CHAPTER 1
INTRODUCTION

1.1 Background

Agriculture provides basic sustenance to mankind. It is very important that ecologically, socially and economically sustainable agriculture should become the backbone of the development process of any nation. Agriculture should be sustainable so that the natural resources such as soil, water and biodiversity are used efficiently and equitably. Equity in sharing benefits is vital for community participation in the conservation and enhancement of natural resources. Agriculture should be economically viable and lead to increasing employment opportunity, social feasibility, strengthening the role of women and other marginalized sections of the people (Agriculture Department, 2005). Satisfactory agricultural production brings peace, prosperity, harmony, health and wealth to individuals of a nation by driving away distrust, discord and anarchy. It helps to elevate the community consisting of different castes and cultures, thus it leads to a better social, political and economical life (Chandrasekaran et al., 2010).

Historically it is believed that women domesticated crop plants, thereby initiating art and science of farming. While men went for hunting in search of food, women gathered seeds from the native plants and began cultivating those of interest for food, fibre and fuel (Mohammed, 1997, Research Foundation, 2005). Women have played and continue to play a key role in the conservation of basic life support systems such as land, water, flora and fauna, and play a significant and crucial role in agricultural development and allied fields. Although women are engaged in a wide range of agricultural activities in many developing countries they continue to be systematically subjugated, undervalued and unrecognized.
Studies on women in agriculture conducted in India and other developing countries all point to the conclusion that women contribute far more to agricultural production than has generally been acknowledged. Recognition of their crucial role in agriculture should not obscure the fact that farm women continue to be concerned with their primary functions as wives, mothers and homemakers. In this regard participation of women in all kind agricultural and allied activities needs to be studied, quantified and analyzed. Outcome of such study can find reasons for low participation, suggestions for better participation and improvements which can be brought to recognize the role of women in agriculture and allied fields. The findings of such studies may be useful to policy makers to incorporate the suitable measures to identify the agriculture women and bring them to main stream.

1.2 Indian Agriculture

Agriculture is the backbone of Indian economy. It is the major source of livelihood for more than 65 percent of the people, contributes about 26 percent to the national income, and about 13 percent of the total export earnings (IBEF, 2005). Hence, the economic growth of our country depends largely on the prosperity of agriculture. This sector acts as a bulwark in maintaining food security as well as national security. The first and the foremost role of agriculture is its promotion of economic progress in the country by enlarging the savings of the rural sector and making them available for the development of industries. Mahatma Gandhi, the father of the nation called agriculture as the soul of India. Also, agriculture has been termed as “The mother of all industries and the maintainer of human life standing at the need of all sciences and arts, indeed, at the head of civilization and progress” (Mirdha, 1964).
India has a geographical area of 328.73 million hectares; of which reported area for land use is 306.04 million hectares. The net area cultivated is about 142.60 million hectares i.e. about 46.6 percent of the total reported area. Since nearly 50 million hectares of area is sown more than once, the cropping intensity works out to 135.1. Forests account for about 68.97 million hectares i.e. 22.5 percent of the total reported land area. Also nearly 13.97 million hectares are cultivable wastelands and 9.91 million hectares are fallow lands. Only about 30 percent of the total cropped area is irrigated and the remaining area is rain fed. The available statistics further shows that only about 66 percent of the gross cropped area is under food crops and nearly 34 percent area under non-food crops. Cereals and pulses account for nearly 52.93 percent and 12.64 percent of the total area respectively. Fruits and vegetables occupy nearly 4.24 percent of area (Research Foundation, 2005).

According to population census of India 2001, there are about 402.5 million rural workers of which 127.6 million are cultivators and 107.5 million are agricultural labourers. In other words, pure agricultural workers constitute nearly 58.4 percent of the total rural workers, of which 31.7 percent are owner cultivators and 26.7 percent are mainly agricultural wage earners (Research Foundation, 2005).

India is the second largest producer of rice and wheat in the world; first in pulses and fourth in coarse grains. India is also one of the largest producers of cotton, sugar, sugarcane, peanuts, jute, tea and an assortment of spices. In terms of the real value added, the Indian agriculture sector ranks third, after China and the United States. The share of agriculture in the total value added to the economy, at around 20 percent, is still quite high. This implies that agriculture is likely to remain a priority, both for policy makers as well as businesses, in the foreseeable future and any move to ramp up the sector calls for a multi-pronged strategy. In recent years, there has been
a considerable emphasis on crop diversification towards horticulture (fruits, vegetables, ornamental crops, medicinal & aromatic plants and spices), plantation crops (coconut, cashew nuts and cocoa) and allied activities. Creation of critical infrastructure for cold storage, refrigerated transportation, rapid transit, grading, processing, packaging and quality control measures open major opportunities for investment (IBEF, 2005).

According to 55th National Sample Survey (NSSO, 2001), agricultural labour households constitute nearly 32.2 percent of the total rural households. The self-employed in agriculture account for 32.7 percent of the total rural households. The NSSO data further revealed that 7.2 percent of the rural households did not possess any land and 51 percent households possessed less than 0.4 hectare. About 19.1 percent household possessed between 0.41 and 1 hectare and 11.5 percent between 1.01 and 2 hectare. Only 11.2 percent possessed land above 2 hectare. Thus by and large Indian farming is dominated by small and marginal farmers.

According to Census of India (2001), there are nearly 127 million cultivators, 107.5 million agricultural labourers and 6 million other farm workers engaged in livestock, forestry and plantations. Of the total agricultural labourers, 38 percent were female and 61.9 percent male workers. Also among livestock, forestry and plantation workers, 78.3 percent were male workers and 21.7 percent were female workers.

1.3 Women in Agriculture

In agricultural systems the roles, rights and responsibilities of men and women who farm, differ according to geographical and cultural context. Ester Boserup’s classic study of 1970 made a great contribution to understand women’s role in
development by recognizing women as important economic actors. Boserup was the
pioneer to define female farming systems (shifting cultivation and food production)
and male farming systems (settled, plow-based cultivation and private land tenure),
and her influence is still seen today through the widespread recognition of the
complexity of agricultural systems and their gendered variations (Rojas M.H, 2004).
Without the total intellectual and physical participation of women, it will not be
possible to popularize alternative system of land management to shifting cultivation,
arrest gene and soil erosion and promote the care of the soil and the health of
economic plants and farm animals.

In male dominated society like ours men are assigned those types of work
which have a direct exchange value and therefore the work of men is considered more
prestigious, while women are assigned work, which has more useful value and is
considered less prestigious in the social hierarchy. Thus, it may be said that culture
determines gender appropriate characteristics in the allocation of work tasks (Sethi,
1991). In the countries like India, occupationally there is no balance between male
and female members. The socialization process has created imbalances in the value
systems relating women to a satellitic existence. A woman is accorded social status
and honour only as a member of her family, as a daughter, wife and mother. However,
as “an individual” and / or as a ‘member’ of the society, she is not expected to possess
self- identity beyond her family existence (Regina Papa, 1991).

Women are almost half of the adult population. They constitute one-third of
labour force but consume two-thirds of the world’s working hours and yet earn only
one tenth of the income and own only one per cent of world property (United Nations,
1975). The real issue therefore, is more serious, despite their involvement in
agriculture work in such a long magnitude they have not been actively involved in the
main stream of development and there is hardly any appreciation and recognition of
their extensive contribution. By and large, they have remained as “invisible workers”. 
The prosperity and growth of a nation depend on the status and development of its
women as they not only constitute nearly half of its population, but also influence
growth of the remaining half of the population. The crucial role of women in
agriculture, allied occupations and household activities has, however, been
underestimated and undervalued.

Rural Indian women are extensively involved in agricultural activities. However, the nature and extent of their involvement differs with the variations in
agro-production systems. The mode of female participation in agricultural production
varies with the land-owning status of farm households. Their roles range from
managers to landless labourers (FAO, 1999). In overall farm production, women’s
average contribution is estimated at 55% to 66% of the total labour with percentages
much higher in certain regions (Venkateswaran, 1992). In the Indian Himalayas a pair
of bullocks works 1064 hours, a man 1212 hours and a woman 3485 hours in a year
on a one-hectare farm, a figure which illustrates women’s significant contribution to
agricultural production (Singh et al., 1988).

Women play a significant and crucial role in agricultural development and
allied fields including crop production, livestock production, horticulture, post-harvest
operations, agro/social forestry, fishing etc. Effective involvement of women in
agriculture is a continuous process involving a series of multi-dimensional activities
leading to the actual results over a period of time. Earlier studies legitimized the idea
of women as productive partners in agriculture, discovering and documenting the
various roles played by women as farmers, farm wives, and agricultural professionals
(Anne and Mary, 1998). Even today women are considered as the molder and builder
of any nation's destiny. They play a significant role in any economy. They are regarded as the backbone of the rural scene.

Most of the women perform various types of works for their livelihood and agriculture is considered as the biggest unorganized sector where large number of rural women takes part actively. In India, a significant proportion of the population are below the poverty line and it is a fact that labour force participation will increase with poverty, a large proportion of rural women are under a pressure to participate in the labour force. These unknown and unacknowledged beings are responsible to keep the economy at a steady pace and helped the nation to occupy a significant place in the world (Reddi and Reddy, 2003).

About 80 percent of all economically active women are employed in Agriculture (Arya and Samra, 2001). Women in rural India accounts for a significant share of wage labour in agriculture, typically providing crucial support for poor farm households. Although their earnings contribute significantly to household incomes, many of the agricultural activities that women perform go unacknowledged as work. So, rural women are sometimes referred as "invisible farmers" (Shiyani and Vekariya, 2004). Development of women has been receiving a special emphasis; however, in practice it is staggering due to various factors such as low literacy, the restrictive social structure, and predominance of patriarchal society, lack of decision making opportunity and ability, low exposure to growth opportunities. (Desai and Mohiuddin, 1992).

Though there are many studies focused on the place of women in agriculture, but only few of them thrown light on comparing the role of women in dry land and irrigated agriculture. In the context of amendment of Hindu Succession Act, 2005 it is worth to shed the light on the capabilities of women in carrying out the agricultural
activities independently. It has also been said that the technological growth in agriculture is biased against female. In this context it is worth studying the potentialities for feminising the agricultural works either through the technological modifications or value modifications in the societal context.

Kaur (1990) reported that economic factors force women to work in agricultural and allied activities. Causes for participation of farm women in agricultural and allied activities are: due to feeling of responsibility, economic necessity, income supplementation, economic independence, large family to support, to avoid unpleasant environment at home, no one to share such activities with husband, no male earning member in the family and ill habits of male members. The agricultural work participation of women can be understood better if we take into account the different agricultural operations. Some agricultural operations are female labor intensive whereas others are male labor intensive because of the sex-based division of labor (Raj Mohini Sethi, 1984).

The constraints faced by farm-women when performing agricultural and allied activities are labor problem, lack of technical knowledge about plant protection, seed selection, storage of produce and exertion to body due to over work, knowledge in dairy farming and financial problems. Bala (2000) reported that problems such as technical knowledge about agricultural activities, labor problem, hard and more physical work and no fixed working hours are faced by the maximum women workers (Kaur, 1990).

The nature and extent of women’s involvement in agriculture vary greatly from region-to-region, and even within a region. Their involvement varies widely among different ecological sub-zones, farming systems, caste, classes and socio-economic status of families etc. (Swaminathan, 1985). Regardless of these variations,
there is hardly any activity in agricultural production except ploughing in which women are not actively involved.

The role of Indian women has undergone dramatic and drastic changes from era-to-era, while within the era there existed simultaneous contradictions. Furthermore, it has varied from caste-to-caste and with the various socio-cultural and economic strata of society. Like many other countries, India lacks adequate quantitative data on women in agriculture. Farm women constitute so significant a part of the working women population in our country that it necessitates a fuller understanding of their status and role not only as they now are but as they may be developed in the future.

In case of agriculture where involvement of women is far more prominent, the situation is no better, in fact, the agriculture seriously in the main-stream of its development processes. Therefore, it is high time that this issue is discussed and deliberated at the national and regional levels in order to sensitize people about its potentiality, prospects and obstacles and charting the course of actions devoted to bringing women as active partners in research and development (R&D) with equal rights and privileges.

Although the farm women were found to involve themselves so much in farming, they were not found to have adequate knowledge of modern technology of crop cultivation. This was because there was no deliberate attempt made to give them education about modern technology. Even if some training programmes are organized, it is only the privilege of men to take part in such programmes. This practice needs to be put to an end and involvement of women in farm training programmes has to be made to make agriculture moving.
The importance and need for the mobilization of human resources in rural development has been well recognized in almost all the developing countries of the world today. An awareness of this need has also brought into prominence the role of women in increasing food production and the improvement of conditions of rural life. Women in agricultural societies are not only engaged in house-keeping and socialization of the young but are also actively participating in the productive process.

1.4 Statement of the Problem

Role of women in agricultural activities is found to be appreciable and it enables in the overall development of agricultural sector. In spite of such activities, women have not been given proper status and equal rights in the agriculture. However, in the existing socio-cultural and technological background some agricultural activities are suitable for women and some others are meant only for men. There is a need to study in which activities women participation low and why? Is it not possible for women to do the works which are hitherto confined for the men? And what technological and value modifications are required to enable the women to do these works? The participation of women in agricultural and allied activities is affected by many factors. Hence, there is need to study the effect of socio-economic factors on participation.

Agricultural production depends on the extent of men and women participation, technological knowledge and skills among men and women, installation and usage of machinery, appropriate decision making, participation in extension activities for knowledge upgradation and exposure to mass media. It becomes necessary to know, is women participation in various agricultural operations is adequate? If not, why? Whether females are having the required technological
knowledge and skills about agricultural operations? Are women capable of using machinery? If not, why? Are they willing to do the agricultural works independently and take suitable decisions? How extension activities and mass media exposure can improve participation, knowledge and decision making? Against this backdrop, it is felt that there is a need to redesign the work culture and technological implications, which might enable the women to be recognized in the agriculture sector.

Davangere district has diversity in several aspects of agriculture and it reflects true picture of the state of Karnataka as well as most parts of the India. The distribution of irrigated and dry land holdings in the district is approximately similar to that of national level. The percentage of total irrigated land area is about 35% and the rest of the land being dry. The district is undergoing a rationale change in implementing new ideas like mechanization and technology use in agriculture. At the same time women are playing a vital role and their contribution in dry and irrigated agriculture in this part of the state needs to be studied. Therefore, this study focuses on the women in dry land and irrigated agriculture in Davangere district of Karnataka state. The micro level study of this nature would be helpful device for local level planning and its implementation.
1.5 Objectives of the Study

- To study the extent of women participation in dry land and irrigated agriculture operations in Davangere district.
- To ascertain the factors influencing the level of women participation in dry land and irrigated agriculture in Davangere district.
- To estimate the impact of mechanization on women employment in dry land and irrigated agriculture in Davangere district.
- To evaluate the level of knowledge about agriculture technology among the women of dry land and irrigated agriculture in Davangere district.
- To study the effect of extension participation, mass media exposure and social participation of women on their participation in agricultural activities.
- To assess the role of women in agricultural decision-making and the effect of socio-economic factors on decision making.

1.6 Hypotheses

- Socio-economic factors are influencing the level of women participation in agriculture.
- Mechanization has affected the level of women participation in agriculture.
- Socio-economic background of women influences her level of knowledge about agricultural technology.
- Participation of women in agricultural decision making is influenced by her socio-economic background.

1.7 Scope and Limitations of the Study

The study will throw a light on the level of women participation in agriculture and factors influencing the level of women participation in agricultural activities. The study provides better understanding about the extent of women participation in
various agricultural activities which is derived from primary data and also on the appropriate scoring and weightages provided based on their extent of involvement. The study provides the positive and negative factors which influence women participation in agricultural activities. Suitable measures and programmes may be planned by knowing level of participation, knowledge, decision making and constraints involved in performing such activities. It will also focus light on the potentiality for feminizing the agricultural works. The findings of the study will be useful to the policy makers at various levels. Based on the outcome and recommendations of this study, policies can be formulated in such way as to increase the female participation in agriculture, which in turn enables the county to utilize women resources more efficiently.

Even though extreme care is taken in the present work, limitations are bound to be there in social science research. This study is no exception to such limitations. The present work is carried out by confining to four talukas (namely Davangere, Harihara, Jagalur and Harapanahalli) of Davangere district in Karnataka state. It is difficult to expect the same conditions of the district to prevail over other parts of the state and country. Therefore, findings of this study could not be generalized. Further, this study is based on the primary data collected by the interviewing the respondents based on the set of questionnaire. The data is entirely depends on the respondents answers based his logical thinking, memory and information available at the time of interview. Hence, the findings might be subjective rather than objective.
1.8 Organisation of Thesis

The study has been organised and presented in six chapters

- **Chapter 1 Introduction** deals with the background of the study, participation of women in agricultural activities, statement of the problem, objectives, hypotheses, limitation of the study and organization of the thesis.

- **Chapter 2, Review of Literature** deals with the review of the relevant research work, having a greater bearing on the objectives of the present study. The contents of the review highlights the objectives of the earlier studies, methodology adopted and salient findings of such studies has been summarised.

- **Chapter 3, Profile of the Study Area: Davangere District**, provides the description of the study area highlighting the socio-economic features of the district, environmental conditions, agriculture, animal husbandry, industry in the district. It also throws a light on agricultural activities and level of participation.

- **Chapter 4, Methodology**, describes the methodology adopted for the study including analytical framework, sources of data, sampling methods and the analytical techniques adopted for the study.

- **Chapter 5, Results and Discussions**, presents the results of the study, which are discussed with logical interpretation.

- **Chapter 6, Summary and Policy Implications**, gives the background of the study, objectives, methodology employed in an abridged version. The findings as well as the policy implications are also reported.

References

Research Publications based on the Work

Appendix-A: Questionnaires