

Chapter-6

KVK: The Capacity Building

S K Acharya, B K Mohanty and A P Kanungo

6.1 Training programmes given by KVKs to farmers

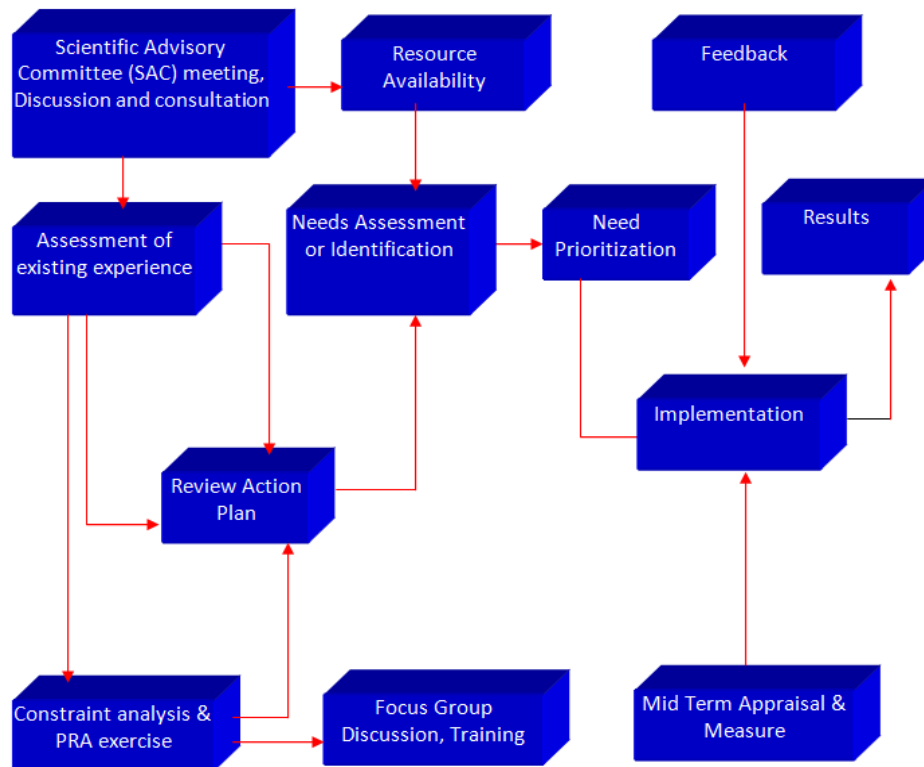
KVKs generally deal with training programme related to needy areas to be served to both for men and women. The types of courses covered may be for package and practices of various field crops, vegetable crops, oil seed crops, plant protection, farm planning, care and feeding of animals, poultry keeping, irrigation and water management, marketing of agricultural product etc. To impart training efficiently, KVKs are arranged more specialized persons. Some progressive farmers may be used as practical teachers. The help of agricultural universities, reputed NGOs, various agro-based industries and other state Govt. agencies are invited. As earlier explained KVK programmes will be problem oriented and field oriented with follow-up measures. "Learning by doing" the motto of KVK is always kept in mind while giving training. It gives direct bearing on our agricultural productivity. The training programmes further intend to cover backward areas, weaker sections and tribes, hill farmers on priority basis. Early adopters are always given priority, as they are the influential group in the rural environment.

The KVK training is of two tiered. The scientists, the SMSs go other KVKs, University ICAR institutes and staff college of agriculture on research study. This is the first phase. The second phase is to give training to farmers. The focal point of the KVK training programme is that, the trainees do the work themselves. It is totally of vocational type. The trainee is very systematic. The lesson plan is properly maintained by trainers. Timely follow-up action is taken to evaluate the training programme and find its cause of failure. Some villages are adopted by KVKs where people of weaker section, majority of whom are under BPL line. Political interference in various matters related to farmers training in KVKs is

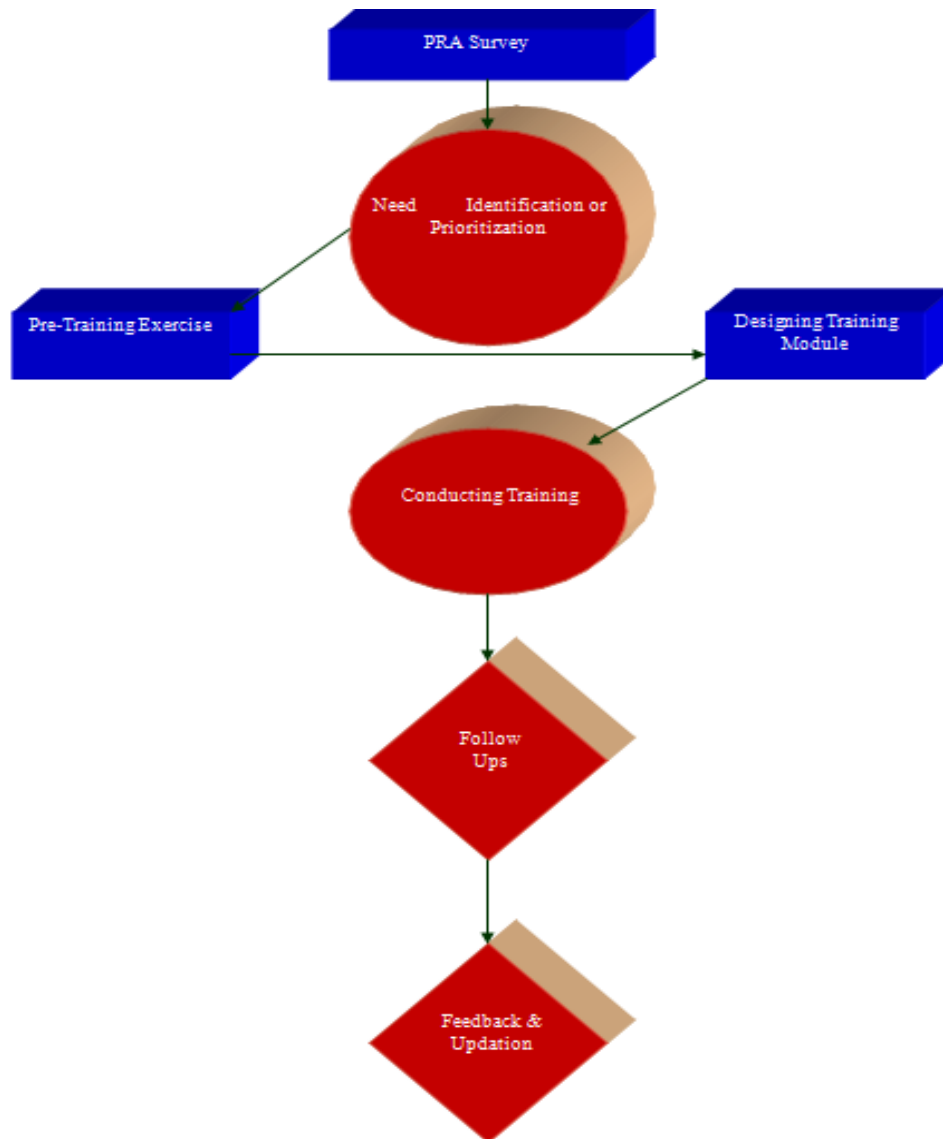
absent. For better fidelity of trainees on various operations posters, leaflets, bulletins projectors are used very effectively. The training in KVKs continue for days so there is hostel facilities available for the trainees. The farmers those are selected to take training are paid some amount as directed by the Government. Here the selection of farmers is very difficult and it is done through PRA technique.

Courses in the Krishi Vigyan Kendra will be tailored to the needs of the areas served and will be for both men and women. The following. types of courses might be provided, cultivation of local crops, application of package of practices; farm planning and plant protection; care and feeding of animals, poultry keeping, pisciculture, tubewell operation, irrigation and water control, nutrition, cooking and hygiene, Food processing and cooking, marketing of agricultural products, catching and marketing of fish etc.

Model 1: Flow diagram of priority setting for the implementation of KVK



Model 2: Training Module of KVK



Model 3: Programme Implementation Strategy of the KVK



6.2 KVK THE EMPIRICAL AND EXPERIENTIAL LEARNING

The basic objective of this character is to describe broadly the concepts used in the study for providing a theoretical base. In the process of theorizing a concept relevant studies are essential precondition. These empirical and conceptual evidences generated by different dedicated researchers come up as supportive and reiterative in placing the evidences on a strong theoretical basement. That is how and why theorization and drawing reference or review works have gone in thus chapter isochronously. The unfolding and

unveiling facts associated with relevant theorization shall go in a unique way to breed on hypothesis in logical framework for being statistically examined in subsequent stage.

6.2.1 Socio- Economic Profile

Gupta (1993) reported that majority of the contact farmer a (64%) were in middle age group 51% were from upper caste and 85% belonged to large family.

Sharma and Sharma (1988) reported that the Contact farmer a were found to be more or less equally distributed in young (31%), middle (73%) and old age group (32%). A majority of them belonged to high caste (77%) and low to medium socio-economic status (70%) with medium to large sized land holding (71%).

Nayak (1995) reported that majority of the beneficiaries belonged to middle age group with slight edge over old age group, received primary education and having medium to high social participation. Further reported that more than half i.e. 58 per cent of the respondent had medium cosmopolitaness and more than 22 -years of fanning experience with 1 hect. to 2 hectares size of land holding.

Ingle and Kude (1995) observed from Krishi Vigyan Kendra that relatively their proportion of the trainees were young i.e. 25 years age (30.30%) and in 26 to 35 years of age group (33.33%). The proportion of educated trainees was maximum with half to them, having high school education. However, 10 per cent were illiterate relatively higher proportion of trainees were from 4.01 to 10 hectares land holding group (35.35%).

D. Dimple *et al.*(1996) observed from Krishi Vigyan Kendra that majority of the trained farmers were of 15-30 years (45%) followed by 31-45 years (22%) and 61-75 years of age group (19%). There were only 14 per cent in 46 to 60 years, Majority of trained farmer were illiterates. (26%) followed by those with primary and Secondary (17% in each case) Intermediate (16%) level education and can read and write (10%) categories. There were only (4 per cent) with graduate degree. There was fair representations of both male (52%) and female fin hum Majority of them were married (64%) followed by unmarried (28%) and widowed (8%), Majority had small land holding (93%) followed by marginal (7%).

Toscano (1979) opined that before embarking on any agricultural modernization programme, it is essential to introduce basic education programme on a large scale for both adult and children.

Kadam (1991) revealed that most of the contact farmer a were educated upto primary level and operating a farm of more than one hectare. Their social participation was medium to high, whole income was relatively low.

Singh (1990) stated Mhat after implementation of Krishi Vigyan Kendra, Keonjhar the Income level of the Respondents increased up to 3500/- to Rs. 7.500/-. Besides that there was little change occurred in social participation of both contact and non-contact farmer. Change in Farm Power Possession in case of contact farmers and it has remained unchanged in case of non-contact farmer. Further he reported that there was significant difference in the low material status of contact farmer after implementation of Krishi vigyan Kendra.

Indian Institute of management, Ahmedabad (1967) and Agro-economic research centre, Shantiniketan (1971) in their studies of HYV of paddy in Tamilnadu and Orissa respectively did not find a significant difference in the size of holding of participating and non participating farmer.

Ingle *et al* (1987) concluded that contact farmers identified under T and V system were well matured and relatively crunched. Their participations in social activities so Tar had been extremely poor is about to per cent of them crime from upper middle class by land size and hardly 27 per cent of them can be said as small farmer having 5 acres of land. Almost 47 per cent of contact farmers were those who were earning annual income of around ten thousand rupees.

Singh (1990) observed that some of socio-economic characteristics like education. Income level, land holding, farm power of the contact farmer were significantly related to their level of knowledge. These variables were the main socio-economic variable for increasing the knowledge level of contact farmer whereas education, Income, land holding, family size, farm power were found to be significantly related to knowledge level of non-contact farmers.

Phatke Warsikar and Ramble (1993) reported that education, land holding, social participation sources of Information and Income were found to have positive significant relationship with knowledge.

Trignayat (1971) found in his study on "Impact of radio on farmers training and education programme in U.P. that when two groups of respondents were compared to know the impact of training it was found that there was significant difference in knowledge because of training.

According to Islam *et al.* (1996) education was found to be significantly associated with women's extent of participation in income-generating activities. So, education is an effective and important component influencing physical participation and decision making process and determining one's socio-cultural status in the society.

Ray (1995) Providing formal education to the members of the family reflects progressive outlook of the farmer. More of formal education in the family also provides better opportunity to the farmer to be in contact with the outside world and hence absorb new ideas and information.

Sarkar (1994) Family education status of farm women has found to be significantly associated with planning process, decision making process, perceptual process, participatory process and interactional process.

Ghosh(1995)Family education status has been found to be positively and significantly correlated with decision making of women in farm related activities.

Moktan (1997). Family education status has been found to be positively and significantly correlated with decision making of women in farm related activities.

Huton (1933) Caste is the social construct of an individual. A caste system is one whereby a society is divided into a number of self-contained and completely segregated units(castes), the mutual relations between which are ritually determined in a graded scale.`

Narwal, Dixit and Dahiya (1991) Caste showed a positive and significant correlation with attitude and knowledge of farmers towards Buffalo management practices.

Bardhan (1978)The participation rates for women vary significantly with caste. The women of lower caste participated more in agricultural jobs than those of higher caste.

Koley (1992) The participation rates for women vary significantly with caste. The women of lower caste participated more in agricultural jobs than those of higher caste.

Kaur and Punia (1988) Caste was negatively and significantly correlated with overall employment status of rural women.

Tripathi, Kunzru and Tripathi (1994) Caste was negatively and significantly correlated with overall employment status of rural women.

Dixit and Laharia (1995) Caste is the most crucial independent variable which positively and significantly contributed to farmers' existing and desired level of interaction for dairy development.

Ray (1995) It refers to the number of primary families living under the same roof and sharing the kitchen. It can be divided as 'single' family and 'Joint' family. A family was considered as single when it consisted of husband, wife and unmarried children. A joint family consisted of other blood relations also.

Narwal, Dixit and Dahiya (1991) Family type has a positive and significant correlation with attitude and knowledge of farmers' towards Buffalo management practices.

Ray (1995) It refers to the number of members present in the respondents' family. Generally a family consisting up to five members is regarded as a small size family and a family with more than five members a large size family.

Sarkar (1994) Positive and significant relationship was found between family size and overall involvement of women in Dairy co-operative

Kur (1988) Per capita income of women was found to be negatively and significantly related with participation and time spent in agriculture.

Punia (1988) Per capita income of women was found to be negatively and significantly related with participation and time spent in agriculture.

Sarkar (1994) Income was highly correlated with planning process and decision making of women in dairy.

Patel *et al.*(1995) There was also a significant relationship between annual family income and participation of rural women in household tasks, Agricultural operation and Animal husbandry activities.

Information use index refers to the communication channels like impersonal cosmopolite channels for mass and group contact; personal cosmopolite channels for individual contact and personal localite channels for individual contact. These are used for collection of new informations and techniques; learning new skills and obtaining new package of practices at the desired level to get higher production. In case of impersonal cosmopolite, channels of communication are from outside the social system of the receiver and at the same time no personal face-to-face contact is involved. Personal cosmopolite channels are the channels of communication from outside the social system of the receiver (Extension agents of various organisations). Personal locality channels are the local leaders and local people who belong to the receivers' own social system

Shoremi and Wodi (1997) The contribution of rural women to livestock production in Igalaland of Nigeria could be enhanced by a unified extension service system and by intensifying extension activities.

Chole (1977) All categories of women in nuclear families performed greater role in decision making as compared to those in joint family.

Kumari (1989) reported that, most of the female workfare working in the unorganized sector was in the age group of 13-40 years

Banerjee and Satapathy (1996) in the study of farm women in Orissa revealed that, the age distribution of 308 selected farm women was 37.01, 27.29, 23.70, and 12.01 % in the age group of up to 35 years, 36-45 years, 46-55 years and above 56 years respectively. It is also reported that, 82.15% belonged to other castes and only 17.55 were scheduled case. Similarly 81.57% belonged to marginal families and 68.18% illiterate. Majority (49.69%) had family members above seven and restricted with social organization of mahila samiti only as well as had little technological knowledge in rice cultivation

Mohanty (1995) reported that 56.25% farm women belonged to other backward communities followed by scheduled caste and scheduled tribe (36.25%). Majority (71.25%) were educated up to primary level, 23.75% illiterate and 65% has joint family system.

Rathore and Shaktwat (1990) in their study on the knowledge of farm women towards hybrid bajra cultivation stated that most of the farm women were illiterate.

Patel and Sarangi (1992) studied work and time analysis of farm women in farming operations and observed that, majority of the farm women were large farmers (73.17%), primary occupation of husband as agriculture (75.32%) and high scientific orientation (65.85%).

Siddique and Pathak (1991) reported that out of the women engaged in rice cultivation 73% had family members of 6 to 9 followed by 12% having more than 13 family members.

Kulkarni *et al.* (1990) stated that nearly 50% of the women had high knowledge, 42% medium and 9% low level of knowledge regarding improved agricultural practices.

NRCWA Annual Report (2003-04) observed that 75% tribal farm women entered to agricultural work at the age of 8-10 years, 92% illiterate and 70% had agriculture as primary occupation next to animal husbandry. They were very receptive to changes unlike women of coastal districts. This indicates the commitment of tribal farm women to their family & contribution to agriculture.

Mishra, Mishra and Nayak (2005) observed that 70% farm women were in the age group of 31-45 years, 50% illiterate, 80% having joint family system, 46% had farm area more than 2ha and had agriculture as the main occupation with subsidiary occupations like pisciculture, horticulture and dairying. But their social, extension and media participation were far from satisfactory level.

Majhi and Patra (1996) revealed that, majority of women cultivators belonged to general caste, having middle school and high school education and 59.53% of them had high scientific orientation.

Sood (1991) revealed that, there was a small section of women who are aware of their own rights. A vast majority of women were illiterate thus unable to seek legal relief.

Abraham (2003) revealed that, women represent 50 percent of population, make up 30 percent of the labour force, perform 60 percent of all working hours, receives 10 percent of the world's income and own even less than

one percent of world's property. According to Human Development Report, poverty has a women's face of 1.3 billion people in poverty, 70 % are women.

National perspective plan for women (1988-2000) highlighted that, there is continued inequality and vulnerability of women in all-economic, social, political, educational, health care, nutritional and legal sectors.

Chotopadyaya (2005) opined that, nearly 90 percent of women workers in rural areas are unskilled. All poor men have to perform domestic duties and also supplement the family income. They are subjected to economic exploitation with low and discriminatory wages.

Mahji and Patra (1996) revealed that, majority of women cultivators belonged to general caste, having middle school and high school education and 59.53% of them has high scientific orientation.

Neeladevei, Rambaby, Rao (2002) revealed that most of the farm women respondents were middle aged and were involved in agribusiness management due to their heavier responsibilities, about 40% are illiterate due to financial problems and non-availability of institutional facilities. Half of the respondents had medium level consumption. About 65 percent of the respondents had medium extension contact and 14.16% had low extension contact. Similarly, about 35% bear some degree of leadership behaviour.

Behera, Mohanty and Mohapatra (2005) revealed that women involved in farming were less educated, low social participation and poor extension contact. They had more contact with cultural organizations, panchayat and SHG by poor contact with cooperatives and educational institutions.

Sinha and Singh (2000) observed that the involvement of farm women was found independently or jointly in all major operations except ploughing, puddling and seed sowing which may be attributed to social norms and hard physical task.

Sarada and Rao (2001) revealed that, a tribal woman works on an average 13.58 hrs/day. They spent much time in collection of fuel wood, care of cattle and mud plastering etc.

Mishra and Tripathy (1991) identified that, only 3-4 percent of the farm women were exposed to resources personnel and hence their knowledge level was low.

Mishra and Sasmal (1997) revealed that rural female perform about 53 percent of works alone, while 20 percent of works done by men and rest 27 percent jointly performed. Rural female shared major part of drudgery.

Saxena (1983) observed that participation in farm activities was more or less same for tribal as well as non-tribal farm women i.e. about 8.25 hours per day.

Patil (2008) revealed that 87.03 percent of marginal and 69.21 percent of small farm households had not availed any credit from formal institutional Organizations (NSSO) 48.6 percent of farmer households are indebted. There are inadequacies in the rural access to credit. An improvement in this sector is needed for overall agricultural strategy.

Thejaswini, Chandra Shekar and Gowda (2004) observed that majority of rural women participated in harvesting, transplanting, manuring, winnowing, cleaning, threshing, transportation and storage of the produce. The participation in water management, earthing up and chemical control was negligible. As far as role performance was concerned, farm women had good participation in meeting, input arrangements, transportation as well as marketing of finished items. They had poor involvement in areas of bank transactions, assessment of profit and loss, participation in social organizations, etc.

Behera, Mohanty and Mohapatra (2005) revealed that the contact of farm women with extension system mostly occasional and majority of the farm women occasionally involved in the cultivation of field crops, vegetables, oilseeds, pulses, and cash crop. However, 49.02% of the respondents were fully involved in farm activities.

Kumar et al. (2003) revealed that nature of family, occupation, mass media exposure and economic motivation have a positive relationship with decision making by rural women.

Thejaswini, Chandra Shekar and Gowda (2004) revealed that lack of training (85%), financial constraints (82%), poor quality of raw materials (81%), high cost of production (77%), marketing problems (65%) and lack of storage facility were the major constraints for socio-economic development of rural women.

Rangnekar *et al.* (1992) recorded that the majority of women from poor families consider animal management as a traditional household responsibility.

Jain *et al.*, (1992) in Hissar, the involvement of women was significantly greater ($P < 0.05$) than that of men in all operations except chaffing of fodder, irrespective of socio-economic status, men and women respectively devoting an average of 1.2 and 5.5 hours/day to animal husbandry activities.

Tulachan and Batsa (1994) noted that in Nepal women are the key players in household livestock production management, contributing more than 80% of the total labour. They are far more knowledgeable than men regarding the local fodder trees and grasses, as well as local practices of treating sick animals.

Patel *et al.* (1994) During the peak period of agricultural activities in Gujarat, average daily time spent by rural women in agricultural activities was 6.97 hours; 2.51 hours were spent in each of both household and animal husbandry activities.

Shooremi *et al.* (1997) Rural women of Nigeria are encumbered with many domestic responsibilities which shortens the time available to them to invest in livestock activities. They generally rear the small animals because they believe that keeping them is less hazardous than keeping the large animals.

Kauar and Punia, (1988); Moktan, (1997) It's demerit is that an individual lost the capacity of physical labour with age. Age is negatively and significantly correlated with physical participation of women in farming.

Beal and Sibley (1967) That the individual's ability to read and write and the amount of formal education he possesses will affect the manner in which the individual gathers data and relates himself to his environment.

Ray (1995) Education is the process of producing desirable change in the behaviour of the people. It produces changes in their knowledge, skill, attitude and action. It widens their mental horizon by helping them to develop favourable outlook, correct perception and objective assessment.

Koley (1992), Sarkar (1994) Education means formal schooling, improves mental action and behaviour of people. So, it plays very vital role in the decision making process. The women of lower education participated more in Agricultural farm operations than those with higher education. Education

was highly correlated with planning process-and decision making of women.

Ghosh (1995) Family education status has been found to be positively and significantly correlated with decision making of women in farm related activities

Huton (1933) Caste is the social construct of an individual. A caste system is one whereby a society is divided into a number of self-contained and completely segregated units(castes), the mutual relations between which are ritually determined in a graded scale.`

Kaur and Punia (1988) Caste was negatively and significantly correlated with overall employment status of rural women.

Tripathi, Kunzru and Tripathi (1994) Caste was negatively and significantly correlated with overall employment status of rural women.

Dixit and Laharia (1995) Caste is the most crucial independent variable which positively and significantly contributed to farmers' existing and desired level of interaction for dairy development.

Ray (1995) It refers to the number of primary families living under the same roof and sharing the kitchen. It can be divided as 'single' family and 'Joint' family¹. A family was considered as single when it consisted of husband, wife and unmarried children. A joint family consisted of other blood relations also.

Narwal, Dixit and Dahiya (1991) Family type has a positive and significant correlation with attitude and knowledge of farmers' towards Buffalo management practices.

Ray (1995) It refers to the number of members present in the respondents' family. Generally a family consisting up to five members is regarded as a small size family and a family with more than five members a large size family.

Sarkar(1994) Positive and significant relationship was found between family size and overall involvement of women in Dairy co-operative

Roy(1992) In the theory of income determination, investment means strictly expenditure on capital goods. In this sense, it denotes addition to the capital stock of a firm or economy, once one has allowed for replacement of capital

which is scrapped. Investment may be divided into i) fixed capital, ii) work in progress, and iii) stocks. Investible surplus can be defined by calculating several factors. It is the subtraction of net income and loan overdue, interest and consumption expenditure.

Sarkar (1994) Income was highly correlated with planning process and decision making of women in dairy.

Khandekar and Khandekar (1995) revealed that opinion leaders were the most important source of information on Animal husbandry practices for rural women. Mass media exposure and contact with extension agents were found to be significantly associated with women's extent of participation in income-generating activities, in Bangladesh .

Islam *et al.*, 1996. revealed that opinion leaders were the most important source of information on Animal husbandry practices for rural women. Mass media exposure and contact with extension agents were found to be significantly associated with women's extent of participation in income-generating activities, in Bangladesh .

Chole (1977) All categories of women in nuclear families performed greater role in decision making as compared to those in joint family.

6.3 Perceived Training needs and exogenous variables

Singh (1990) reported that there was significant change in the development of irrigation facilities after implementation of Krishi Vigyan Kendra programme in the area under study. In case of contact farmera 66% of the respondents constructed dugwell against 30% and 46% of the respondents against 20% in case of non-contact farmer respectively.

All the adopters of smokeless chulla said that fuel was saved. Except diary adopters, other felt that their household pmpose was fulfilled. All diary and poultry adopters said that they got employment at home.

Jagdale and Nimbalkar (1993) revealed that there is significant association between education, size of the family, Annual Income, Socio-economic status, sources of Information, extension contact and cosmopolitaness with level of knowledge and recommended Dryland technology.

Dash and Das (1996) observed that knowledge level of contact farmera was influenced by Income, land holding and farm power. In case of non-contact

farmera, Income land holding, family type, family size, social participation and farm power were found to be significantly related with knowledge level.

Kanungo *et al.* (1996).out of twelve characteristics studied only five characteristics viz. education total farming experience, social participation, extension contact and achievement motivation had positive and significant relation with the knowledge level of small farmer. As regards to the marginal farmer, only four characteristics viz education, extension contact, extension participation and achievement motivation had positive and significant relationship with the knowledge level.

Rath and Mohapatra (1996) observed that five characteristics viz. average Annual Income, social participation, extension participation, economic motivation and achievement motivation had positive and significant relationship with the adoption behaviour of small farmers towards NWDPRRA practices, further in case of marginal farmer, it was observed that several variable viz. total farming experience. Average annual income, social participation, extension contact, extension participation, economic motivation and achievement motivation had positive and significant relationship with the adoption behaviour towards NPDPRRA practices.

Patel (1972) opined that farmer training has paramount Importance in guiding the farmers to adopt Improved farm practices or higher production

Chauhan (1972) found that majority of the respondents said that training is necessary concerning the subject matter. It was found that greater emphasis should be given on agriculture, plant: protection and improved implements. In case of trainees, trainers, subject matter and physical facilities were found positively and significantly related to each other. The relationship between trainers/ subject teaching aids, physical facilities were also found positively and significantly related to each other, He emphasised that trainers-trainees relationship that existed was good, moat of them were satisfied with the subject matter taught and the physical facilities provided to them. The trainers were also satisfied with the subject matter, teaching aids, physical facilities provided at the training contra.

Singh and Raj Harayan (1975) observed that farmers training resulted in an increase in the area under improved farm practices and also in an increase in the productivity of the crops. They concluded that farmers training

programme plays a vital role and supplements the efforts made by the Government for increasing agricultural production, The training appeared to be an invisible input but its results were highly visible. There existed a need to expand and strengthen this programme for achieving the desired goal of increased agricultural production.

Patel and Pandya (1975) reported that acquiring new knowledge and improving farming were found to be the two main purpose a for joining the training classes,

Mathur (197G) stated that before adoption modern technology it was essential for small farmers to know the basic principle of firing suitable crops in cropping system. He further added that knowledge of short duration crops of high yielding varieties, efficient water management, judicious trained, farmers consulted these sources more frequently as compared to the untrained farmers. It was also found that with few exceptions almost all the trained farmers gained higher adoption scorers than those matched untrained farmers in all categories of socio personal characteristics, e.g. age, caste, educational status) and area of land cultivated. Thus they concluded that training had considerable impact on the adoption of improved farm practices.

Rao (1969) critically analysed the farmers training in IADP and IAAP districts in Karnataka state in relation to HYVP and found that most popular training to farmers in relation to cultivation of high yielding varieties, was of short duration type varying from 1 to 3 days.

Singh and Sohal (1969) concluded that there is a lot of technical know-how to be properly disseminated. There are favourable conditions for extension workers to accelerate the speed of adoption of innovations by arranging training courses for the farmers.

Pal (1970) analysed the, farmers' training and education programme in relation to changes in farmers' behavioural components and also compared institutional and non-institutional training programme to determine their effectiveness . He found that farmers of treatment group gained more knowledge attitude than those of control groups. This institutional training was found to be superior to non-institutional training. There were significant differences in knowledge, attitude and adoption behaviour of

farmers trained in institutional training and non-institutions training programmes.

Khuspe (1970) while analysing differential impact of training found that there was significant change in the adoption behaviour of trained farmers

Kamalason (1971) found in his study that there was significant increase in knowledge, change in attitude and adoption of high yielding varieties in positive direction due to one-day farmers training camp, 62 percent of the farmers had changed their attitude towards high yielding varieties of paddy, 83 per cent the trainee farmers had gained more knowledge of high yielding varieties of paddy, 61 per cent of trainee farmers had adopted more practices after the training. There was significant correlation between the change in attitude and change in knowledge due to training.

Patni (1977) stated that KVK training programme will serve the purpose of adult education by covering all the aspects.

Anantharanian (1977) found that small and marginal farmer did not differ in their training needs of the major subject matter area, plant protection, soil, conservation and soil reclamation as the most important areas of training.

Gill and Singh (1979) concluded that farmers training and education programme plan play an important role in transfer and adoption of new agricultural technology by the farming community. The study revealed that technical training in agriculture both rabi and kharif season is essential for increasing the production and for further dissemination of agricultural technology to other fellow farmers.

Shalaby (1991) In Egypt the women contribute to family income generation through the activities of kitchen gardening. There is evidence that such contributions could be expanded if supportive systems of management and finance could be arranged.

Acheampong (1992) In the Ghanaian small family farm, women are the major tillers of the land. They make up an important part of the labour force, but their full potential remains unrealised. Women have few rights, are generally denied credit, extension assistance and training, factors which contribute to low food production and malnutrition.

Banerjee and Satapathy (1996) revealed that farm women possess very little knowledge about specific technologies recommended for rice cultivation.

Altogether 64.93% of the farm women had contact with various categories of extension personnel. They had good participation in post harvesting activities in agriculture and animal husbandry practices except marketing.

Jamuna Rani, Reddy and Reddy (1998) observed that interpersonal and face to face interaction played a key role in the information sharing behaviour of the farm women. They rely mostly on informal sources for information support but places high credibility on extension agency which is not available to them and express their desire to link them through women extension staff.

Das and Mishra (2000) stated that in spite of key roles performed by tribal women in farm and home activities in one hand and their low level of awareness in the improved technologies on the other, their perceived training needs was found to be comparatively very low. The reason being attributed to their unawareness/ ignorance, religious restriction, male dominance, lack of time, less incentive for training, etc.

Mishra, Mishra and Kanungo (2005) revealed that, majority of women farmers obtained the first information from the SHGs followed by mass media, husband and least with the extension agents. Majority of women farmers were aware about crop rotation, improved vegetable cultivation, storage, seed treatment, improved cultivation of rice, pulse and oilseed, mushroom cultivation etc. Poor response was obtained on fertilizer management, tillage, low cost farm implements, dairy, fish production, pesticide application etc. membership, education were positively related with access to farm technology.

Padmanabhan (2001) emphasized the need for empowerment of rural women in agriculture through effective training and extension services arises from the gradual decrease in the availability of cultivable land, increasing population pressure and growing environmental degradation which have far reaching implications for food and nutritional security.

Majhi and Patra (1996) suggested that special training programme should be conducted to develop the scientific orientation, entrepreneurial abilities and working knowledge of farm women on agricultural activities. Programmes on sericulture, lac cultivation, mushroom cultivation apiculture etc. may be incorporated particularly for tribal farm women to develop the livelihood.

Sivangam (1992) advocated that, it is essential to create awareness among women about their legal rights and status and about the need of proper development as well as equal participation in social, political and administrative functions.

Sinha (2000) emphasized that special trainings should be organized for farm women to increase their efficiency.

Ray (1999) Stated that there is an urgent need for the efforts towards status equalization for socio-economic development of rural women.

Sailaja and Reddy (2003) suggested that, farm women should be empowered through effective training programmes. The challenges are mutually supportive manner, so that men and women can play active role in productivity.

Neelaveni, Rambabu and Rao (2002) suggested the following points for the development priorities of farm women -

- i) Women friendly technologies particularly with respect to agricultural implements.
- ii) Knowledge and skill development particularly in the areas of pest and disease control.
- iii) Skill trainings on storage techniques of grains.
- iv) Incentives to improve their participation in social activities.

Santra and Kundu (2001) suggest that, gender sensitivity and systematic approach are two factors important for rural development programme targeted either at women or both women and men. Empowerment is a complicated process which comprises of short-tem and long-term strategy. Under each strategy, several projects need to be formulated and carried out. The process of women's empowerment is conceptualized in terms of personal assertions and confidence, ability to project themselves as women, attaining economic independence, ownership of productive assets, and leadership in both women and community related issues at all levels.

Sinha (2004) suggested that agricultural and rural development policies should accord women's access to and control over productive assets, rather than merely transferring income for consumption. Suggestions for improving the quality of life of rural women are access to land, credit,

agricultural inputs, extension and training, education technology, rural organizations, transport and market facilities.

Parichcha and Das (1997) opined that there is a felt need to increase farm women's access to knowledge regarding agricultural inputs, credit, and marketing facilities.

Saraswati (1987) revealed that, the sale proceeds were generally kept with the women and spent by them on what they considered appropriate.

Mishra, Misha and Nayak (2005) observed that conducting training programmes based on the felt needs of farm women would definitely influence and change the behaviour in a desired manner.

Pitamber and Osama (1994) In northern Sudan, the women specified their need to engage in poultry and goat rearing activities as a method for income earning.

According to Yang (1980) Management in farming situation, means how well the farmer organises and utilises the resources at his disposal to obtain a good produce and a good price by intelligent marketing.

Tripathi *et al* (1994) Management orientation of rural women had exerted the greatest total indirect effect on productivity of dairy animals. Management orientation was negatively and significantly correlated with overall employment status of rural women.

Tripathi (1994). Management orientation was negatively and significantly correlated with overall employment status of rural women.

Rangnekar *et al.* (1994) Many of the women were keen to learn about high producing dairy animals. Many expressed their interest in learning about fodder crops, ensiling, urea treatment and grass storage. They were aware of the effect of good quality fodder on milk production. However, illiteracy is the main limiting factor. An attempt at functional literacy would be useful as many women were eager to read and write. The training and extension programmes need to be better organized to ensure that women do not need to leave their homes for long periods.

6.3 PERCEIVED TRAINING EFFICACY AND EXOGENOUS VARIABLES

Ram Krishna (1980) found that there was significant change in knowledge of majority of trained farmer in Krishi Vigyan Kendra in all the practices, namely seeds, and sowing, manure and manuring, plant protection, irrigation and water management, harvest and storage due to training.

Singh (1990) observed that there was a significant change in the knowledge level of the farmers after implementation of Krishi Vigyan Kendra programmes. In case of contact farmers, maximum change occurred in gaining knowledge about plant protection measures, manure and fertilizer management seed treatment, maintenance of optimum plant population seed rate and variety. Little change was observed in knowledge level about suitable soil condition for growing crops. In case of non-contact farmer maximum change in knowledge level was observed in the package of practices of crop production, which were found to be highly significant except knowledge about varieties.

Dube and Savvarkar (1992) revealed that 50% of small and marginal farmers were having partial knowledge of Rice production technology.

Nayak (1995) observed that majority of the farmer benefited by the agro-forestry programme posed average (40-60%) knowledge and none had high knowledge level.

Dhingra Dimple *et al.* (1995) observed from Krishi Vigyan Kendra that majority of trainees seems to have gained adequate knowledge (48%) followed by some (30% only) two percent felt that they gained very little knowledge from Krishi Vigyan Kendra.

However, majority of trained farmer (38%) reported that they could not use the training, followed by used a little (27%). Twenty per cent of them reported to have used to a great extent only 15 per cent had used the new knowledge fully from Krishi Vigyan Kendra.

Ganesh (1975) found that impact of training on knowledge was highly significant in respect of hybrid jowar cultivation and soil and water management technologies. Impact of training and adoption was highly significant on hybrid jowar cultivation and soil and water management technologies.

Vittal (1971) reported while studying impact of training camps on gaining knowledge and its relation to certain personnel and socio-economic factors,

negative relationship was found between social participation and gain in knowledge. But it also showed gain in knowledge as a result of peripatetic trainings.

Palled (1972) found that there was a clear indication of positive impact of trainings on knowledge and attitudinal component of the farmers. use of fertilizer and its time of application, fungicides, herbicides for plant protection, timely harvest and storage of grain was very essential.

Patel (1978) stated that knowledge regarding wheat and bajra crop was associated with participation in training programme.

Halappanarar (1979) revealed that the experimental villages and control villages differed significantly in the knowledge and adoption of cotton cultivation practices. Impact of training with respect to gain in knowledge by participant in relation to recommended cotton cultivation practices was significant. There was no significant association between the personnel characteristics of the farmers studied and their gain in knowledge as a result of training,

Gangadharappa (1979) concluded that there was significant difference in the knowledge level and adoption behaviour in relation to improved practices of both aspects studied as a result of training. Her study thus indicated a positive impact of training on members.

Rangnekar *et al.* (1994) Many of the women were keen to learn about high producing dairy animals. Many expressed their interest in learning about fodder crops, ensiling, urea treatment and grass storage. They were aware of the effect of good quality fodder on milk production. However, illiteracy is the main limiting factor. An attempt at functional literacy would be useful as many women were eager to read and write. The training and extension programmes need to be better organized to ensure that women do not need to leave their homes for long periods.

Sapru (1989) observed that, women are not only economically dependent but also politically and legally powerless.

Abraham (2003) revealed that women represent 50 percent of population, make up 30 percent of the labour force, perform 60 percent of all working hours, receive 10 percent of the world's income and own even less than one percent of the world's property – International Labour Organization.

Nigmal and Singh (1989) revealed that women had access neither to agriculture information and services nor to production assets.

Antwal and Bharwadkar (1990) indicated that nearly 78% farm women were unable to have personal contact with extension workers.

Tantray (1991) reported that women participated in all farm activities except ploughing, bond making, marketing of produce, plant protection operations and irrigation work.

Majhi and Patra (1996) opined that women cultivators had more involvement in arrangement of inputs, supervision and labour management, winnowing, feeding animals and processing of milk products.

Das (2000) stated that tribal women are very labourious and lay dual role in their daily life. They are the main earning members and care taker of their families. Except ploughing they are doing almost all the agricultural operations.

NRCWA Annual Report (2003-2004) revealed the tribal farm women are highly involved in the activities like Jhola land preparation (75%), transplanting (82.5%), weeding (72.5%), harvesting (82.5%), transporting (60%), threshing (52.5%), hand milling (80%) and processing (85%) under livestock management they were involved in fodder collection (82.5%) feeding the animals (97.5%), cleaning the animal shed (87.5%) caring new born calf (87.5%), and preparing cow dung cake (90%).

Gopalppa (1997) reported that female member of the family took decision in celebration of religious festivals, buying clothes and type of food to prepare etc.

Hossain and Mishra (2002) revealed that the farm women respondents took decision on kitchen gardening (100%), family budgeting (99.3%), goat rearing (94%), cattle management (80.7%), selection of crops and varieties (78.70%) raising of fruits and vegetables (71.3%) and poultry keeping (64.7%).

Joshi (2004) stated that empowerment implies expansion of assets and capabilities of people to influence, control and hold accountable institutions which affect their lives. Empowerment has multiple components like economic independence, access and control over productive resources,

knowledge and awareness, self image, autonomy, health, education and employment.

Satapathy (2003) opined that empowerment is the process by which individuals, organizations and communities gain control and mastery over social and economic condition. The minorities, women, the poor and local communities loose control which empowerment restores.

Timsina et al. (1996) showed that women participated equally or sometimes even more than men in different rice farming and livestock production activities in two district of Chitwan, Nepal where integrated rice-based farming system are practiced.

Flaba (1997) Women were aware of the effects of animal disease and poor nutrition on animal productivity, effects they observed during daily milking. In general, women are more sympathetic than men in the treatment of animals.

Ghosh (1995) Time is the best teacher of our life. An individual enriched with several practical experiences and gainful knowledges overtime. These guerdons from time lead to an individual to enter into the decision making process.

Moktan (1997). Family education status has been found to be positively and significantly correlated with decision making of women in farm related activities.

Tripathi et al.(1994)High and low level of aspiration are to indicate relative level of goal specification. Level of aspiration of rural women had exerted the greatest direct effect on productivity of dairy animals.

Ghosh (1995) A negative correlation was obtained between the level of aspiration and participation of women in fish culture due to barrier like male dominance in an area of West Bengal.

Bradford and Johnson (1964) defined management in functional terms, as the performance of five tasks - observation, analysis, decision making, action and acceptance of responsibility. Heady and Jensen (1964) outlined four basic functions of farm management in a changing world. These are :

- (i) It must formulate expectations of prices, yields and production for the future;

- (ii) It must formulate a plan to meet price, yield and production expectations;
- (iii) It must put the plan into effect, and
- (iv) It must bear the consequences of plans.

Samanta (1967) defined management orientation as the degree to which a farmer is oriented towards scientific management comprising planning, production and marketing functions of the farm.

Stoner (1988) Decision making is the process of developing and selecting a course of action to solve specific problem. It is the basic of all activities. People at all levels must constantly make decisions and solve problems and every action of an individual is the result of conscious or unconscious decisions arrived at by him.

Aspinall *et al* (1994) The results of group interviews of 200 women in 19 villages showed that men are the Agricultural decision makers, except in a few villages where men have off-farm employment.

Patel *et al.* (1995) reported that the majority (71%) of the rural women alone made the decision on storage of grains for home consumption and other purposes. On the other hand, decisions on animal husbandry activities, expenditure pattern, education and marriage of children were made jointly by rural women and their husbands in a majority of cases. It was also observed that decision on cropping pattern and marketing of produce was made by the husband alone in the majority cases.

Robert (1996) In Kenya women are also more actively involved in decision-making concerning the marketing of milk where males are absent from home for wage labour .

6.4 TRAINING PERCEPTION AND EXOGENOUS VARIABLE

Basavaraja and Veerabhadrawah (1987) revealed that a majority of farmer have adopted the Recommended practices which are simple in nature and less expensive while majority have not adopted the practices which are complex nature and more expensive.

Raghuwanshi and Jawalkar (1992) revealed that use of improved seed and inter cultural operation were adopted by 73 % and 62% respectively

whereas fertilizer application was adopted by 57% respondents and the adoption of plant protection measure indicated a poor minority (34-25%).

Singh (1974) observed that trained farmers significantly differed from untrained farmers with regard to extent of adoption of package of practices.

Pimprikar *et al.* (1974) concluded that there was significant association between level of knowledge, attitude and adoption of modern poultry husbandry practices with that of training imparted to the poultry farmers.

Gill (1970) found a wide gap between what is and what ought to be of training in improved wheat cultivation.

Yadvikar (1971) reported that majority of the respondent were found with a fairly good level of knowledge with regard to packages of practices demonstrated. The demonstrating farmers had better knowledge with regard to improved seed treatment, seed rote and spacing.

Chaudhary (1971) has reported that there was an association between training and the extent of knowledge of the farmers as they had a good influence of training over their knowledge concerning fertilizer and insecticides/ pesticides and fair influences over their knowledge concerning improved seed and implements.

Mayani (1976) found that the small farmers overall knowledge taking all the crops and all practices together was far below the fair level. He further observed that they needed training in oil the crops and in all the practices. He further pointed out that the farmers knowledge was poor with respect of plant protection practices, while it was fair in agronomic and manurial practices. Practices and adult literacy than their counterparts in control group.

Muthaiah *et al.* (1970) confirmed the effectiveness of training programmes in increasing the adoption level of farm practices by the farmers.

Gopal krishnan (1978) reported that production-cum-demonstration training (special training) was more effective in increasing the knowledge of practices for growing high yielding varieties, hybrid jowar.

Rangnekar *et al.* (1992) recorded that the majority of women from poor families consider animal management as a traditional household responsibility.

Tulachan and Batsa(1994)noted that in Nepal women are the key players in household livestock production management,contributing more than 80% of the total labour.They are far more knowledgeable than men regarding the local fodder trees and grasses,as well as local practices of treating sick animals.

Martins (1995) In German advancement of women has successfully combined with livestock production. The successful integration of women into livestock development projects requires a change in the way people think; stereotypes have to be changed, and women's important role accepted at face value.

Timsina *et al.* (1996) showed that women participated equally or sometimes even more than men in different rice farming and livestock production activities in two district of Chitwan, Nepal where integrated rice-based farming system are practiced.

Ray (1995) Education is the process of producing desirable change in the behaviour of the people. It produces changes in their knowledge, skill, attitude and action. It widens their mental horizon by helping them to develop favourable outlook, correct perception and objective assessment.

Koley(1992) , Sarkar(1994)Education means formal schooling, improves mental action and behaviour of people. So, it plays very vital role in the decision making process. The women of lower education participated more in Agricultural farm operations than those with higher education. Education was highly correlated with planning process-and decision making of women.

Aspiration are goal statements, encouraging future level of achievement. English and English (1958) defined aspiration as the standard by which a person judges his own performance as a success or failure or as being up to what he expects of himself. It is expected that the more progressive farmers will have higher level of aspiration. According to Haller (1958) an aspiration usually refers to a persons, or a group of persons' orientation towards goal. Goals can vary in kind and are usually described with reference to a particular social status or status attribute (occupation, income, education, residence and so on).

Ghosh (1995) A negative correlation was obtained between the level of aspiration and participation of women in fish culture due to barrier like male dominance in an area of West Bengal.

Bradford and Johnson (1964) defined management in functional terms, as the performance of five tasks - observation, analysis, decision making, action and acceptance of responsibility. Heady and Jensen (1964) outlined four basic functions of farm management in a changing world. These are :

- (i) It must formulate expectations of prices, yields and production for the future;
- (ii) It must formulate a plan to meet price, yield and production expectations;
- (iii) It must put the plan into effect, and
- (iv) It must bear the consequences of plans.

Aspinall *et al* (1994) The results of group interviews of 200 women in 19 villages showed that men are the Agricultural decision makers, except in a few villages where men have off-farm employment.

Patel *et al.* (1995) reported that the majority (71%) of the rural women alone made the decision on storage of grains for home consumption and other purposes. On the other hand, decisions on animal husbandry activities, expenditure pattern, education and marriage of children were made jointly by rural women and their husbands in a majority of cases. It was also observed that decision on cropping pattern and marketing of produce was made by the husband alone in the majority cases.

Robert (1996) In Kenya women are also more actively involved in decision-making concerning the marketing of milk where males are absent from home for wage labour. Several factors are held responsible to create problems among rural women in entrepreneurship. The kind of socialisation (male dominance) they perceive from their childhood restrict them from acquiring some traits such as self confidence, need for achievement, inclination to take risk, independent outlook which are essential for entrepreneurship.

Sood (1991) revealed that, there is a small section of women who are aware of their new rights. A vast majority of women are illiterate thus unable to seek legal relief.

Chattopadhyaya (2005) Nearly 90 Percent of women workers in rural areas and unskilled. All poor women have to perform domestic duties and also supplement the family income. They are subjected to economic exploitation with low and discriminatory wages.

Mishra and Tripathy (1991) revealed that only 4% of farm women had contact with extension agents. They had also little exposure to the formal sources of information.

Pradhan (1990) stated that Indian women contributed to agriculture mainly as nursery growers, vegetable venders and transplanting seedlings

Pandian and Eswaran (2002) reported that empowerment of women through micro-credit has provided access to finance without the burden of collateral security through self help groups that has empowered the women folk economically and socially. Though the credit provided is micro in nature, it has produced macro changes in the lives of women.

NRCWA (2001-2002) in their study revealed that farm women had significant higher contact with lady village agricultural workers and also good contact with animal husbandry workers. Farm women were mostly involved in manuring, leveling, transplanting , harvesting and less involved in land preparation. Taking both agriculture and non-agricultural sector, women engaged for 138 days in year in comparison to male for 120 days in tribal areas.

Devi (1983) identified that farm women play about eighty roles out of which eighteen roles were in agriculture and other eighteen roles in allied agricultural activities.

Satapathy (2003) opined that rural women have access to and performed as many as 27 roles in relation to agriculture and allied activities. Such as planning and decision making, marketing of farm produce, arrangement of inputs, supervision of labour, sowing of seeds, planting of seedlings, fertilizer application, manuring, weeding, intercultural operation, irrigation management, plant protection, harvesting, threshing, winnowing, post harvest operation, preparation of bi-product, preparation of FYM, earth

work, nursery raising, fencing and land preparation management, animal care, marketing, milk processing, fishing and net making, forest related activities, and beekeeping.

Saraswati (1987) revealed that the sale proceeds were generally kept with the farm women and spent by them on what they considered as appropriate with respect to livestock produce.

Chattopadhyaya (2005) observed that Indian females had only 10 percent of the total households and the ownership of land and other properties are mainly in the name of the male members of family. Hence, women have hardly any ownership of resources and autonomy to take decisions.

Santra and Kundu (2001) identified that farm women had limited access to resources particularly land, input and credit, inadequate technical competency, Poor participation in decision making, poor gender consideration in research and extension, limited exposure to mass media and untapped women potential are the major handicaps for over all development of women.

Hossain and Mishra (2002) revealed that most of the farm women respondents were engaged in harvesting (68.6 %) seedling uprooting, transplanting (59.3%) and weeding (58%) operations. They had less participation in seed treatment, manuring and plant protection operations. As much as 47.3 percent of them had participation in storage of food grains. It was also observed that 90.6 percent of them involved in backyard kitchen gardening, 34.5 percent in marketing of vegetable, 72 percent in preservation of fruits and vegetables, and 26.8 percent in development of fruit orchard.

Chaudhari and Ganorkar (1992) revealed that farm women played active role in decision making particularly in the areas of crops to be sown (41%), selecting the varieties (31%), stubble collection (84%), application of manures (46%) cleaning field boundaries (41%), harvesting (62%) and cleaning (61%). The study also further revealed that decision making behaviour of farm women on animal production was limited to collecting fodder (53%),

Mohanty (1995) reported that, as far as the purchase of farm equipment and animals are concerned, a majority of decision were taken either husband or alone (37.5%) or by the husband and wife jointly (36.75%)

Majhi and Patra (1996) stated that majority of women cultivator took decisions in areas like land preparation (71.57%) application of manures (59.95%), time of harvest (59.52%) weeding (89.95%), kitchen gardening, storage of seeds and grains (64.28%)

Makkena (1987) observed that farm women played a dominant role in decision making regarding transplanting, time of weeding amount to be spent on hiring labour, harvest and storage. No decision making behaviour was observed in soil testing, land preparation, use of farm machinery, adoption of plant protection measures and sale of surplus produce. Wives of contact farmers were more desirous to take part in decision making and they did so actually. Leadership status of farm women was positively correlated where as caste adversely related to participation in decision making.

Kulkarni (1983) observed that majority of farm women (71%) per were not involved in independent decision making on any of the agricultural operations.

Seema (1986) observed that farm women took independent decisions on storage and marketing of produce. Joint decisions were taken on purchase and sale of land, care and management of animals as well as children's education. were either taken by husband alone or jointly.

Sobha (2001) emphasized that training and technologies information has to be provided to the farm women to improve their skills, level of decision making and effective participation.

Suguna (2002) suggested that empowerment is a process where women become able to organize themselves to increase self reliance, assert their independent right to make choices and to control resources which will assist in challenging and eliminating their own subordination.

Desai and Maithreyi (1990) opined that, the constitutional recognition of equal status for women and progressive legal enactments have undoubtedly empowered Indian women with juristically equality.

Martins (1995) In German advancement of women has successfully combined with livestock production. The successful integration of women into livestock development projects requires a change in the way people think; stereotypes have to be changed, and women's important role accepted at face value.

According to Islam *et al.* (1996) education was found to be significantly associated with women's extent of participation in income-generating activities. So, education is an effective and important component influencing physical participation and decision making process and determining one's socio-cultural status in the society.

Sarkar (1994) Family education status of farm women has found to be significantly associated with planning process, decision making process, perceptual process, participatory process and interactional process.

Shoremi and Wodi (1997) The contribution of rural women to livestock production in Igalaland of Nigeria could be enhanced by a unified extension service system and by intensifying extension activities.

Malone (1958) Rural women of farm families have to involve them in decision making process regarding different farm (agriculture, animal rearing, poultry rearing and fish farming) related activities and financial affairs in different enterprises to maximise their family income. Decision making is a mental process of reasoning to search out the best alternatives for problem solving. Rural women have to bear responsibilities of domestic chores; child care; different farm related activities; arranging savings; availability and repayment of loans and purchasing and selling of different inputs and outputs respectively and confronts adverse situations and decides what actions to take. Decision making is the heart of firm management.

Marketing of products both output and input play a crucial role in a production system. Agriculture and allied farming activities are not the exception. Farm women have to decide what to buy, when and where to buy, how much to buy and how to buy along with what to sell, where to sell, when to sell, how much sell and how to sell.

Garg (1966) Considering mother-in-law, daughter-in-law pairs in farm families, the mother-in-law was expected to do more decision making tasks alone. On the other hand the daughter-in-law was expected to do more of physical tasks (relating to home as well as farm) and less decision making tasks.

Zepeda *et al.* (1977) indicated that while couples exhibit a high degree of co-operation, share goals, and make long term decisions jointly, they have different preferences and different spheres of influence and decision-making on the farm. This points to a cooperative model of decision making

behaviour. Factors that most influenced decision-making were age, debt load and wives' off-farm income.

Koley (1992) reported that participation of farm women in decision making relation to farm operation was very low whereas in economic aspects like farm, surplus, savings, repayment of loans, participation is fairly good. Generally, decisions regarding the produce (milk) is with women and purchase or sale of animals is decided by men. Tribal women have more say in decision making, amongst poor families most decisions are joint, while women from families with commercial dairy operations have no involvement.

Rangnekare *al*, (1992) reported that participation of farm women in decision making relation to farm operation was very low whereas in economic aspects like farm, surplus, savings, repayment of loans, participation is fairly good. Generally, decisions regarding the produce (milk) is with women and purchase or sale of animals is decided by men. Tribal women have more say in decision making, amongst poor families most decisions are joint, while women from families with commercial dairy operations have no involvement.

Shalaby (1991) In Egypt the women contribute to family income generation through the activities of kitchen gardening. There is evidence that such contributions could be expanded if supportive systems of management and finance could be arranged.

Thangvelu *et al*. (1992) reported that in Malaysia main responsibility falls on women in livestock production. Although they are heavily involved in animal production work they are not in the forefront of animal production due to socio-cultural, finance and educational constraints : decisions are undertaken by men; obtaining credit requires collateral, but most property is restricted under a male's name, restricting financial assistance for women; and the participation of women in training is still low. Improvement needs to be made to increase women's involvement in training and education and their access to financial assistance.

6.5 ADAPTION LEVEL AND EXOGENOUS VARIABLES

Sarkar (1980) reported that there was significant difference in adoption of package of practices after the Introduction of T and V System than before the introduction of the system as calculated by means adoption score.

Rajaguru and Panda (1981) reported that percentage of farmers growing high yielding paddy increased after the Introduction of T and V system in the area under study. There was a significant difference in adoption of high yielding paddy before and after implementation of T and V system in case of both contact and non-contact farmers.

Jaiswal *et al.* (1985) observed that only small farmer worked as labourers in contour bunding and many of them did not bother about the maintenance of bunds. They also observed that adoption of Improved Dryland practices was confirmed to small section of farmers.

Mishra, *et al.* (1986) revealed that the acceptance of fertilizer use of Improved seeds and seed treatment was more i.e. 14.41 and 58% respectively, whereas the acceptance of practices of insecticides/pesticides and weed control was very limited i.e. only 32% and 15% respectively.

Babu and Jayaramaiah (1987) revealed that the big farmers had higher adoption level and economic performance than small farmer, small farmer had better adoption and economic performance than marginal farmer. In general the adoption level of all the three categories were high and economic performance level of all three category were low.

Singh (1990) reported that there was significant difference in adoption of Agricultural Input like timely getting seeds, bank loans, adoption of irrigation facilities in dugwell and technical guidance, by both categories of the respondent (non-contact/contact) after implementation of Krishi Vigyan Kendra programmes.

Mohapatra *et al* (1991) revealed that the adoption behaviour of farmer in Puri District of Orissa that majority of the respondents adopted Improved Agricultural practices like line sowing, correct spacing, seed rate and top dressing of fertilizer whereas partial adoption was found in use of balanced dose of fertilizer and plant protection measures.

Hugar *et al.* (1992) concluded that adoption rate increases in the frequency of involvement of farmers in extension activities.

Pathak and Sasmal (1992) reported that four factors namely like age, mass media contact, economic motivation and fanner's goals had emerged as the most dominant variable in explaining the variation in the adoption Jute technology.

Ajore and Singh (1993) reported that the farmer of progressive district differs from these of less progressive district. On the extent of adoption gap of reclamation technology.

Nayak (1995) revealed that the extent of adoption of Recommended technologies under Agro-forestry programme was the majority of the Respondents belonged to medium adoption level category,

Dinger Dimple *et al* (1996) revealed from Krishi Vigyan Kendra trained practised that all adoption of poultry and 32 percent adopters of diary practices expressed that their income increased after adoption of practices. It is also observed that all the respondents who hail adopted diary practices selling milk to milk producers, Co-operative society.

Kher (1992) reported that age had no association with the adoption behaviour of the farmers towards wheat cultivation practices. He further revealed that the extension contact and participation in extension programmes were significantly associated with adoption behaviour.

Kanungo *et al*.(1996) revealed that size of land holding, risk bearing preference and economic motivation were positively and significantly correlated with the adoption level. The social participation and cosrnopoliteness characteristics of the farmer was found non-significant. Age and education were found to be negatively and non-significantly associated with the adoption level of farmer.

Patel and Patel (1968) found that all the farmers of both trained and untrained categories did not secure equal adoption scores on the adoption of improved farm practice with few exceptions most at of the trained farmers gained significantly higher adoption scores than those of the matched untrained farmers on the adoption of improved seed-, treatment, insecticides. Study revealed that majority of the trained farmers belong to higher economics status occupied positions in village organisations as against untrained farmers who did not. It was found that use of inter-personal sources of farm information, majority of the trained farmers used more frequently as compared to the untrained farmers.

Ranukaradhya (1971) coroborates the findings while analysing the impact of institutional training programme in Karnataka, where he found significant rise in the level of knowledge and adoption of farmer after they underwent institutional training at farmers Training Centre.

Sukumaran (1972) found that adoption of package of practices of high yielding varieties of paddy was higher among trained farmers than among untrained ones. He reported that the lowest, highest and average scores of the trained farmers were significantly higher than those of matched untrained farmers.

Krishna and Jalihal (1976) found that trained farmer had higher adoption of hybrid maize practices than untrained farmers. Majority of trained farmers (70 per cent) had higher adoption in seed and sowing practices as against only 44 percent in the untrained group. A significant association was found between training and their yield level hybrid maize.

Shashikumar (1978) found that the trained farm women had significantly higher knowledge and favourable attitude in adoption of improved practices may be ragi cultivation. This difference in adoption behaviour may be attributed to training imparted to farm women.

Chandaji (1980) in her experimental study on farm women revealed a positive influence in the participants in relation to adoption of simple low cost and no cost practices in home management and nutrition aspects.

Kumar and Bhalla (1990) stated that farm women had involvement in planting, weeding, harvesting and post-harvest activities in almost all food crops and also played a prominent role in horticultural productivity.

Ingle et al (1990) reported that tribal women were involved on an average 5.31 hours per day in agricultural activities.

Chavannavar (1990) observed that farm women had very poor involvement in plant protection measures except bringing water to the sites for spraying.

Panda (1986) found that tribal women were involved in decision making only with respect to buying food materials for the family and selling vegetables in the market. They had no role in important decisions of the family and society.

Saraswati (1987) stated that decisions regarding crops, lease, sale and purchase of land were taken jointly. In the few women headed families farm women took decisions in other matters. Decisions regarding home consumption or selling of livestock produce were also made by women.

NRCWA (2003-2004) observed that individual role of women in decision making on various crop production issues was found to be very low and almost negligible. Men dominated the decision making on various components of crop production. However, the decision on weeding / inter cultural operations were taken both by men and women jointly with mutual discussion. Decision on domestic issues was done solely by women. But they had major role in decision making in dairy issues.

Annual Report of NRCWA 2003-2004 revealed that, the intense involvement of tribal in agriculture is very much evident from the research studies and it suggests changes in the structural and functional aspects of the organizations associated with agriculture. The service providers in this sector must consider so far as agricultural development in tribal areas is concerned. Care should be taken for their capacity building for effective management of agricultural activities.

Chottopadhyay (2005) revealed that empowerment is multi dimensional refers to the expansion of freedom of choice and action in all spheres (social, economic and political) to shape one's life. It also implies control over resources and decisions. For women such freedom is often severely curtailed due to gender inequality. For empowerment, women require a set of assets and capabilities at the individual level such as health, education and employment at collective level such as ability of organize and mobilize to take action to solve their problems.

Rowlands (1998) divided empowerment into three dimensions, i.e, personal empowerment (development of individual consciousness and confidence to confront oppressions), relational empowerment (increase ability of negotiate and influence rational decisions) and collective empowerment (collective action at local or higher level to change oppressive social structure).

Ray (1995) Providing formal education to the members of the family reflects progressive outlook of the farmer. More of formal education in the family also provides better opportunity to the farmer to be in contact with the outside world and hence absorb new ideas and information.

Narwal, Dixit and Dahiya (1991) Caste showed a positive and significant correlation with attitude and knowledge of farmers towards Buffalo management practices.

Bardhan (1978) The participation rates for women vary significantly with caste. The women of lower caste participated more in agricultural jobs than those of higher caste.

Koley (1992) The participation rates for women vary significantly with caste. The women of lower caste participated more in agricultural jobs than those of higher caste.

Kur (1988) Per capita income of women was found to be negatively and significantly related with participation and time spent in agriculture.

Punia (1988) Per capita income of women was found to be negatively and significantly related with participation and time spent in agriculture.

Patel *et al.*(1995) There was also a significant relationship between annual family income and participation of rural women in household tasks, Agricultural operation and Animal husbandry activities. Information use index refers to the communication channels like impersonal cosmopolite channels for mass and group contact; personal cosmopolite channels for individual contact and personal localite channels for individual contact. These are used for collection of new informations and techniques; learning new skills and obtaining new package of practices at the desired level to get higher production. In case of impersonal cosmopolite, channels of communication are from outside the social system of the receiver and at the same time no personal face-to-face contact is involved. Personal cosmopolite channels are the channels of communication from outside the social system of the receiver (Extension agents of various organisations). Personal localite channels are the local leaders and local people who belong to the receivers' own social system

Aspiration are goal statements, encouraging future level of achievement. English and English (1958) defined aspiration as the standard by which a person judges his own performance as a success or failure or as being up to what he expects of himself. It is expected that the more progressive farmers will have higher level of aspiration. According to Haller (1968) an aspiration usually refers to a persons, or a group of persons' orientation towards goal'. Goals can vary in kind and are usually described with reference to a particular social status or status attribute (occupation, income, education, residence and so on).

Tripathi (1994) Management orientation was negatively and significantly correlated with overall employment status of rural women.

Kunzru (1994) Management orientation was negatively and significantly correlated with overall employment status of rural women.

6.6 PERCEIVED TRAINING CONSTRAINTS AND EXOGENOUS VARIABLES

Sinha and Sohal (1970) Mentioned that trained farmers bring about visible all round improvement in their farm organisations, through adoption of profitable cropping pattern r high yielding varieties of crops/ balanced use of fertilizers timely and proper application of pesticides and improved work methods. Their farms act as demonstration centres for other farmers. The training programme thus had a great multiple effect.

Sharma and Murthy (1971) observed that both trained and untrained farmers as well as Progressive farmers recognized the need for training in plant protection and use of manures, fertilizers and improved seek is Progressive farmers wanted only one training exposure, but non-progressive as well as small farmers definitely preferred more than one exposure. They have further observed. that small and medium farmer need full financial assistance for attending training, while big farmers did not demand it as a pre-condition for attending trainings. more emphasis was laid on field trails, visits to method and result demonstrations practical, rather than theoretical presentation were preferred .

Sinha and Verma (1977) inferred that farmer training programme can be made effective if field trials are shown to trainees, the training is made skill-development oriented. In case of lectures, the lecture should not be distributed before it is delivered and judicious use of audio- visual aid should be made to supplement presentation of the ideas.

Vanlataiah (1977) found that experimental group had significantly higher knowledge in modern agricultural technology and practices. They had favourable attitude towards improved agricultural

Jain et al.,(1992) in Hissar , the involvement of women was significantly greater ($P < 0.05$) than that of men in all operations except chaffing of fodder,irrespective of socio-economic status,men and women respectively devoting an average of 1.2 and 5.5 hours/day to animal husbandry activities.

Aspinall (1994) reported that in Turkey women are responsible for milking of Animals. They may assist with lambing and calving, cleaning animal houses and feeding stock.

Pitamber and Osama (1994) In northern Sudan, the women specified their need to engage in poultry and goat rearing activities as a method for income earning.

Patel *et al.*(1994) During the peak period of agricultural activities in Gujarat, average daily time spent by rural women in agricultural activities was 6.97 hours; 2.51 hours were spent in each of both household and animal husbandry activities.

Flaba (1997) Women were aware of the effects of animal disease and poor nutrition on animal productivity, effects they observed during daily milking. In general, women are more sympathetic than men in the treatment of animals.

Shooremi *et at.* (1997) Rural women of Nigeria are encumbered with many domestic responsibilities which shortens the time available to them to invest in livestock activities. They generally rear the small animals because they believe that keeping them is less hazardous than keeping the large animals.

Ghosh (1995) Time is the best teacher of our life. An individual enriched with several practical experiences and gainful knowledges overtime. These guerdons from time lead to an individual to enter into the decision making process.

Kauar and Punia, (1988); Moktan, (1997) It's demerit is that an individual lost the capacity of physical labour with age. Age is negatively and significantly correlated with physical participation of women in farming.

Beal and Sibley (1967) That the individual's ability to read and write and the amount of format education he possesses will affect the manner in which the individual gathers data and relates himself to his environment.

Khandekar and Khandekar (1995) revealed that opinion leaders were the most important source of information on Animal husbandry practices for rural women. Mass media exposure and contact with extension agents were found to be significantly associated with women's extent of participation in income-generating activities, in Bangladesh .

(Islam *et al.*, 1996). revealed that opinion leaders were the most important source of information on Animal husbandry practices for rural women. Mass media exposure and contact with extension agents were found to be significantly associated with women's extent of participation in income-generating activities, in Bangladesh .

Tripathi *et al.*,(1994)High and low level of aspiration are to indicate relative level of goal specification. Level of aspiration of rural women had exerted the greatest direct effect on productivity of dairy animals.

Samanta (1967) defined management orientation as the degree to which a farmer is oriented towards scientific management comprising planning, production and marketing functions of the farm. according to Yang (1980)Management in farming situation , means how well the farmer organises and utilises the resources at his disposal to obtain a good produce and a good price by intelligent marketing.

Tripathi *et al* (1994)Management orientation of rural women had exerted the greatest total indirect effect on productivity of diary animals. Management orientation was negatively and significantly correlated with overall employment status of rural women.

Tripathi(1994)Management orientation was negatively and significantly correlated with overall employment status of rural women.

Kunzru(1994) Management orientation was negatively and significantly correlated with overall employment status of rural women.

Tripathi (1994). Management orientation was negatively and significantly correlated with overall employment status of rural women.

Stoner (1988) Decision making is the process of developing and selecting a course of action to solve specific problem. It is the basic of all activities. People at all levels must constantly make decisions and solve problems and every action of an individual is the result of conscious or unconscious decisions arrived at by him.

Malone (1958) Rural women of farm families have to involve them in decision making process regarding different farm (agriculture, animal rearing, poultry rearing and fish farming) related activities and financial affairs in different enterprises to maximise their family income. Decision making is a mental process of reasoning to search out the best alternatives

for problem solving. Rural women have to bear responsibilities of domestic chores; child care; different farm related activities; arranging savings; availability and repayment of loans and purchasing and selling of different inputs and outputs respectively and confronts adverse situations and decides what actions to take. Decision making is the heart of firm management.

Marketing of products both output and input play a crucial role in a production system. Agriculture and allied farming activities are not the exception. Farm women have to decide what to buy, when and where to buy, how much to buy and how to buy along with what to sell, where to sell, when to sell, how much sell and how to sell.

Arya (1964) The younger group of male family heads expected their female counterparts to involve more in decision-making but as age of the male head advances, there was a greater tendency to consult sons and hence importance of female members decreased. Male family heads belonging to the category non leaders relied more upon female member when they had to take decision regarding Agricultural marketing and sale or purchase of land.

Garg (1966) Considering mother-in-law, daughter-in-law pairs in farm families, the mother-in-law was expected to do more decision making tasks alone. On the other hand the daughter-in-law was expected to do more of physical tasks (relating to home as well as farm) and less decision making tasks.

Zepeda *et al.* (1977) indicated that while couples exhibit a high degree of co-operation, share goals', and make long term decisions jointly, they have different preferences and different spheres of influence and decision-making on the farm. This points to a cooperative model of decision making behaviour. Factors that most influenced decision-making were age, debt load and wives' off-farm income.

Singhal (1986) Rural women are facing constraints regarding decision making and it is mainly due to male dominating social structure. The men were dominant decision makers (51 per cent) followed by joint decision (43 per cent) and alone women (6 per cent). The decision parameters for the study were buying and selling of farm and home products, legal matters, education, religious matters, financial matters and health care.

Monjal (1986) Rural women are facing constraints regarding decision making and it is mainly due to male dominating social structure. The men

were dominant decision makers (51 per cent) followed by joint decision (43 per cent) and alone women (6 per cent). The decision parameters for the study were buying and selling of farm and home products, legal matters, education, religious matters, financial matters and health care.

Women are found to be the custodians of family income. They have controlled in day-to-day expenditure items while expenditure on larger items are decided by their husbands on jointly among them. Decision-making in other important issues for the household is also usually made by men in Thailand (Benchawan *et al.*, 1988).

Zend(1990) Housewives were involved in agriculture related work and task performing to some extent in farming. However, their involvement was highest in religious decisions, followed by savings and investment of farm as well as in home.

Harode(1990). Housewives were involved in agriculture related work and task performing to some extent in farming. However, their involvement was highest in religious decisions, followed by savings and investment of farm as well as in home.

Banda (1991) Wives had an important role in the decision-making process that was not a result of the matrilineal social organization. Women often initiated and continued to shape ideas, which usually formed the basis for household decision-making. Socially, however, the final decision was often attributed to the male as head of the household. But where the activity involved generated income, the male tended to have a stronger say on decision-making mainly in relation to the expenditure of funds in Malawi.

Koley (1992) reported that participation of farm women in decision making relation to farm operation was very low whereas in economic aspects like farm, surplus, savings, repayment of loans, participation is fairly good. Generally, decisions regarding the produce (milk) is with women and purchase or sale of animals is decided by men. Tribal women have more say in decision making, amongst poor families most decisions are joint, while women from families with commercial dairy operations have no involvement.

Rangnekare *al*, (1992) reported that participation of farm women in decision making relation to farm operation was very low whereas in economic aspects like farm, surplus, savings, repayment of loans,

participation is fairly good. Generally, decisions regarding the produce (milk) is with women and purchase or sale of animals is decided by men. Tribal women have more say in decision making, amongst poor families most decisions are joint, while women from families with commercial dairy operations have no involvement.

Thangvelu *et al.* (1992) reported that in Malaysia main responsibility falls on women in livestock production. Although they are heavily involved in animal production work they are not in the forefront of animal production due to socio-cultural, finance and educational constraints : decisions are undertaken by men; obtaining credit requires collateral, but most property is restricted under a male's name, restricting financial assistance for women; and the participation of women in training is still low. Improvement needs to be made to increase women's involvement in training and education and their access to financial assistance.

Eswaram *et al.* (1998) reported that problems encountered by farm women vary from region to region, cultural attitudes and status of women. The main problems are non availability of water, lack of assistance, inadequate income and lack of time saving equipment, *etc.*

Amudha and Veerabhadraiah (2000) recorded that the main problems of rural women in poultry rearing are lack of knowledge about improved practices and disease control measures, poultry diseases, higher feed cost and low *egg* prices, lack of storage facilities for eggs, poultry farmers are dependent on middle men to get poultry fed and marketing their eggs, absence of remunerative prices, low *egg* consumption, lack of export facilities and inadequate capital.

Human Development Report (1995) Poverty has a women's face, out of 1.3 billion people in poverty 70 percent are women.

National Perspective Plan for Women (1988-2000) highlighted that there is continued inequality and vulnerability of women in all economic, social, political, educational, health care, nutrition and legal sectors.

Sapru (1989) observed that women are not only economically dependent but also politically and legally powerless.

Tripathi (2001) revealed that, less use of institutionalized sources of information by rural women may be due to their inability to spare working hours to seek new knowledge and non-accessibility to these sources.

According to Sinha (2004) women farmers' access to resources were constrained by cultural, traditional and sociological factors. Traditional inheritance and land tenure laws limit women's ownership and use of land. Banks and credit associations are less inclined to give credit to women without property land rights and without collateral security. Little extension services are targeted specially at rural women.

Carr (1985) opined that limited impact of new technologies on rural women was mainly due to the factors like neglect by the extension workers, exclusion from the participation in the developmental process, lack of authority & absence of gender appropriate technology.

Abraham (2003) women workers face several constraints and their lack of access to productive inputs such as raw materials; technology, training and market were major impediments. Women in rural societies do not have the control over the resources. Due to privatization and lack of awareness of technical skills, women are thrown out of the industries.

Goswami, Challa and Gawande (2004) revealed that, role of women was important in areas like purchase and sale of land, selection of crop activities and varieties, manures and fertilizes, time of inter culture, time of harvesting, animal care, quantity required for family consumption and storage of farm produce. Women were also consulted by their counterparts in deciding the leasing in and leasing out of land, purchase and sale of farm machinery, allocation of area under different activities, selection of manures and fertilizer to be used, time of transplanting, time of inter culture and marketing of live stock produce. It was noticed that the role of women in decision making was not prominent in areas like construction of farm buildings, use of plant protection measures, determining means of irrigation and grading of farm produce for marketing.

Parichha and Das (1997) revealed that farm women were not consulted for final decisions areas of labour payment, employment of labour, plant protection, inter cultural practices, application of fertilizer, and selection variety. Their role was visible in final decision making in areas of transplanting, weeding, seed sowing, irrigation selection of crop and land

preparation. Only 4.35% of the respondents took independent decision in transplanting and 13.05% in weeding. But farm women took independent decision regarding storage and preservation of seeds as well as food grains.

Mohanty and Samantray (1997) observed that, decisions related to food, its procurement and cooking were generally taken by house wives. Decisions related to clothing were taken jointly. A majority of health related decisions

Abraham (2003) identified that, absence of purposeful human resource development adverse implications of technological growth for women and segregation of labour market were the main reasons for low participation of women.

Kamala and Raju (2003) revealed that financial problem, accessibility of work place and improper marketing facility are major problems faces by farm women for managing enterprises. The suggestion for empowerment was easy availability of credit for women and marketing facilities in each village for produce.

Hossain and Mishra (2002) in one tribal women study in Koraput district of Orissa suggested that, in spite of several constraints like lack of knowledge and conservative attitude of the society, there is an urgent need to involve women in developmental mainstream through trainings on kitchen gardening, goat rearing, cattle management, mushroom cultivation etc.

Ray (1999) found that contribution of rural women in both household and agricultural activities is significant. However, their contribution remains unrecognized mainly because of their inferior status in rural society.

Abrabam (2003) stated that women constitute more than 50 percent of the population; the step to empower women is to make them literate and free from economic exploitation and oppression. In order to fight against the socially constructed gender bias, collective strength of empowered women is needed.

Aspinall (1994) reported that in Turkey women are responsible for milking of Animals. They may assist with lambing and calving, cleaning animal houses and feeding stock.

Arya(1964) The younger group of male family heads expected their female counterparts to involve more in decision-making but as age of the male head advances, there was a greater tendency to consult sons and hence

importance of female members decreased. Male family heads belonging to the category non leaders relied more upon female member when they had to take decision regarding Agricultural marketing and sale or purchase of land.

Singhal (1986) Rural women are facing constraints regarding decision making and it is mainly due to male dominating social structure. The men were dominant decision makers (51 per cent) followed by joint decision (43 per cent) and alone women (6 per cent). The decision parameters for the study were buying and selling of farm and home products, legal matters, education, religious matters, financial matters and health care.

Monjal(1986) Rural women are facing constraints regarding decision making and it is mainly due to male dominating social structure. The men were dominant decision makers (51 per cent) followed by joint decision (43 per cent) and alone women (6 per cent). The decision parameters for the study were buying and selling of farm and home products, legal matters, education, religious matters, financial matters and health care.

Women are found to be the custodians of family income. They have controlled in day-to-day expenditure items while expenditure on larger items are decided by their husbands on jointly among them. Decision-making in other important issues for the household is also usually made by men in Thailand (Benchawan *et al.*, 1988).

Zend (1990) Housewives were involved in agriculture related work and task performing to some extent in farming. However, their involvement was highest in religious decisions, followed by savings and investment of farm as well as in home.

Harode (1990). Housewives were involved in agriculture related work and task performing to some extent in farming. However, their involvement was highest in religious decisions, followed by savings and investment of farm as well as in home.

Banda (1991) Wives had an important role in the decision-making process that was not a result of the matrilineal social organization. Women often initiated and continued to shape ideas, which usually formed the basis for household decision-making. Socially, however, the final decision was often attributed to the male as head of the household. But where the activity involved generated income, the male tended to have a stronger say on decision-making mainly in relation to the expenditure of funds in Malawi.

Several factors are held responsible to create problems among rural women in entrepreneurship. The kind of socialisation (male dominance) they perceive from their childhood restrict them from acquiring some traits such as self confidence, need for achievement, inclination to take risk, independent outlook which are essential for entrepreneurship.

Acheampong (1992) In the Ghanaian small family farm, women are the major tillers of the land. They make up an important part of the labour force, but their full potential remains unrealised. Women have few rights, are generally denied credit, extension assistance and training, factors which contribute to low food production and malnutrition.

Eswaram *et al.* (1998) reported that problems encountered by farm women vary from region to region, cultural attitudes and status of women. The main problems are non availability of water, lack of assistance, inadequate income and lack of time saving equipment, *etc.*

Amudha(2000) recorded that the main problems of rural women in poultry rearing are lack of knowledge about improved practices and disease control measures, poultry diseases, higher feed cost and low *egg* prices, lack of storage facilities for eggs, poultry farmers are dependent on middle men to get poultry fed and marketing their eggs, absence of remunerative prices, low *egg* consumption, lack of export facilities and inadequate capital.

Veerabhadraiah (2000) recorded that the main problems of rural women in poultry rearing are lack of knowledge about improved practices and disease control measures, poultry diseases, higher feed cost and low *egg* prices, lack of storage facilities for eggs, poultry farmers are dependent on middle men to get poultry fed and marketing their eggs, absence of remunerative prices, low *egg* consumption, lack of export facilities and inadequate capital.

Roy (1992) In the theory of income determination, investment means strictly expenditure on capital goods. In this sense, it denotes addition to the capital stock of a firm or economy, once one has allowed for replacement of capital which is scrapped. Investment may be divided into i) fixed capital, ii) work in progress, and iii) stocks. Investible surplus can be defined by calculating several factors. It is the subtraction of net income and loan overdue, interest and consumption expenditure.