangetic plain region of Bihar. The assessment of women's contribution in dairy enterprises was done by working out costs and returns along with female and family labour income obtained from local and crossbred cattle. The analysis revealed that total family labour income from crossbred cow and local cow was about Rs. 25 and Rs. 16 per animal per day, of which the share of female labour in the total labour income was about Rs. 539 and Rs. 155 respectively, which accounted for about 34 per cent of the total family labour income in the group of sample households. Thus, the contribution of rural women was considerable in total human labour employment and family labour income from dairy enterprises.

Considering the perceptible importance of rural women in agrarian economy especially in dairying, the policies must be oriented towards enhancing the skills and training of farm women in various technologies of milk production and processing in order to increase productivity and income of the households.

**Singh and Rai (2003)** reported that women from the backbone of agriculture comprising the majority of agriculture labours in India. Gender divisions are stark with all activities involving manual labour or monotonous work assigned to women while men generally perform all operations involving machinery. Agricultural wages are an average 30-50 per cent less than those for men despite putting up, equal hours and intensity of labour inputs.
Singh, et al. (2005) conducted a study of labour wages discrimination in agriculture: gender bias and policy implications at different villages in six states of the country. They concluded that the drudgery of women in overall activities as well as household works was higher than men in all the selected states. However, it was lower in agriculture as compared to their male counterparts. Wages disparity were found to be higher among men and women in agriculture where men enjoyed with higher wages than women while in case of non-farm activities, male and female labour wages differentials were meager and they were not pronounced much. Hence, there is need to remove drudgery of work in case of women and narrow down the differences in wages between men and women in agriculture for the well-being of women works.

2.1 Hypotheses

On the basis of objectives given in chapter I and review of literature given in the present chapter, following hypotheses were developed

- The farm women workers get higher employment in agriculture and non agriculture sector.
- The farm women workers contribute significantly towards income of the household.
- The farm women workers are paid fewer wages than men for performing the same operations.