CHAPTER II
REVIEW OF LITERATURE

Review of literature is the paramount of any research project as its helps to acquire a broad general background in a given field. It also helps to identify the gaps in research and to document the events relating to a particular aspect of investigation. It includes the views and observations of the scholar on various aspects of the subject under specific investigation. It provides researcher the direction to undertake investigation in contemporary emerging area and also help in designing research in more appropriate manner. Since literature available in the areas of women entrepreneurial behaviour is scanty, an attempt has been made in this chapter to review the relevant literature available. A brief review of previous studies conducted on women entrepreneurial behaviour has been chronologically arranged in this chapter. This helps the researcher to develop the theoretical framework for the study and also to assess the research already undertaken in the area on the study. The reviews are presented below under various headings in accordance with the objectives of the study.

2.1. Personal and socio-economic profile of rural women involved in agri-based enterprises.

2.2. Extent of knowledge and participation of rural women in different agri-based enterprises.

2.3. Training needs of rural women in different enterprises.

2.1 Personal and socio-economic profile of rural women involved in agri-based enterprises

2.1.1 Age

Maity (1999) and Meena (2002) found age as personal profile of dairy farmers and categorized into young middle and old age groups on the basis of their age in years.

Das and Pankaj (2004) found that majority of dairy farmers belonged to middle age group.
Rao (2006) reported that dairy farmer from the younger group (<30 yrs.) were more suitable for any self-employment non-traditional activity.

Khumlo (2009) found that most of the women engaged in agro-based enterprises belonged to the age group of 38 to 62 years of age (66.60%), and (16.70%) women belonged to the age group of 32 to 38 and another (16.70%) were found to belong in the age group of 62 to 75 years.

The above cited literature reveals that majority of farmers were in middle age group. It means new skill development is possible only among the younger and middle age group.

2.1.2 Education

Kannan (2002) reported that 95 per cent of the women respondents doing dairy activity were literate.

Maity et al. (2002) and Murali et al. (2003) reported that majority of respondents had medium level of education.

Jhamtani et al. (2003) found that good percentage of respondents have education status up to senior secondary level and above.

Kumar et al. (2005) reported that significant positive relationship of education with overall entrepreneurial behaviour of floriculture farmers.

The above past studies indicate the educational status of majority of dairy farmers ranging from middle level to higher education.

2.1.3 Caste

Reddy and Rao (1998) found that 50 per cent of farmers belonged to low caste group followed by farmers with medium caste and high caste groups i.e., 26.67 and 23.33 per cent respectively.
Ananthan and Jhamtani (2002) reported that majority of the rural women working as agricultural labourers were under backward caste category.

Murali and Jhamtani (2003) in their study categorized the respondents into dominant forward, backward and most backward categories on caste while assessing orientation towards different enterprises related to agriculture.

Jhamtani et. al (2003) reported 42 per cent respondents involved in agriculture were from Jat caste followed by Brahmin (36%) and schedule caste (18%).

2.1.4 Family Size


Jhamtani et al. (2003) found that a good percentage of respondents were having fairly large family size with 8 or more than 8 members in the family.

2.1.5 Social Participation

Kumar (2001) Das (2003) and Sah (2005) found that majority of respondents were having low or poor level of social participation.

Meena (2002) reported that majority of the respondents were members of one or more than one social organization and family scored good or high on social participation.

Chugh (1995), Maity (1999) and Das (2003) reported that a good percentage of respondents had not participated in any social organization.
2.2. Extent of participation and knowledge of rural women in agri-based enterprises

Smith (1990) found that a significant differences (p<.01) between men and women on occupational status. Women were significantly less likely than men to be employed in management positions and were significantly more likely to hold clerical positions. Men had 64 per cent of all managerial positions, which made up 13 per cent of the work force. Women accounted for 92 per cent of clerical workers, which made up six per cent of the work force. Women were also less likely to be unskilled labourers (p<.01), which made up nearly two-thirds of the work force. No difference existed between men and women employed as skilled labourers, about 17 per cent of the work force. Women were underrepresented as managers and overrepresented as clerical workers. In small nurseries, however, women were overrepresented as clerical workers, but not over- or underrepresented in the other occupational status categories. In addition, women were more likely than men to be employed in smaller nurseries.

Sudharani and Raju (1991) interpreted that though female labour contribution was significant in both the cropping systems, but they were not employed fully throughout the year.

Bala et al. (1993) found that women participated actively and dominantly in household decisions. The participation of women in decision making, jointly with their counterparts was significantly affected by their educational status and age group whereas the self-decision making was affected only by their age group. Farm size had not shown any significant influence on the decision making by women.

Mehra (1997) reported that development policies and programmes tend not to view women as integral to the economic development process. This is reflected in the higher investments in women's reproductive rather than their productive roles, mainly in population programs. Yet women throughout the developing world engaged in economically productive work and earn incomes. They work primarily in agriculture and in the informal sector and increasingly, in formal wage employment. Their earnings, however, are generally low. Since the 1950s, development agencies have
responded to the need for poor women to earn incomes by making relatively small investments in income-generating projects. Often such projects fail because they are motivated by welfare and not development concerns, offering women temporary and part-time employment in traditionally feminine skills such as knitting and sewing that have limited markets. By contrast, over the past twenty years, some non-governmental organizations, such as the Self-Employed Women's Association in India, have been effective in improving women's economic status because they have started with the promise that women are fundamental to the process of economic development.

**Batish et al. (1999)** analysed the nature and extent of participation of rural women in farm activities and revealed three different agro-climatic regions of Punjab that showed considerable differences regarding participation of rural women in farm activities. They found that the difference in participation of rural women in farm activities varied according to cropping pattern adopted in three regions of Punjab.

**Sadangi et al. (1999)** categorized the farm activities into two different classes. The first category of activities which is mostly performed outside the home and requires continuous efforts and the second category of activities was performed inside the house and required intermittent efforts by the women having children.

**Tamilselvi et al. (1999)** conducted a study to assess the roles performed by farm women themselves and through their support in assisting others, supervising labour or simply reminding others under different farming situation. The study revealed that farm women’s performance was less in activities like seed treatment with chemicals & bio-fertilizers, buying a specific type of seed and selecting the strain of poultry birds.

**Bhuvaneswari and Kannan (1999)** reported that out of the total labour time spent by women on various activities, their active participation in farm operations accounted for more than 80 per cent.

**McCoy (2001)** reported that a growing number of farm women participate in the farming operation as managers by marketing farm products, maintaining computer
records, making purchases and helping with long term planning. In recent years a trend toward larger farms and smaller families has resulted in more daughters entering the farming business, either as partners with other family members or as independent operators. Forty-one per cent continued to describe themselves as their husbands' assistants on the farm and 34 per cent described themselves as silent partners. Farm women spent an average of 21 hours per week working off the farm, 22 hours per week working on the farm, and 35 hours per week engaged in household and family duties. The research highlighted that 86 per cent of women with children working on dairy farms participate in off-farm work, with more than half of them working more than 20 hours/week.

Narmatha et al. (2002) reported largest percentage (i.e. 31.33%) of farm women under very high category of entrepreneurial behaviour followed by 22,18.67, 17.67 and 10.33 per cent of respondents under high, low, moderate and very low categories, respectively on entrepreneurial behaviour in agri-enterprises.

Mohammed (2002) found that males and females start to participate in farming activities at an early age (about 5-9 years) the level of female participation increases at the same rate as male participation. In the age group (30-34) years, female participation increases significantly as most male households seek job opportunities outside agriculture as a result of the limited size of the family house holding.

Yadav et al. (2003) told that the rural employment is disappointing Indian agriculture and has to move towards commercialization and diversification to keep pace with fast changing scenario in recent time. For this, farmer must become entrepreneur and view their farm unit as viable commercial units

Jha (2003) stated that a stage has now come when we must strive not only for having sustainable agriculture but also for making the farming a profitable commercial venture and a business and for entrepreneurship development.

Bheemappa (2003) stated that if one undertakes agriculture in the form of business based on scientific knowledge, latest technology package, together with proper pre
planning, agriculture turns out to be the most profitable venture. Further he visualized the scope for entrepreneurship developed in allied agricultural activities including dairying.

**Sailaja and Reddy (2003)** reported that low cost agricultural practices were the primary emphasis of farm women. Farm women should be empowered through effective training programmes so that they do not deserve the term ‘the invisible hands’ and ‘unheard voices’. The challenge before State Department of Agriculture therefore lies in integrating brain (technology), brawn (physical work) and bank (credit and other resources) in a mutually supportive manner so that man and woman can play an active role in improving productivity, profitability, stability and sustainability of major farming systems. This will contribute to the second green revolution in our country.

**Saini (2003)** observed that agri-enterprise as a function of four dominant factors i.e., socio-sphere system, resource system, support system and self-sphere system. Entrepreneurship development training which helps in strengthening informal and unorganized sector is expected to motivate enterprising people to opt for self-employment and entrepreneurial career. It will therefore help in solving the problem of increasing unemployment.

**Narayan and Geethakutty (2003)** revealed that entrepreneurship has been recognized as an essential ingredient of economic development. Very high literacy rate and lack of employment opportunities paved way for many unemployed youth including women to take up small-scale business units. In this study entrepreneurial success index (ESI) was developed to measure the level of success of women in agribusiness and the respondents were classified into four groups of very high success, high success, medium success and low success.

**Jhamtani et al. (2003)** reported that majority of rural youths had medium entrepreneurial characteristics and in almost all dimensions of entrepreneurial behaviour, large percentage of respondents come under medium category except risk taking and hope of success in which majority of rural youth were under high category.
Murali and Jhamtani (2003) reported that age of the respondents is negatively and significantly related with all dimension of entrepreneurial behaviour (large percentage of respondents) come under medium category except risk taking and hope of success in which majority of rural youth were under high category and also reported that education, socio-economic status and land area were positively and significantly related with dimensions of entrepreneurial behaviour.

Bokil and Milind (2003) observed that in recent years, the traditional roles of women have undergone some changes due to economic needs, and some efforts were made to bring visibility and mainstream women’s contribution to the overall growth and development of society. An empirical study was done by Development Support Team (DST) on women engaged in micro-enterprises in Maharashtra. Tailoring was a favored occupation in both urban and rural areas, whereas in villages, agriculture and dairy were key occupations. As all the respondents were involved in micro-enterprises so a total of 92 loans were accessed by 57 urban respondents and 196 loans were accessed by 107 rural respondents. The ratio works out to be 1.61 loans for urban and 1.83 loans for rural respondents. In urban areas, women spent 5.83 hours per day in the business/occupation, whereas in rural areas women spent 6.93 hours per day in this occupation. On other domestic chores, rural women spent 5.23 hours per day, whereas urban women spent 4.96 hours per day. Being overburdened, around 60% urban and 70% rural respondents reported health problems, the most notable being backache and body ache. Almost all respondents mentioned that they did not get time for themselves. Self-employed women need to be engaged in wider community activities by freeing their energies, which at present are imprisoned in domestic chores and occupational responsibilities. Then alone would their human potential be fully utilized, and be a true indicator of development.

Kumar (2004) explained the approach for developing rural women enterprise, suggested an integrated approach for agri-enterprise development among rural women considering different social organization and institution and support facilities.

Mohammad and Shahid (2004) found that 60 per cent of the samples were in the age group of 25-45 years, 22 per cent were below 25 years and 17.7 per cent were above
45 years. They also reported that 72 per cent women were educated till primary and intermediate level, 7.8 per cent were graduates, 3.3 per cent post graduates and 8.9 per cent were illiterates whereas 80 per cent WPs and all the sampled CBDs and AWWs had very limited income. Data showed that the CBDs were more articulate, mobile, active, and sent their children to schools.

**Rajasekhar (2004)** reported that micro finance aims at providing the rural and urban poor, especially women, with savings, credit and insurance and aims to improve household income security. This study examined the economic and social benefits of micro finance programmes implemented by two NGOs in Karnataka and Andhra Pradesh. The rule formulated by Gram Vikas attempt to translate the strategy of microfinance as an instrument of poverty reduction into practice. The savings programme of Gram Vikas was larger than that of Sanghamitra. The micro-finance programmes undertaken by NGOs do provide access to credit for the poor, enable them to undertake income generation programmes, and contribute to higher recovery rates.

**Wadiniale (2004)** found that 70 per cent women were in the age group 20-45 years, 32 per cent were SC, 84 per cent were married, and 27 per cent were illiterate. Saving credit program had membership fees ranging between Rs.2.00-10.00, upper limit of loan was Rs.7500.00, rate of interest was 12 per cent per annum, period of repayment was 12-24 months, and only 89.7 per cent respondents were regular in repayment.

**Bhanj and Tripathi (2004)** emphasised on the need of additional efforts to meet the challenges. Serious efforts are needed to be made towards judicious control of dairy cattle population, extending the existing A.L network and improve its quality of service, strong extension linkages and input delivery system through extension support, genetic up gradation of cattle to enhance productivity, improvement in quantitative and qualitative availability of feed and fodder, control of epidemics, adequate budgetary support, revising of milk pricing at regular intervals and effective procurement network.
**NRCWA Report (2005)** revealed that women of family contributed highest hours per season (61.66%) in harvesting and post harvesting operations and participated lowest in land preparation.

**Gupta (2005)** reported that farm women moved towards economic and social empowerment. Almost all the beneficiaries felt that SHGs were boon to them by providing economic security and also facilitating easy loaning. There was incremental change in trust and openness of women and the formation of SHGs helped in imbibing self-confidence and self-esteem. It was also reported that 23-75 per cent improvement was perceived in confidence building. In self-esteem, 25-80 per cent improvement was perceived by farm women. The farm women felt increased satisfaction level with their lives than before. Decision making abilities of farm women related to family, farm and social issues increased significantly. Farm women felt socially more empowered in terms of aspects like leadership, ability to work with others, communication skills, assertiveness and participation in village activities. It was observed that farm women were changing in their outlook, attitude, hopes, aspirations and practices towards self-help groups.

**Saghir et al. (2005)** indicated that rural women were involved in food production activities such as wheat and vegetable production on the family farms. They were also actively involved in food storage and security related activities such as cleaning of wheat for milling, cleaning of store rooms etc. Women of the arid area perform their role in wheat and vegetable production extensively whereas in maize and fruit production, their participation was least. This research study highlighted the need to further explore their access to non-formal educational resources concerning agriculture and home economics with special reference to food production, and storage, the extent to which they utilize these resources and the obstacles to gender mainstreaming in extension

**Kumar and Gill (2006)** revealed that the age group of most of the women entrepreneurs as 36 to 65 years. The average annual household income of the women entrepreneurs has been found to vary between Rs 1.66 lakh for the dairy enterprise to Rs 2.16 lakh for the bee-keeping enterprise. The share of enterprise income in
household income has been found 18.89% (the lowest) for the dairy enterprise and 72.84 per cent for the _papad/badi_ enterprise. Amongst the different enterprises selected for study, _papad/badi_ enterprise has been observed as the most successful/viable enterprise, followed by beekeeping, pickles making and the dairy enterprise. Marketing, lack of capital, problems of being the women and technical deficiency have been identified as the major problems faced by the women entrepreneurs. To make these enterprises viable, there is a need of subsidy on the purchase of inputs, reduction in formalities for getting credit from the institutional sources, and financing of input costs by the formal banking institutions. To increase the profit from bee-keeping and pickles enterprises, the entrepreneurs should try to sell their products directly to the consumers.

**Rao (2006)** stated that India has a predominantly agrarian economy. Seventy per cent of population is rural, of those households, 60 per cent engage in agriculture as their main source of income. It has always been India's most important economic sector. In this important agricultural sector woman plays a vital role, because it is largely a household enterprise. Women in India are major producers of food in terms of value, volume and number of hours worked. Nearly 63 per cent of all economically active men are engaged in agriculture as compared to 78 per cent of women. Almost 50 per cent of rural female workers are classified as agricultural labourers and 37 per cent as cultivators. About 70 per cent of farm work was performed by women. It is observed that women play a significant and crucial role in agricultural development and allied fields including, main crop production, live-stock production, horticulture, post-harvesting operations, agro/social forestry, fishing etc., it is a fact long taken for granted but ignored since ages.

**Kumar and Gill (2006)** found that for _papad/badi_ entrepreneurs, enterprise income was the major source of income as it contributed about 73 per cent to the total household income. The male members of the household were also involved in the services sector which contributed about 27 per cent to the total household income. Most of the pickle entrepreneurs depended heavily on the farming and services sectors for the household earnings, as the enterprise contributed only about 23 per cent to the total household income.
**Damisa et al. (2007)** discovered that the socio-economic characteristics of the women farmers significantly affect their decision making in agriculture and revealed that in each of the farm operations, less than 20 per cent of the women were consulted, except in the sourcing of farm credit where about 28 per cent were consulted, about 13 per cent or less of the women had their opinion considered in each of the farm operations except in storage and marketing where about 46 per cent had their opinion considered. However, only between 1 and 2.5 per cent took the final decision in all of the farm operations.

**Sharma (2007)** found that women’s participation in micro-credit programs helps to increase women’s empowerment. Credit program participation leads to women taking a greater role in household decision-making, having greater access to financial and economic resources, having greater social networks, having greater bargaining power compared with their husbands, and having greater freedom of mobility. Female credit also tended to increase spousal communication in general about family planning and parenting concerns. Ecologically, the higher impact on women’s empowerment was noticed in Tarai. The reason may be relatively lower social and economic status of Tarai women at the time of program initiation compared to that of hills.

**Fabuiyi et al. (2007)** observed that women generally do not control a lot of money in the household as a result their productive resources are usually limited. FAO studies confirm that while women are the mainstay of small-scale agriculture, farm labour force and day-to-day family subsistence, they have more difficulties than men in gaining access to resources such as credit and productivity enhancing inputs and services. Enhancing the access of the rural food processing entrepreneurs to credit through easy access to loan from people’s bank, microfinance bank and Agricultural banks could lift up their productive capacities as they will be able to expand their business, create more value added products, developing new products and increase food availability, hence improvement in food insecurity.

**Ahmad et al. (2007)** found that majority of the respondents were in age group of 20-40 years, 54 per cent of the total respondents were educated, 73 per cent of the respondents had barani type of land. Education and adoption of vegetable growing
practices were positively correlated. The results further showed that 54 per cent of the respondents grew vegetable inside their houses, among which 47.5 per cent grew vegetable for profit purpose and 47 per cent of the female respondents grew vegetables by themselves. Major constraints in vegetable production found in the study were lack of capital, credit availability and lack of marketing facilities.

Nunes et al. (2008) presented a comparison of the disclosure practices, in the social balance, of the social indicators of female workforce participation in the agro-industries Sadia and Perdigo. The analysis of labour indicators can produce relevant information for investors and society in general regarding the protection and the stimulation of female labour. A study of these indicators can also be an important step in understanding the diversity practices of Sadia and Perdigo which, due to their size and social and economic contributions, are natural candidates for becoming benchmarks in the agribusiness sector. Despite the growth of female participation, a balance between male and female labour, especially in management positions, has not yet been reached more than 80 per cent.

Boas (2008) found that the women soap makers in the study areas used 83 and 17 percent of palm oil and kernel, respectively. On the average, annual net income of N160, 614.90 was recorded implying that one naira invested in the enterprise returned N1:56k, that is, 156 or 56 per cent above the investment and operating cost. The net income contribution to family sustainability was realized through provision of food (28%), paying children school fees (17%), changing children’s cloth (13%) and leisure (2%). In conclusion, the sampled women make substantial contributions to their family through the profits of their enterprises, which enabled them to play roles hitherto played by men. The study recommended that small-scale agri-business women entrepreneurs should be involved in development planning and policies at both the design and implementation stages.

Rajani and Sarada (2008) in their study revealed that for effective enterprise management, women need a large quantity of co-operation and encouragement in the sphere of activity, at all levels, home and in society and from governmental organizations.
Biswa (2008) examined the empowerment of women by addressing two dimensions: economic empowerment and personal empowerment. One hundred women, aged between 16 and 65 years, participating in self-help groups from two rural Indian villages in North-West India took part in the study. Both quantitative and qualitative data were gathered through self-report surveys and interviews, with the analysis yielding contradictory findings. The quantitative data found that working women reported moderate to high levels on collective efficacy, proactive attitude, self-esteem and self-efficacy with no significant reporting of psychological distress. In contrast, examination of the qualitative data revealed positive appraisals of self-worth, purpose and independence and negative appraisals of pressure, challenge and stress.

Hoque and Itohara (2008) showed that among the agricultural activities rural women’s participation was relatively higher in various postharvest activities and livestock management activities than other agricultural activities. On the other side, their participation was almost nil in the case of aquaculture activities while few of them participate in some selected non-agricultural activities like handicrafts making, tailoring and Nakshi katha making. It was also evident from the study that farm women were contributing in household income through participating in EAs. The result of the study explored that woman’s personal income; institutional participation and training received by the women are the most influential factors for increasing the extent of participation of women in EAs. Findings also showed that in most of the cases women’s participation in decision making process regarding various family affairs is lower than their male counterpart. However, both in participation in EAs and decision making process NGO women were in the leading edge than the Non-NGO women.

Mishra et al. (2008) concluded from the study that women were the main performers in crop production as well as animal husbandry activities in the area of study. However, for decision making on farm activities, it was mainly men who were involved. For effective and beneficial participation of women in any activity, it is imperative to enhance the level of education for better management and dispersal of knowledge in society. A strong impact of socio-economic factors such as age, education and land holding was observed on the relative participation of farm
women in different activities. In total they spent about 14-17 hours per day on different household and farm activities.

Adinya (2008) revealed that rural women participate in food production and bearing responsibility for food marketing and distribution, family health, nutrition and sanitation. The lack of recognition of women’s contribution in crops and poultry production has resulted to low productivity in agriculture. The findings also revealed that women play major roles in processing of cassava into garri (19%), marketing of farm products (13%), planting of crops (19%), weeding (12%), harvesting (36%), storage (36%) and cleaning of poultry house and feeding of poultry birds (17.50%).

Awotodunbo (2009) revealed that respondents’ age, sex and extent of participation are significantly related to participation constraints at p<0.05. Religion of the respondents is however not significantly related to participation constraints at p<0.05. It is therefore recommended that all stakeholders in agriculture and rural development must come up with policies and reforms that would further encourage youths’ participation in agriculture and other rural income generating enterprises in the zone.

Farid et al. (2009) showed that most of the respondents constitute economically active age group who were mostly illiterate. Rural women largely took part in homestead gardening, harvesting crops, post-harvest operation, selling labour, sewing katha, ‘buying daily necessities’ and rice husking by dhekhi. Women were involved in various activities in order to meet basic family needs, increase family income and meet additional family requirements. The values of correlation coefficient (r) indicated that age of the respondents, amount of indebtedness of the family and family size were positively, and level of education and size of landholding are negatively associated with the participation of rural women in various agricultural and non-agricultural activities, whereas, average annual income and wage rate have no significant relationship with their participation in various activities.

Collett and Gale (2009) concluded that traditional attitudes towards women and assumptions about their role as child-bearers continue to restrict their access to training. Projects must address these attitudes if women’s needs are to be met.
However, projects must also understand women’s current domestic duties and work within these constraints, aiming for incremental changes in attitudes. One effective approach to this is working with the men to identify the benefits of the women engaging with the project for the family as a whole.

Jamali (2009) argued that the rural women in Pakistan had been actively involved in agriculture and its allied fields. Rural women’s work ranged from crop production to harvesting operations, from livestock rearing to raising babies. In addition to her daily work routine, consisting of, cooking, cleaning, and other domestic chores, rural women were also heavily involved in all aspects of country’s agricultural sector. From crop production to livestock rearing, rural women were expected to regularly engage in both domestic and commercial aspects of society. Despite such a huge contribution, her role has yet not been recognized. The paper recommends a fair treatment to the rural women and calls for social upliftment by enhancing education, employment, training, and health care facilities.

Singh (2009) stated that a successful agri-enterprise must have positive attitude towards modernization and individual farming for the growth of agriculture in the country in contrast to traditional and successful enterprises.

Taj et al. (2009) found that in commercial vegetable production, mostly family male and hired male labour (more than 80% in case of cauliflower, potato and cucumber) was noted. In peas, onion, garlic and ladyfinger production, women have a reasonable (more than 40 %) involvement especially in hoeing, weeding and picking of these vegetables. Further marketing of vegetables output was also male dominated as more than 90 per cent of male involved in marketing of these commodities while women have more involvement in milk, ghee and poultry sale. The results further showed that more than 60 per cent farmers considered the insects and disease attack as main problem faced by vegetable growers. Moreover, high seed cost, adulterated pesticides, inadequate availability of quality seeds and costly electricity and fertilizers were also major constraints identified by farmers with varying intensity. Low output prices and uncertain market situation was also identified as major marketing problem of vegetable growing community. As women
have low participation in commercial vegetable production in this district, household based women activities may be generated to utilize optimum potential of women in the area.

**Vaishya and Nigam (2010)** found that extent of knowledge of different agricultural practices. The maximum percentage of the respondents (66%) were noted having medium level of knowledge followed by 19 per cent and 15 per cent respondents who had low and high extent of knowledge respectively about rice production technology. The mean of scores of knowledge was calculated to be 25.43 with the range of 8 and 43 as minimum and maximum respectively. Out of 22 agricultural practices of rice production, knowledge about selection of variety was ranked at first (78%) followed by moisture percentage in grain during harvesting and storage (67.99%) and intercultural operation (65%) got rank second and third respectively. The poorest extent of knowledge was reported for use of weedicides (3%), disease control (5%) and disease name (6%). The overall extent of knowledge about rice production technology was observed to be 40.45 per cent. It has been observed that women had poor knowledge about rice production.

**Sultana et al. (2010)** found that existing gender ratio in demographic structure of Bangladesh indicates that women comprise almost 50 per cent of its total population, of whom more than 80 per- cent live in rural areas. Women in rural Bangladesh are considered as a vulnerable group and the poorest of the rural poor. It was also seen that microfinance institutions provide poor women with small capital, create an opportunity to conduct small business and assist them to become economically empowered. Women’s participation in home typed, traditional business can significantly build social capital, create awareness and enhance their capability to uplift their position.

**Adesope et al. (2010)** revealed that women were more involved in cassava processing than in other enterprises. Education and income significantly influenced rural women’s involvement in Agro processing enterprise of the National Special Programme for Food Security. Women with higher level of education were less involved in agro
processing than women with lower level of education, women with higher income were more involved in agro processing than women with lower income.

**Baba et al. (2010)** revealed that although women have significant role in some operations of vegetable cultivation but in totality male participation was found more important. As far as various decisions relating to vegetable cultivation are concerned, the role of women in majority of the cases was supportive in nature while men performed the dominative role in most of the cases. On the basis of the findings, it is suggested that education and extension facilities to female should be provided to broaden their out ward horizon that can ultimately enhance their participation in decision-making.

**Khanduri and Chandra (2011)** revealed in their study that the overall pattern of decision-making process related to home and farm affairs, the maximum decisions were taken by all family members (33.64%) followed by 27.27%, 20.91% and 18.18% decisions taken by women and male, women alone and male alone, respectively. The study also revealed that the participation of women in decision-making process related to home affairs was comparatively lower (13.64%) than farm affairs (28.18%), while in case of males, the situation was just reverse as the participation of male in decisions related to home affairs (27.27%) was higher than the farm affairs (7.27%). Thus, males were dominating the scene regarding decisions related to home affairs as compared to their female counterparts, whereas in decisions relating to farm affairs it was the women who dominate the scene. This is a unique situation of the rural Garhwal of Uttarakhand, where women perform more than 80 per cent home and farm activities but their participation in decision-making has been less than 20.91 per cent. It shows that there was a clear-cut gender bias in the society, which explains traditionally subjugated status of women, as well as their role in decision-making process.

**Ekatpure et al. (2011)** concluded that majority of the farm women were from middle age group, educated upto higher secondary school level, medium land holding. Majority of the farm women were from medium category of annual income, socio-economic status, social participation, sources of information, extension contact. While in case of constraints in production of
vermi-compost, preparation of bed, mortality due to high temperature, overburdening due to house and farm activities, difficulties in separation of earthworm, pH of mixture, lack of proper guidance and earthworm were eaten by birds, these were the major constraints faced by the farm women in production of vermi-compost.

Sani and Danwanka (2011) showed that the women soap makers in the study areas used 83 and 17 per cent of palm oil and kernel, respectively. On the average, annual net income of N160,614.90 was recorded implying that one naira invested in the enterprise returned N1:56k, that is, 156 or 56 per cent above the investment and operating cost. The net income contribution to family sustainability was realized through provision of food (28%), paying school fees of children (17%), changing children’s cloth (13%) and leisure (2%). In conclusion, the sampled women make substantial contributions to their family through the profits of their enterprises, which enabled them to play roles hitherto played by men. The study recommended that small-scale agric-business women entrepreneurs should be involved in development planning and policies at both the design and implementation stages.

Adisa and Akinkunmi (2012) showed that women participates more in production (94.5%) and marketing activities (95.9%) but participated less in processing (27.4%). The results also revealed that most women that participated in commercial poultry production are literate (71.2%), fell within 31-40 years of age (46.6%) and of high income status (87.7% received above N300,000 per year. The test of association showed positive and significant relationship between participation and each of socio-economic characteristics of age (r = 0.289), marital status (r = 0.362), educational level (r = 0.310), years of experience (r = 0.256), household size (r = 0.392), number of employees (r = 0.283) and type of birds (r = 0.479) at 0.01 significant level. The study concluded that the extent of participation of women in commercial poultry activities in the study area was low. This might be because most women assigned certain poultry operations that are tedious to their attendants or casual staff. Some of the recommendations made include provision of better extension services for effective performance, provision of credit facilities in form of loans to women, quality control of poultry input by government.
Lahoti et al. (2012) found that the women were actively involved in various aspects of dairy farming activities like care of new born calf, cleaning of animal shed, cleaning of utensils, storage of concentrates, feeding young calf, diagnosis of common disease and care at home level, care of sick animals, watering the livestock, offering the concentrate mixture, soaking the concentrate mixture, care during pregnancy, disposal of infected litter materials, grooming, cleaning and bathing buffaloes and cows. It is also observed that the participation of women was less in enrichment of dry fodder, money transaction like involvement in banking process, purchasing and sell of animals, maintenance of account financial records, maintenance of farm records, involvement in dairy cooperatives and purchasing of equipment’s.

Moktan and Mukhopadhey (2012) reported that participation of farm women in agriculture was significantly influenced by socio economic variables like family size, education of respondents, average family education, land holdings, material possession, personal cosmopolitan, mass media exposure, social participation level of awareness, level of knowledge and level of skill.

Bhatt (2012) concluded that cent per cent of the dairy farmers possessed about average period of gestations in buffalo/cow and Artificial Insemination, followed by more than (90 %) of the dairy farmers had knowledge regarding importance to clean the udder before milking and symptoms of a buffalo/cow being in heat/estrus, Hence, to get significant impact of training to gain in knowledge through VRCs, more numbers of training with more weightage should be given especially for breeding, animal health care practices as well as on feeding-nutrition practices for getting higher milk production.

Rayanagoudar et al (2012) indicated that respondents from non-organic village had no knowledge about organic farming and organic foods. Extension work will have to be intensified through conducting extension activities at village level for achieving better knowledge about organic farming and organic food. This can be done by organizing campaigns in all the villages for educating the rural folk not only about farming and soil health but also the effects on human health, animal health and the environment. It
also suggests that intensive efforts be made to educate rural mass with special emphasis
given to farm women as they are producers as well as preparers of food.

**Khan et al. (2012)** showed that pre-harvest activities accounted for wheat, sugarcane
and maize 38.72, 22.25 and 14.4 hours, respectively. The study also reveals that post-
harvest activities accounted for wheat, sugarcane and maize 121.55, 66.37 and 34
hours, respectively per acre for the crops for one season. The average daily time spent
on livestock management activities was 6.23 hours. Total income of family, number
of adult males in the household and educational level showed negative but
significant effect on women’s participation in crop production. However, the age
and tenurial status of respondents had significant effect but positive relationship to
women participation. Lack of training, extension services, cultural constraints and
financial problems emerged as main problems encountered by women engaged in
agriculture activities. These were the major causes of dissatisfaction among women
involved in agriculture activities.

**Abubakar et al. (2012)** found that majority of the participants (75%) are married and
undertook animal rearing as their major occupation. Results further showed that (85%)
of the participants were involved in decision making, which enhanced their
participation. Pair-wise ranking showed mosque completion as the most preferred
activity, followed by community development workers. Recommendations made in the
light of achieving people’s participation include, provision of more infrastructural
facilities (e.g. construction of mosque), provision of improved breeds, credit and
income generating activities.

**Goudappa et al. (2012)** revealed that a large majority of the farm women performed
the farm activities viz., stubble collection (90%), dibbling of seeds (80%), sowing
with seed bowl (68.33%), transplanting of seedlings and irrigation (56.66%).
Three-fourth of the farm women performed the postharvest operations viz., processing
of grains (91.66%), grading of quality seeds (89.17%) and harvesting (74.16%). It was
interesting to find that a large percentage of the farm women participated in the
decision–making process at awareness and initiating solutions for problems revealed
that the agricultural operations viz., hand weeding (80%), harvesting (75.83%) and
irrigation (74.16%) but the final decision making was mostly rested with the men only. Further, it also revealed that comparatively larger percentages of farm women were noted for “high” level of involvement in decisions related to land preparation (75.13%), irrigation (74.16%), application of fertilizer and pesticide (67.50% each), sowing (64.16%) and hand weeding (55%). Friedman’s two way analysis of variance by ranks indicated highly significant results confirming the differences in the level of involvement of women in different agricultural operations.

Sharma et al. (2012) identified dairy, goat rearing, tailoring, embroidery and knitting, soap and cleaning powder making as potential areas of entrepreneurship development among women of their study area.

Tsegaye et al. (2012) showed that only 14 per cent of the respondents accessed formal trainings on seed production and management indicated the male domination in benefiting from trainings and extension services. The result depicted that 98 per cent, 92 per cent, 84 per cent, 82 per cent and 80 per cent of the respondents participated and engaged in weeding, organic fertilizers preparation, inputs transport to farm, fertilizer applications and harvesting, respectively. However, their participation was limited on ploughing (14%) and crop protection activities (34%). The roles of women in final decision making on purchase/sell of farm implements (6%) was quite minimal. Their extent of participation in decision making for most of seed production activities is limited only on consultation. Therefore, serious attention and integrated support should be given for rural women to improve their position in decision making.

Verma and Kumar (2012) revealed that the extent of adoption of improved food processing and preservation practices among the respondents was cent per cent. The full adoption was observed to maximum in “milk processing”, whereas on the other hand non adoption was also observed to be highest in the category of “milk processing”. The overall findings of the study make a strong case for developing capacity building through training programmes about milk processing and ensuring accessibility to technology for promoting adoption of improved food processing and preservation practices among the rural women.
Chayal et al. (2013) showed that involvement of farm women in decision-making process in agriculture was very low. It is because the majority of farm women were illiterate, had little knowledge about the latest techniques of farming, faced dominance by males and restricted mobility due to several cultural taboos.

Onwurafor and Enwelu (2013) concluded from their study that the level of rural women involvement/participation in post-harvest agro-food processing activities in Enugu State was low. They participated in the establishment of micro agro-food processing enterprises with low start-up capital which could affect the growth and sustainability of the agro-food processing enterprise. Majority of the women agro-food processors had no entrepreneurial training. The constraints that militated agro-food processing enterprise to a great extent were lack of capital and inability to apply modern processing techniques.

Nargunde (2013) stated that the advent of dairying has been a boon for dairy farmers and of particular importance to those segments of the society that have been traditionally weak, the small landholders, landless labourers and women. It has provided a year-round source of income for people who previously could only depend on payments from small seasonal crops or from occasional labour. It is estimated that up to 60-65 per cent of the income of this group (marginal and small-scale farmers) now comes from dairying. Studies have shown that dairying in rural areas surpassed crop production in terms of profit in marginal, small and medium-sized holdings. For small-scale farmers with irrigated land, dairying and crop production together, were more profitable than crop farming alone. Over the period, dairying has also acquired the contours of a fully-fledged industry in the country and has positively improved the life of those engaged in this business, directly or indirectly, bringing significant socio-economic changes.

Nazir et al. (2013) revealed that that majority of the working women were participating in diverse agricultural activities including sowing, harvesting and picking. Majority of the working women were doing work to increase their family income but they were facing many problems in looking after their children and household chores. Negative attitude of the landlord is found to be one of the main
problems. It is suggested that negative stereotype image of working women in rural areas should be changed with the help of mass media.

Srivastava (2013) revealed that in vegetable cultivation various intervention points were addressable. Women were involved in operations such as cleaning of land, sowing of seed, transplanting of vegetable nursery, hoeing and weeding, scaring of birds and rodents, harvesting and processing of vegetable and storage of seed. The non-participation of women in various operations was due to high fatigueness, requirement of more muscle power, and lack of knowledge and awareness. With respect to decision making, it is observed that Women played only supportive role. Less participation of women in decision making could be attributed to custom, tradition social barrier, their illiteracy ignorance and less participation in extension programmes. Women education, technical training and adequate extension facilities can create a positive impact leading to a better tomorrow.

Rao (2006), Jamali (2009) and Nargunde (2013) stated that rural women’s work ranged from crop production to harvesting operations, from livestock rearing to raising babies. In addition to her daily work routine, consisting of, cooking, cleaning, and other domestic chores, rural women were also heavily involved in all aspects of country’s agricultural sector. From crop production to livestock rearing, rural women were expected to regularly engage in both domestic and commercial aspects of society. For small-scale farmers with irrigated land, dairying and crop production together, were more profitable than crop farming alone. Over the period, dairying has also acquired the contours of a fully-fledged industry in the country and has positively improved the life of those engaged in this business, directly or indirectly, bringing significant socio-economic changes. It is observed that women play a significant and crucial role in agricultural development and allied fields including, main crop production, live-stock production, horticulture, post-harvesting operations, agro/social forestry, fishing etc., it is a fact long taken for granted but ignored since ages.

Ogdand and Hembade (2014) found that no women take decision without the permission of their spouse for selling the animals. For milk consumption at home a whole decision is taken by the spouse therefore no women found who take their own
decision. It is also seen from the investigation that activities like quantity of milk to be used for home consumption and type of milk product to be made from surplus milk was decided by the farm women themselves, although respondents also reported that they were taking decisions in consultation with their spouse with regard to quantity of milk to be used for home consumption.

2.3 Training needs of rural women in different enterprises

Agarwal (2005) reported that 540 farm women were grouped into 36 Self Help Groups for starting different enterprises based on the needs and preference of farm women, resources available and marketing potentiality in the area. Trainings were organized for capacity building of farmwomen of the SHGs in the enterprises. The members’ of Self Help Groups were also trained to handle different equipment. Empowerment of women Self Help Groups have been made by skill training and orientation to project management aspects. All the members of SHGs started enterprises as per their interest. The women have started generating income from those agri-based enterprises.

Barbazett (2006) assessed the women’s participation in training and seen that the number of women participants in the training was low as suggested by sample respondents. They were asked to suggest probable reasons behind low level of women participation in the training. As suggested by 75.7 per cent of trained sample respondents (p<0.01), the reason was cultural influence in a sense that preventive cultural outlooks and tradition that relegates women only to household work might be responsible, 12.8 per cent of trained respondents suggested to be fear of male domination during training sessions. Only 11.5 per cent opined that the reason might be load of house hold work.

Davis et al. (2007) suggested that training focused on enterprise skills, such as market analysis, distribution and business management, would support small-scale farmers in identifying the technologies that would benefit those most, and would help them to participate in agricultural innovation.
Rajani (2008) observed that 26 per cent of female entrepreneurs received skill oriented business training; the remaining 74 per cent didn’t receive any business training. Only eighteen per cent of women entrepreneurs have business experience and the remaining 82 per cent of them stated that they did not have any business experience before embarking on the business. It appears that most women gain their first management experience in their own business. From among the eighteen per cent of women entrepreneurs only eight per cent had formal experience compared to 10 per cent who received informal experience by assisting/ participating/ observing parents/siblings working for the enterprise.

Durgga and Subhadra (2009) reported that the farm women needed training most in housing. The minor operations preferred the most for knowledge need were proper design of cattle shed, selection of breeds, compounding balanced feed using locally available ingredients, vaccination and banking and insurance. As for skill needed, construction of scientific low cost cattle shed, selection of breeds, compounding balanced feed using locally available ingredients, symptoms of common diseases and banking and insurance were preferred the most.

Sachan et al. (2009) assessed that farm women most needed training in areas like knowledge of improved varieties, disease and Integrated Pest Management, spacing, seed treatment, weed control, cropping system, marketing, package of practices, management of fertilizers, quality improvement and nursery raising and concludes that the practices like sowing time, harvesting, seed rate, intercultural operation, irrigation and use of organic manure's in which farm women received training contributed major role in reducing overall knowledge gap.

Kumari et al. (2010) highlighted that there is a significant gain in knowledge of all the components of nutrition domain included in the training programme. The significant increase in the knowledge of the farm women may be due to the intensive educational training efforts made by the trainers and also due to the realization of importance of these practices by the participants in raising the health status of their families, as the subject matter and content of the training was very much closer to what the women do in their daily routine. Besides, the nutrition training package was made
interesting and stimulating that it completely captured the attention and interest of trainees and motivated them to adopt the nutrition practices to the maximum extent possible.

**Busari et al. (2012)** revealed that a majority (76.15%) of women vegetable farmers fall between the ages of 41-60 years with a mean age of 50.85 years. 42.31 per cent of women vegetable farmers had primary education. While 24.61 per cent receive secondary education. None of the women vegetable farmers receive post-secondary education. Majority (31.54%) of the women vegetable farmers acquired the land they are using for farming through gift. 22.31 per cent of the women vegetable farmer obtained their land through inheritance, while 15.38 per cent of the women vegetable farmers acquired their land through purchase, tenancy and other means. All (100%) of the women vegetable farmers are married. The mean gross margin of women vegetable farmers is #33047. Four variables were significant at 5 per cent level. These are years of formal education, land ownership, cost of chemicals and cost of labour. There is no significant difference in the socio-economic characteristics of women vegetable farmers in the study area. Also, there is no significant difference in the gross margin of women vegetable farmers group in the study area. The mean gross margin (#33047) obtained from the study indicated that vegetable production is an essential income earner for rural women in the study area.

**Chauhan and Kshirsagar (2012)** revealed that the members of Tribal Women SHGs in general were not conscious in full about the SHG concepts and latest crop production and marketing technology. The study further revealed that 81 per cent of the respondents suggested providing information on SHG concepts and linkage programme. Seventy-nine per cent suggested arranging village level training programmes on crop production technology of soybean crop, which is now widely accepted short duration high yielding oilseeds crop followed by onion, garlic and tomato cultivation technology by organic farming methods. Marketing of produce attained the top most priority in assessing training needs (76%), followed by plant protection (66 %) and manures and fertilizers (61 %). Vermi-compost, its preparation and application methods accorded highest response (87 per cent) from the members followed by ITKs (81 %) being used in organic farming. Poultry
farming ranked first (78 %) followed by agro-processing units (71 %) in the assessment of training needs. Communication skills ranked first (84 %) followed by access to infrastructural facilities like transport, water supply, school and marketing (81 per cent). Almost more than two third respondents indicated the training needs on the subjects like, conflict management, self-confidence and self-worth, participation in local affairs, meetings, community health and sanitation.

Sajeev et al. (2012) revealed that farmers sought maximum trainings on integrated farming systems, integrated pest and disease management and technologies for soil and water conservation. Nursery management topped the list under horticulture while training with respect to rearing of piggery was the most important one under animal sciences. Income generating activities for empowerment of rural women, formation and maintenance of SHGs and training on small scale processing and value addition were also in high demand.

Sanyang (2012) showed that majority of the poultry producers were in the age group of 31-40 years (44.5%) and 20-30 years (24.2%). However, the result reveals agro-producers were in the age greater than 50 years (7.8%), meaning that, there are no age restrictions for women groups who want to start business. Furthermore, 50% of the women respondents indicated group management and marketing skills as major training needs. It was also concluded that poultry production enterprise plays a meaningful role in poverty reduction, generate income, and create employment opportunities in improving the living standard of women and enhancing the growth of local economy.

Meti (2013) revealed that majority (71.60%) of the farm women regularly attended training and 32.50 per cent of them occasionally participated in extension activities. Whereas it is noticed that majority of the farm women were self-motivated as to join SHG since it is a good means to save money. The money lending, local poultry, local Dairy and vermi- culture on small scale basis were the major activities adopted by more than half of the farm women due to motivation through training and demonstration. It was highlighted from the results that, financial condition of majority (73.33%) of farm women was improved, followed by social and
psychological status (68.33%) and increased level of confidence (61.66%) among farm women towards entrepreneurship are the major benefits derived after joining as the members of SHG as expressed by themselves. Participation of women in SHG activities motivate them to take up entrepreneurial activities. Hence policy makers and administrators have to give priority for formation of women SHG and provide financial assistance for establishing their own agro based enterprises.

Mohanty et al. (2013) revealed that microenterprises programmes have had greater impact on both social and economic aspects of the rural women in Odisha. The study shows that before training, twenty per cent of respondents only always participate in decision-making and near about 38 per cent of respondents never participate. However, after training, it is found that 41 per cent of the respondents always participate in decision-making. It can be concluded that training was effective in bringing the change in decision-making capacity. It was also evident that before participation in training programme for micro enterprises, 11.81 per cent of the respondents always took decisions in buying personal items such as toiletries, personal clothing, ornaments, and some fancy items etc., visiting places, visiting market places or institutions, arranging recreational facilities and meeting with people. 21 per cent of them never took decisions regarding their personal items, which shows their low participation in decision making. After women took part in training programme, 23 per cent respondents found to take decision always on personal matters. The involvement of women in microenterprise training programme enhances their decision-making capacity on personal matters. Before involvement in training programme, only 8 per cent respondents always took decision on family matters like child education, child’s marriage, making big and small purchases etc. However, after training 17 per cent of respondents participated in family matter decisions.