CHAPTER 2

REVIEW OF LITERATURE

There is a whole body of literature showing that the roles of men and women in agriculture vary vastly across and within countries and continents. Similarly the levels of participation of men and women also are varied and the reasons for the variation are not much exhibited in the contemporary research for they are very rarely recorded. An analysis was carried out in Tamil Nadu where the number of landless and marginal farmers is more when comparing the all India level and it was found out that three districts stand distinct in its levels of gender participation in irrigated agriculture. As an attempt to find out the reasons, the present research took up following question; “What are the reasons for the differential participation of men and women in irrigated agriculture in Tamil Nadu?”.

To fulfill the foregoing question the research objectives were formulated. With a specific focus on the socio-economic and cultural factors, to delineate the function of men and women, gender division of labour in agriculture and the use of technology among farmers the reasons are listed.

The perspective of differential gender participation in the three districts, namely South Arcot, Kanyakumari and Nilgiris in six sample villages, is narrowed down and becomes focused when farm men and women are categorized according to the land holding. In the light of the above, other issues in the daily life of farm men and women are also analysed.
2.1 THE SOCIO-ECONOMIC AND CULTURAL FACTORS

Land is not only an asset but also the root of subsistence in the rural areas. With a view to look at whether there is any interrelation between the complex land relations and the differential levels of gender participation (which is the objective of the study) a review is made. According to the study the pattern of land relations that determines the agrarian economy proves to be one of fundamental reasons for the differential gender participation. As for instance in Kanyakumari district larger the land holding the greater the participation of women in irrigated agriculture whereas for men the participation is more irrespective of the size of their land. In South Arcot district the smaller the land, the greater participation of women. The men in South Arcot district contribute irrespective of the land holding. In Nilgiris district landlessness accompanied by other backward conditions push women to take up farming operations but for men it opens up avenues owing to their exposure to keeps most of them away from agriculture. The importance of land size and the land relations in this study underline the necessity of understanding of scenario exists in other parts of the world.

2.1.1 African and Asian Experience

In order to understand the land relation in other regions, the African situation is reviewed. The participation of women in agriculture in African countries is different from that of the Asian women by and large. The participation of women in agriculture in African countries is different from that of women in the rest of the world. Asia Humid Tropics Program (Series No. 6) highlights the fact that in Asia women are particularly important in the production of rice. Women are traditionally responsible for transplanting,
weeding, harvesting and winnowing, whereas in Africa the system varies from region to region, and in certain areas the division of labour is on a crop basis, which means that women growing rice are involved in all the farming operations related to that crop. Mueller (1985) reveals that while in Southern and South East Asia women are highly visible among wage labourers, in much of Sub-Saharan Africa they are self-employed cultivators.

While African women are exploited economically terms Asian women are backward both economically and culturally. The Asian women tend to be culturally invisible when compared to their African counterparts because of the prevailing ideology and idealization of motherhood (Bruins and Hejmans 1992). As far as resources are concerned, the African women have their own place. The Asian women, though they have some access to material resources, the access to material resources outside the familial domain is restricted when compared with Africa (Kabeer 1990).

A detailed study on the differences between men and women in accessing farm land and agricultural input such as labour, extension assistance, irrigation water and output such as produce is carried out to understand the socio-economic status of men and women.

2.1.2 Accessing Agricultural Input and Output

2.1.2.1 Access to Land, Labour, Irrigation Water and Produce

It is learnt from the literature that in Africa the family members, especially women, have differential access to land, and that there are differences in land rights and usage. For instance, the Niger women cultivate vegetables on plots separate from those of their husbands, where rice is grown.
where as in central Nigeria the female contribution is 100% in agriculture. Despite women’s profound and independent participation, gender discrimination can be widely seen in Africa in land relations. Whitehead (1990) states that women’s access to land in sub-Saharan Africa has become more fragile because the agrarian relations which give access to land and other rural resources have become highly politicized. In Burkino Faso, land directly allocated to woman is being exploited more than the land allocated through their husbands (Von Koppen, 1970).

In Asia the restrictions in accessing land vary according to the land holding. It is still more rigid for the poorer women, are always the most, disadvantaged group (Zwarteveen 1994a). For example in India according to Thakur (1991) the land holding women in Himachal Pradesh are confined to perform particular household, agricultural and allied activities which are female specific in nature according to the old established customs, traditions and religious taboos. Hart (1992) states that in Muda Irrigation Scheme, in Malaysia a comparatively high percentage of women from households with large landholdings are actively involved in mobilizing and organizing agricultural labor, and in allocating contracts for transplanting and harvesting to poorer women. Women with medium size land holdings work mainly on their own lands belonging to members of their mutual labour exchange group. Poor women are mainly involved in wage labour. Also the rural based studies of Singh (1968) and Mulay and Lokhande (1974) in Punjab and Sinha (1980) in Haryana, Devi (1991) in Andhra Pradesh support the above statements.

In this regard the general know how of women about the landholding that encourages the agricultural output need to be studied. In general it is found out that the awareness of the cultivator women about the lands they own is
negligible. Arens et al (1977) also says that the Jhagrapur women's horizons are restricted mainly to their own little world and that they do not even know approximately how much land their husbands own and where their fields are. Van Harder (1975) states that the women from Dacca could not answer questions on land, rental land, cropping patterns, acreage and agricultural methods. It is learnt that the existing socio-cultural constraints are the reasons for the meagre contribution of Pakistani women to the economy. The literature reveals that in countries such as Bangladesh, Pakistan and India and in some parts of Sri Lanka also purdah norms, property rights and familial hierarchies coalesce within the household, to produce a corporately organized patriarchal collectivity and the rights of the women are suppressed. A similar condition is seen among the women in Malaysia, although women fought and retained their rights to rice lands and increased their ownership of rubber land as well. Yet the formal ownership of land alone has not been able to fetch economic independence for these women.

In Latin America in Columbia, the new constitution led to a new agrarian law number 160 of 1994, favors women in several ways. The beneficiaries are peasant men and women who are landless and poor. Female heads of family and women suffering from lack of protection are given beneficiary status and joint titling is reaffirmed. Similarly Costa Rica too the country's law established means to obtain/inherit to land and house that are considered as family property, giving both spouses equal rights. Article 7 of this law deserves special mention. All property distributed through social development programmes should be inscribed in the name of both the spouses in the case of married couple, in the name of women in the case of consensual union and individuals (male or female) in any other case. It was first time in the
when country women were given priority in joint titling when the family was characterized by consensual union.

The present research in the state Tamil Nadu reveals that women are restricted just as anywhere else except in Kanyakuramari district where a higher literacy level and its resultant awareness among women has increased the pattern of ownership of land and accessing of labour.

A probe into the position of women shows that in many of the African countries women face discrimination not only inheriting land but also in getting access to crops and cash. In Northern Tanzania, if a man helps his wife by providing labour, seed or fertilizer for cultivation in her enterprises he has a right to take a share of the produce, but the wife does not enjoy reciprocal rights. In Nigeria the rotation schedule for water delivery is based on the water requirement of rice. When rice is ready for harvesting, delivery of water is stopped, despite the fact that the vegetables and other crops still need additional water. As a result, women experience severe losses due to the withering of their vegetable crops (Dadi Barmou 1993). In the Nyaniyadze Irrigation Scheme in Zimbabwe, the highest incidence of female-headed farms is found in those blocks within the system with very poor water supply. Thus, the unreliability of irrigation water leads to low and uncertain yields.

In Asia the change in irrigation networks has a repercussion on irrigation practices. According to Stanburry (1981a) in Asian countries women belonging to households which, practise irrigation are likely to benefit from new or improved irrigation facilities, even if it involves an increase in their workload. But Agarwal (1981) expresses the view that the most easily recognized relation between gender and irrigation is that relates to women's use
of irrigation water for domestic purpose. Alsop (1993) does not say that the Irrigation Planning supports women's roles as mothers and housekeepers but denies their active role in agricultural production. Backer (1992) states that because women in Bangladesh and Nepal are responsible for providing water for domestic use, they are the most directly affected. Zwartween (1994) points out that the invisibility of gender is also due to the fact that women, generally, seem to be less involved in irrigation related activities. In many societies, the processes of acquiring, allocating, distributing, and draining water appear to be strictly male activities. This is often justified by the physical strength and technical dexterity required for irrigation activities.

The Literature shows that the awareness levels of women are similar in the three states of India, Andhra Pradesh, Tamil Nadu and Karnataka and women irrigate the fields all alone, if they have to. However because of convenience and convention women are less often engaged in canal irrigation and men's role is admittedly predominant in irrigation in India. It is also true that the Nepalese irrigation practices, which resemble those prevalent in India do not allow a single woman to access irrigation water easily. One of the reasons for this is that from female headed households they are not supposed to attend water users association (Bruins and Hejmans 1992).

It is learnt that in Latin America the participation of women in irrigation and water management is almost similar to that of the Asian women. In Peru, “water” is very much considered a male affair.

In order to understand the contemporary position of farm women in irrigation in Tamil Nadu the present study attempts to trace all the activities women take up in irrigation. It is clear that women do not have access to
irrigation water and produce to the extent that men do just as anywhere else in the world. In this research from the analysis of the position of women who are in majority at the grassroot level in Tamil Nadu it is seen that women's use of water for irrigation is limited. But for men irrespective of the districts their participation in irrigation is absolute.

2.1.2.2 Extension Services

Again, in the use of extension services there are women who are denied proper access. Olayidu (1954) describes the condition in Nigeria where men benefit more than women, from the agricultural extension services and the access to technological innovations. The reason for this is that the extension workers are easily attuned to training men., Okojie 1987, Okorji 1988 (studies on the Nigerian situation). In Liberia, gender bias in extension and training is the reason for women's continuing use of old techniques (Tinker, 1976) and a similar situation prevails in Senegal also (Boserup, 1970). According to Bernal (1988) in Sudan, widows who are allocated irrigated land fail to use these plots because they face great difficulty in hiring labor and obtaining agricultural extension advice and inputs.

In Asia also women have limited access to extension services in agriculture and are neglected in the field of agricultural training (Nyuyen Nhat Tuyen 1997a). It is learnt that the Nepalese women's role in decision making is not as important as before and it is declining. This is after the extension programs provided subsidized credit to men alone for use of chemical fertilizers (Pradhan, 1983). Bhatt (1995b) indicates that the extension workers rarely ask women directly about their work and use of water for it is easier to ignore women than to take the trouble to reach out to them in any meaningful way.
Goetz (1990) observes that the Green Revolution is amplified by the role of agricultural extension agents in transferring new technology and practices from the research station to the cultivators. Such knowledge is typically transferred to male heads of households in large parts because the extension agents are usually men who do not see women as worthy agents for agricultural extension work, not only in purdah societies such as Bangladesh, but elsewhere also. Tinker (1976b) comments that the increased productivity of any family member in any activity leads to a consequent rise in the family production. Productivity may even decline because women have less access to technological training, credit and extension assistance. Sridharan's (1975) study in India in Green Revolution villages reveals that agricultural extension work was a male process with visits of male experts who only contact husbands and distribute pamphlets, which women can not read anyway.

From the above review it is clear that the men have virtually monopolised agricultural input. In Tamil Nadu in the study villages the extension services are almost completely denied to the female-headed farms. This is because women lag behind men in formal interaction with the officials. This affects production and income which that in turn cause variations in participation.

2.2 GENDER DIVISION OF LABOR

In order to understand the gender division of labor in agriculture, various activities of men and women in agriculture under different social conditions are analyzed.
Whatmore (1991) opines that gender analysis in agriculture is based on the premise that women are primarily involved in farming through specific forms of familial gender relations, most significantly through marriage as wives, but also as daughters or mothers of male farmers. The position and contribution of women in various activities from studies of different countries in agriculture are highlighted. Murdock (1949) states that in Central Nigeria, it is found that female contribution is 100 per cent in weeding, storage, (except in the cultivation of millet) and processing (except in rice cultivation where it is 50:50) for all crops. Their contribution to field preparation, planting and harvesting varies from crop to crop and it is 100 per cent for millet, sorghum and sesame.

From Rajapakse’s (1989) analysis it is seen that in Sri Lanka, the gender division of labour and resources (within the Mahaweli Scheme) varies greatly according to the extent to which the family has succeeded in becoming "entrepreneurial". While in the richest families women's labour has been effectively withdrawn from all agricultural activities in the field and replaced by hired labor, in poorer landholding households, both men and women are engaged in almost all agricultural activities and jointly decide on how to spend the income. And in the poorest household, both women and men, in addition to cultivating their own plot, work as labourers and control and spend the small incomes they derive from their work individually.

Vietnam women, on the other hand, form the largest part of the labour force. In households where male members are absent, women undertake most of the winnowing, watering and spraying pesticides, (Tuyen, 1997b). The Chinese women like their other Asian counterparts participated to a large extent in doing all kinds of operations particularly in sowing seeds, raising rice
seedlings, inter-tillage, spraying chemicals to control pests, weeding, applying fertilizers, seed selection, harvesting and threshing (Lichen-Quan et al, 1985).

Further studies acknowledge that in rural and urban Bangladesh the housewives have to put in about 10 to 13.6 hours daily in all kinds of productive works. This is applicable more to the landless women labourers and to the wives of marginal cultivators (Farouk, 1975). The studies on Indonesia by white (1976) and by Cleave (1974) on Ghana, Tanzania, Zimbabwe, Nigeria and Uganda indicate the same.

The situation in Philippines is similar to that prevalent in most of the Asian countries. In Philippines, where rice production is concerned it is men who make decisions (Lyda Res, 1985). In Indonesia, a different picture is seen. In agriculture Indonesian women can get a higher wage than men during the peak season by hiring themselves out. The men, on the other hand, remain at home to cook and do the babysitting (White, 1996b). Particularly in rural Indonesia the poor men depend heavily on their wives agricultural labour to retain a hold over tiny plots of land, and for income Hart (1992).

In India in Puri district of Orissa, women do more work in agricultural operations than what is documented by official agencies. However, their contribution is either supportive or preparatory to agricultural operations (Patnaik et al 1991a). Chaudhary et al, (1961), state that the non-farm owning women in Punjab participate in most of the agricultural operations like manuring, land preparation, sowing of seeds, transplanting, weeding, hoeing, applying fertilizers, taking care of the standing crops, harvesting, threshing, carrying the produce from farm to home, storing of food grains, cattle care and

With the aim of understanding the existing gender division of labour in Tamil Nadu in the three districts, namely South Arcot, Kayakumari and Nilgiris, certain facts are listed here. It is understood that gender division of labour is one of the main factors that generate differential gender participation in irrigated agriculture. To be precise what is considered as strictly male specific activities in many parts of Kanyakumari district is done exclusively by women or jointly by men and women in other districts. Harvesting and processing are the examples. The reasons for this are crops grown, the size of land and gender division of labour in Tamil Nadu.

2.3 GENDER IN TECHNOLOGY

In the sample villages it is seen that except the Rice Mill no other technology has affected the participation of women. While the use of the Rice mill adversely affects the participation of women, the use of HYV's increases the participation of women. The growth of agricultural technology in India is tremendous more in terms of HYV's, fertilizers and pesticides. While certain studies support the statement that farmwomen have benefited by the use of technology, in many places it is proved to have a negative impact on farmwomen. For example the labour using technology employs more women but the labour saving technology either displaces or replaces women. Sawant (1991) states that women's participation may decline if the demand for farm labour especially for female labour decreases with the introduction of new labour saving technological advances in the farm sector, coupled with the absence of technological upgradation of women in the rural sector.
2.3.1 Labour Saving Technology

Van Harder (1975), Zeidenstein (1975), Harris (1977) comment that the rice milling machines have replaced women in traditional rice milling methods in Bangladesh. Asian Regional Workshop (1976), Billing (1970) and Nath (1970b) notice the same in Punjab. Goody (1973) and Boserup (1970) observe that the introduction of plough cultivation replace women's work (hoeing). Lindebaum (1974) reports that the rice mill, parboiling and drying equipment in Bangladesh displace women. Agricultural Development Council (1974) states that the herbicide deprived women from weeding jobs in many parts of South Asia. Agarwal (1986) explains that combine harvesters, wheat threshers, Maize shellers displace hired labor. Das et. al (1996b) indicate that the operation of rice transplanters put many women out of job. Ohki (1985) observes that in Japan the machinery and chemicals greatly contribute to the reduction of labour, particularly three major types of work done by women, weeding (-80%), planting (-75%) and harvesting (-50%). Binswanger (1978) reveals that the use of tractors (which in South Asia are mainly being used for ploughing and transportation, although technically they can perform many diverse functions) reduces the requirements of labour time.

2.3.2 Labor Using Technology

Bina Agarwal (1985) studied that in desegregation by farm size groups, there is an increased use of female and male casual labor with HYVs. Acharya et al (1981) highlight the fact that the High Yielding Variety seeds along with the chemical fertilizers and an assured water supply that form the 'Green Revolution' technology 'package' require access to cash or credit, on which count women in general and poor women in particular, are seriously
disadvantaged. PMU (Project Management Unit, The Netherlands) reported that the socio economic status of the family has a bearing on the work of women in agricultural operations. Studies on the impact of the "green revolution" through introduction of high yielding variety seeds indicate that women are withdrawn from fieldwork when the family acquires a better economic status. Saraswathy (1987) reports that in a village in South Arcot and Tirunelveli districts, the general reasons for women's inability in operating farm machines are the lack of practice, less physical strength, and socially expected behavior, which make women refrain from tough jobs.

From the above review, that in the prevailing conditions men and women in irrigated agriculture across the globe is clear. This seems to be at times similar but in few cases different. To understand the above said this study proceeds the research question “What are the reasons for the differential levels of participation of men and women in irrigated agriculture in Tamil Nadu?” The answer are that the socio-economic and cultural factors, gender division of labour in agriculture and the nature and use of agricultural technology at varied levels augment the participation of men and women in irrigated agriculture.