CHAPTER - I

INTRODUCTION

Decision-making and accurate performance of all activities helps in making an enterprise more viable, feasible and profitable. Before performing any operation task a person thinks over various options available to him/her and selects only those which are simple, profitable, compatible and relatively better. If a person before implementing a task also plans and decides about various activities, can produce excellent results.

But in case of agriculture, due to gender bias, farm women, a significant contributor in various activities is being kept away from the role of decision maker.

Agriculture and allied sectors are unique because of their diversity and location specific requirements, decussating adaptation of technologies to a range of agro-ecological conditions. Women constitute almost half of our country's population and have been the major components of the working force since from the beginning of agriculture. Their contribution to the economic growth has been quite substantial. Farm women play many roles inside as well as outside the home. She spends about 304 days of her life span only in the Kitchen annually, which remains unaccounted in the national income estimates. Farm women have always worked along with men in fields and have helped them in other vocation such as handicrafts, small scale cottage industries etc. One must therefore not to overlook the major role played but the women in an agricultural setting where the distinction between farm and house work gets blurred. Even the household work by women which accounts for 40 per cent of our gross national product and involves much drudgery is totally left out of economic account. Though women have been playing major part in agriculture, her role in the decision-making ability related agricultural activities is seen to be minimal. But history is proof to show that women if given an opportunity can be very effective agents of change for a better home and better society.

Women contribute a major share to the farm labour, all over the world, especially in the developing countries like India. According to the 2011 census, the percentage share of farmers and agricultural labourers in the rural population of India are 34 per cent and 41.4 per cent respectively in which the share of women cultivators and women agricultural labourers are 10.3 per cent and 17.7 per cent, respectively.

The role of women has always been a multi-dimensional and significant as women have performed well in case of agricultural activities, domestic activities, marketing activities as far as labour requirement is considered. The decision-making ability is an important segment of every household because the functioning of family resource management depends on the efficiency of decision-making progress. So, women involvement in decision-making ability has been of great importance because women play an important role in every household activity and gives excellent performance most of the time. It may be related to household activity or for the decision-making at household or any other level. In rural society, there has been noticed a considerable fluctuation regarding the decision-making power of women. The state like Punjab and Haryana show positive role of women in decision-making ability in many of the families. But it has become insignificant and negligible in rural families due to illiteracy of women. The contribution of rural women has not taken seriously because it is considered very disgraceful to accept the decision of women. This is because the abilities of women have been neglected and undermined as the responsibility of forming the policies is always regarded the job of male traditionally. Haw far, the role of women in decision-making ability has been noticed in positive manner is the major concern of our study.

The role of farm women in decision making abilityin agriculture in Madhya Pradesh has not been explored by many researchers. To examine the role of farm women in the decision-making ability in growing of crop in agriculture, different areas of decision making were identified for the present study, considering their importance for agricultural development.

Objectives of the Study:

1. To study the socio personal, socio economic and communication attribute of farm women.
2. To measure the decision making ability of farm women and their participation in various agriculture activities.
3. To analyze the association of socio personal, Socio economic and communication attribute of decision making ability of farm women and their participation in various agriculture activities.
4. To determine the constraints and suggestions in relation to participation of farm women in various agriculture activities.

Scope and importance of the study:

The study was confined to Kasrawad block of Khargone district and 06 selected villages. The findings of the study will be applicable to other areas where similar condition exists. Researches done in the field of decision-making of farm women are very limited. It is hoped that this study will provide proper guidance in identifying steps that could be taken to improve decision making of farm women, which in turn can accelerate and stabilize planned change in rural society. The knowledge of the findings of this research may also serve as a basis for future studies, who are interested in deeper analysis of decision making of farm women. The study will also provide the knowledge regarding the problems reported by farm women related to decision making, it would serve as guideline in modifying future development activities**.**

Limitation of the study:

The study was confined to 06 villages and 120 farm women and hence the generalization of the study is limited only to the women farmers and the area under study. The main basis for data as the responses of the respondents. However, all possible efforts were made to extract information from the respondents on the basis of structured interview schedule. And the data were based on the recall ability of the respondents in reporting factual information. Only few variables have been taken for study.

Organization of the study:-

This investigation has been presented in five chapters, Chapter – I attempts to focus the need of the study with background, objective, importance, scope and limitations of the study. Chapter – II highlights the review of literature related to the study. Chapter – III elaborates the materials and method, sampling and technique of data collection & its analysis and operationalization of variables with their measurement. Chapter – IV deals with the results and discussion of the data and the last chapter is concerned with the summary, conclusion, and suggestions of the study.

CHAPTER-II

REVIEW OF LITERATURE

A comprehensive review of literature is an essential part of any scientific investigation. Reviews constitute an important source of information and helps in clearing some concepts. It is well known fact that scientific approach in case of social sciences has limitations as these are not very much authoritarian and is less developed in technique in contrast to their use. Social science cannot be put to experimentation as much as the physical sciences. Also, there is great subjectivity and judgment which is weak on account of the temporary nature of the problems. Hence, after the problem has been decided upon, it becomes necessary to look into the previous work done on the subject or topic through the review of literature. Review of literature provides useful cause and effect relationship and helpful suggestions for significant investigation. Hence, in this chapter an attempt has been made to assimilate the previous works within the frame work of present study, which are helpful in interpretation of results obtained during the research on the basis of the objectives of the study. In accordance with objectives of study the literature has been reviewed and presented under following subheads.

1. Socio personal, socio economic and communication attribute of farm women.
2. Decision making ability of farm women and their participation in various agriculture activities.
3. Association of socio personal, socio economic and communication attribute of decision making ability of farm women and their participation in various agriculture activities.
4. Constraints and suggestions in relation to participation of farm women in various agriculture activities.

1. Socio personal, economic and communication attribute of farm women.

Age

Warkade (2010) reported that 42.50 per cent respondents belonged to middle age group, 37.50 per cent young age and 20.00 per cent belonged to old age group.

Gondaliya (2012) indicated that slightly less than three-fourth (70.00 per cent) of farm women belonged to middle age group, followed by young age (25.83 per cent) and old age (04.17 per cent) groups, respectively.

Chayal *et al.* (2013) observed that majority 52.50 per cent of the farm women fell within the middle age group. While 30.83 per cent and 16.67 per cent of them belonged to low and high age group, respectively.

Singh (2013) observed that out of the total 110 farm women, 45.46 per cent farm women belonged to middle age group, 36.36 per cent young age and 18.18 per cent belonged to old age group.

Chouhan *et al.* (2014) reported that majority (69.17 per cent) of the farm women belonged to middle age group followed by old age group 15.83 per cent and young age group 15.00 per cent.

Pal and Haldar (2016) shows that 57% of the woman respondents and 62% of the man respondents belonged to young age (20-35 yrs.). Therefore, young women as well as young men in the age group between 20 to 35 years participated in farming activities.

Srichandan (2016) observed that out of 120 farm women 51.67 percent were young, 36.67 percent were middle aged women and 11.66 percent were older ones.

Patel *et al.* (2017) indicate that majority (73.50 %) of the farm women belonged to middle age group followed by 14 per cent with young age and 12.50 per cent were from old age group.

Education

Warkade (2010) reported that maximum tribal farm women (37.50 per cent) were illiterate, 10.00 per cent can read and write, 26.66 per cent were educated up to primary level, 17.50 per cent were educated up to middle school level and 08.34 per cent were educated up to high school level.

Gondaliya (2012) observed that slightly more than two-fifth (44.14 per cent) of the farm women had obtained primary level of education, followed by illiterate (35.00 per cent) and secondary level of education (09.16 per cent). While, 07.50 per cent of the respondents had higher secondary level of education and only 04.17 per cent of them had college level education.

Bhairve (2013) reported that a higher percentage of the farm women (38.33 per cent) were of illiterate group followed by primary education group 32.50 per cent and middle and above education group 29.17 per cent, respectively.

Singh (2013) reported that out of the total 110 farm women, 03.64 per cent were illiterate, 30.92 percent were both can only read and can write only, 18.18 per cent were educated primary, 18.18 per cent were educated middle and 25.45 per cent were educated higher secondary school and 03.63 percent were educated college.

Chouhan *et al.* (2014) reported that two fourth (52.50 per cent) of the farm women were illiterate followed by primary (21.67 per cent), middle (14.17 per cent) and read and write (06.66 per cent) education level.

Pal and Haldar (2016) indicates that literacy among the responding women was 56% and it was 72% among the responding men. So, mostly literate women and men respondents participated in farming activities. it may be assumed that education among the rural women varies with the socio-economic status of the families. Furthermore, percentage of literate men was greater than the percentage of literate women. It is established that higher levels of education are indeed associated with higher WPR for male, both in rural and urban areas. Both men and women labours.

Srichandan (2016) revealed that 06.68 per cent women were illiterate, where as 17.50 percent women were functionally illiterate, 25.00 per cent women were having primary education and 24.00 per cent were having middle education which indicates the school dropout rate is high. The percentage further decreases in higher secondary and college i.e. 12.50 and 09.16 respectively which indicates the educational empowerment was comparatively low.

Patel *et al.* (2017) revealed that 31 per cent of the farm women were educated up to primary level followed by 28.50 per cent of them were educated up to secondary level, 21.50 per cent of them were illiterate, 16.50 per cent of them had completed their higher secondary education and 2.50 per cent were graduate.This may be due to the availability of primary school and secondary school at village level and higher secondary school at near by villages.

Caste

Pal and Haldar (2016) Found majority 70% belonged to Scheduled caste and Scheduled tribe (Hindu) and then 28% to OBC (Hindu); and therefore, most woman respondents were from Hindu Scheduled caste and Scheduled tribe ($\chi 2 = 184.30$, df = 4, $P < 0.0001$). Among the man respondents sampled in this study, 64% belonged to Scheduled caste and Scheduled tribe (Hindu) and then 25% to OBC (Hindu); and

therefore, most man respondents were from Hindu Scheduled caste and Scheduled tribe and Hindu OBC.

Patel *et al.* (2017) found that 44 per cent of the dairy farm women were from SEBC, followed by 33.50 per cent were from general category, 16.50 per cent were from ST category and only 6 per cent were from SC category. It can be concluded that majority (75 %) of the farm women were belonged general and SEBC category.

Size of Family

Rathod *et al.* (2011) reported that majority of farm women lived in large family (65 per cent) while 35.00 per cent lived in medium size of family.

Gondaliya (2012) reported that more than two-third (67.50 per cent) of the farm women belonged to large size of family and rest 32.50 per cent of farm women belonged to small size of family.

Bhairve (2013) reported that higher percentage of the farm women 38.33 per cent found to medium size of family group followed by large size of family group 32.50 per cent and small size of family group 29.17 per cent respectively.

Singh (2013) reported that 70.91 percent of the farm women belonged to large size family and remaining 29.09 per cent were of medium size family.

Chouhan *et al.* (2014) reported that slightly more than two fourth (59.16 per cent) of the farm women were having medium family size 21.67 per cent farm women were having large size family and 19.17 per cent of them having small size of family.

Pal and Haldar (2016) shows that among the woman households, 67% belonged to nuclear families and 33% belonged to joint families. On the other hand, among the man households, 77% belonged to nuclear families and 23% from joint families.

Srichandan (2016) indicated about 55.84 percent of small family and 44.16 percent of larger family from 120 respondents.

Patel *et al.* (2017) indicate that majority (41.50%) of the farm women belonged to the large sized families i.e. above 7 members, while 38 per cent of them belonged to medium sized families having 5 to 6 members and only 20.50 per cent of the farm women belonged to small sized families having up to 4 members. It can be concluded

from above table-6 that majority (41.50%) of the farm women were having large size family.

Annual Income

Warkade (2010) reported that 26.66 per cent respondents were from below poverty line group, 53.34 per cent respondents were from low income group, 15.00 per cent respondents were from medium income group and 05.00 per cent respondents were from high level income group.

Rathod *et al.* (2011) reported that 60.83 per cent of the families had low income followed by medium income category (35.83 per cent) and high income group (03.34 per cent).

Gondaliya (2012) reported that slightly more than three-fourth (75.83 per cent) of the respondents had low (up to Rs 50,000/-) annual income, followed by 20.84 per cent of them were having medium (between Rs. 50,001 to Rs. 1, 00,000/-) annual income and 03.33 per cent of the respondents had high (above Rs. 1, 00,001/-) annual income.

Bhairve (2013) reported that higher percentage of the farm women 36.67 per cent were of medium annual income group followed by low annual income group 32.50 per cent and high annual income group 30.83 per cent,respectively.

Singh (2013) observed that out of total 110 farm women 48.18 per cent of the respondents were medium income group, 33.64 per cent of the respondents were from low income group and 18.18 percent respondents were from high level income group.

Shrichandan (2016) indicated that 43.34 per cent of farm families was having low income, 36.67 per cent of families was having medium income followed by 20.00 per cent of farm family having high income.

Patel *et al.* (2017) concluded that majority (72%) of the farm women belonged to low level of income (300000 rupees) group. The probable reason could be that most of the rural farm families from lower to middle class and their main source of income based on only agriculture and animal husbandry.

Farm size

Warkade (2010) reported that 26.66 per cent respondent had marginal land holding, 51.66 per cent had small land holding, 12.57 per cent had medium size land holding and only 09.16 per cent had big size of land holding.

Rathod *et al.* (2011) revealed that one third (33.33 per cent) farm women families had marginal land followed by small farmers (28.34 per cent). It was also observed that 20.83 per cent farm women were landless and 18.00 per cent were large farmers.

Chayal *et al.* (2013) observed that two fourth (50.84 per cent) of the farm women had medium size land holding. While 35.00 per cent and 14.17 per cent of them had small and large size of land holding, respectively.

Singh (2013) cleared that out of the total 105 farm women, 01.81 per cent had marginal land holding, 10.00 per cent had small land holding, 59.64 per cent had medium size land holding and 34.55 per cent of them had large size of land holding.

Chouhan *et al*. (2014) reported that majority (68.33 per cent) of the farm women were having marginal size land holding while 22.50 percent and 08.33 per cent were having small and semi-medium land holding and 0.84 per cent of the farm women had medium land holding.

Shrichandan (2016) reported that the farmers 01.67 per cent were big farmers, 10.83 per cent were medium farmers, and 35.00 per cent were small farmers followed by 22.50 per cent marginal ones.

Patel *et al.* (2017) found that the majority (53.50%) of the farm women respondents were with marginal land holding i.e. up to 1.00 hectare followed by 30.50 per cent with small land holding, 12.50 per cent with medium size of land holding and 2.50 per cent with landless farm women. Only 1 per cent of the respondents were large farmers i.e. with land holding above 4.00 hectare.

Farm mechanization

Ravindra (2012) in his study Farmers awareness of climate change and their adaptation. Farm resources were computed by considering the different resources like land, livestock, water, and material possession. Farm resources were found to be low among 52.00 per cent of farmers followed by high (40.00%) and medium (8.00%).

Mass media explore

Sharma (2006) revealed that majority of the respondents (62.50%) had regular mass media with agriculture supervisor (once in a fortnight) whereas half of the respondents met AAO once in a month.

Dashawant (2007) reported that cent per cent of the respondents have high mass media explore.

Anuj Kumar *et.al.* (2008) reported that across the systems majority (47.33%) of the IVLP farmers had medium mass media explore and 32.67 per cent had higher mass media explore. Majority (53.34%) of the IVLP farmers of irrigated agro eco-systems had higher mass media while most of the farmers of rain fed agro Eco-systems fell in medium (49.33%) and low (38.67%) mass media categories.

Parmar (2008) reported that a higher percentage of the beneficiaries (46.67%) had low contact mass media.

Doddamani (2010) reported that 36.47 per cent of respondents belonged to low mass media category followed by medium (35.29%) and high (28.24%) media explore categories, respectively.

Information seeking behaviour

Tripathi (2007) reported that majority of the farm women had medium categories in source of information.

Badodiya *et al.* (2008) found that majority of the farm women had medium categories in source of information.

Singh (2011) concluded that 38.89 per cent of the farm women belonged to medium, 32.64 per cent low and 28.47 high utilization of information sources categories.

Shiroya (2014) pointed out that majority (73.00 per cent) of the farm women had medium level of utilization of information sources whereas, slightly more than one fifth (21.00 per cent) and a few number (6.00 per cent) of them had low and high level of utilized information sources, respectively.

Decision making ability of farm women and their participation in various agriculture activities

FAO (2010) argued that however, since family structures for the majority of the households in the region are male-headed and patriarchal, one could infer that men generally control decision making, although in many situations, decisions are often made jointly.

Warkade (2010) observed that all the tribal farm women (100.00 per cent) were participating in the weeding and harvesting practices as compared to other activities in the farm operations, followed by sowing time of seed (85.00 per cent), grain storage (83.33 per cent), threshing (80.00 per cent), use of manures (76.66 per cent), quantity of seed (68.33 per cent), selection of crop (56.66 per cent), use of fertilizers (45.00 per cent), selection of varieties (43.33 per cent), seed treatment and marketing (40.00 per cent), irrigation (39.16per cent), plant protection measures(36.66 per cent) and field preparation (30.00 per cent) and that 44.16 per cent respondents had moderate role in decision making 35.00 per cent had low and 20.84 per cent had high role in decision making.

Yadav (2010) found in study that farm women performed a variety of agricultural operations and related activities. It is observed that majority of farm women found to high level of participation in agricultural activities i.e. 35.00 per cent followed by the medium participation 34.17 per cent and low participation 30.83 per cent in agricultural operation respectively.

Hussain *et al.* (2011) stated that, the traditional role of women farmers as a home works remained unaltered. Decision making pattern regarding farm affairs revealed it to be more or less male domain. Farm women showed low level of participation in household decision making.

Rathod *et al.* (2011) revealed that women performed activities like Milking (90 per cent), cleaning of animal sheds (89.16 per cent) and disposal of cow dung or preparation of cow dung cakes (86.66 per cent). The farm women participation was least in farm record maintenance (52.50 per cent) and getting loans or credits from the banks (49.16 per cent.

Gondaliya (2012) revealed that slight less than three-fourth (67.50 per cent) of the farm women had medium level participation. Whereas, 17.50 per cent and 15.00 per

cent of the respondents had high and low level of participation in decision making process, respectively.

Goudappa *et al.* (2012) revealed that a large percentage of the farm women participated in the decision–making process at awareness and initiating solutions for solving problems related to agricultural operations viz., hand weeding (80.00%), harvesting (75.83%), irrigation (74.16%), selling and buying the land and equipment (71.67%), land preparation and application of fertilizer (67.50% each), and also revealed revealed that comparatively larger percentages of farm women were noted for higher level of involvement in decisions related to land preparation (75.13%), irrigation(74.16%), application of fertilizer and pesticide (67.50% each), sowing (64.16%) and hand weeding (55.00%) respectively.

Sarma and Payeng (2012) concluded that most of the decisions related to feeding, management, and processing of surplus milk for product preparations were taken by farm women either independently or jointly with their spouses.

Singh and Srivastava (2012) concluded that most of the decisions related to livestock, household and allied activities were taken jointly by female members and their male counterpart at whole. However, the decisions related to selection of breed and health care practices were male dominated due to their technical knowledge. In household activities the decisions related to purchase of goods and construction etc. were male dominated rest of the activities like food, clothing, marriage and education was done by female members.

Nazir *et al.* (2013) reported that majority of the women were participated in sowing, harvesting and picking activities and most of the working women were doing work increase their family income.

Singh (2013) reported that most of the farm women (100 per cent) were participating in the weeding practices as compared to other activities in the farm operations followed by picking (85.00 per cent), grain storage (97.27 per cent), sowing time of seed (89.09 per cent), seed treatment (81.81 per cent), gap filling (80.00 per cent), plant protection measure (61.81 per cent), selection of seed (54.45 per cent), transportation (51.81 per cent), use of fertilizer (09.90 per cent), nursery management (43.63 per cent), use of manure (40.00 per cent), marketing (54.00 per cent) and land preparation (20.00 per cent). International Institute of Sustainable Development (IISD)

(2015) mentioned that farm women play an important role in raising poultry and small livestock such as goats, rabbits and pigs. They also feed and milk larger livestock. Their tasks vary from country to country: Latin American women are less involved in crop production than women in sub-Saharan Africa, but are largely responsible for small livestock.

Singh (2013) reported that out of the total 110 respondents, 45.46 per cent had medium role in decision making, 36.36 per cent had low and 18.18 per cent had high role in decision making.

Bhairve (2013) showed that higher percentage of the farm women 35.84 per cent performed overall medium decision followed by low decision 33.33 per cent and high decision 30.83 per cent respectively.

Balian (2014) concluded that only in purely domestic matters like decoration of house, purchase of domestic goods, making of chulla / chakki, marriage of children, etc. Farm women are given freedom to take their own decisions. But in matters related to children's education and occupation and money related matters they enjoy limited freedom.

Mihiret and Tadesse (2014) reported that most of the rural women did not have any role in decision making with regard to purchase /sale of farming implements, land preparation and determination of type and amount of chemicals (pesticide herbicide) used. Rural management decision making is quite minimum.

Pal and Haldar (2016) was observed that 20% of responding women had no participation in decision making in the area of farm production. In most cases (33.18%), responding women took joint decisions. Opinion was considered in 21.36% cases, opinion was sought in 12.27% cases and 13.18% respondents took decision independently, and observed that only 1.36% men respondents had no participation in decision making in the area of farm production. In most cases (33.18 %), responding men took joint decisions. Opinion was considered in 17.27% cases, opinion was sought in 8.18% cases and independent decision was taken in 40.00% cases. Therefore, in the case of men respondents there were significant variations among the types of decision making in relation to farm production. Production decisions and farm women's involvement in decision making process in agriculture field is quite minimal.

Chayal *et al.* (2013) also found that decisions on cropping pattern and marketing of produce were made solely by men. Although, decision making score was higher among the man respondents, woman respondents participated in decision making processes in the areas of crop and variety to be sown, sale of farm products and savings. From this studies it may be presumed that rural women have significant role in making decisions regarding to some farm activities. Moreover, decision making by rural woman varies with the farming activities. Similar results were also presented by Sharma *et al.* (2013).

Godara and Varsha (2017) found that majority of the respondent has not involved in decision related to purchase and sale of land. Only near about 29.7 per cent respondents were partially involved in taking decision in this activity. More than 91.6 per cent respondents had say no in the decision related to purchase and sale of machine in agricultural sector. It has also been found that only 0.7 per cent of the respondents were taking sole decision about the purchase and sale of seeds. 2.7 per cent respondents were partially involved in taking decision in this activity, only 4.6 per cent has accepted the fact that they have been able to convert their views into final decision in the District. Once again the role of women in taking decision on farm credit has been very low as only 8 per cent respondents have taken decision jointly. But in case of buying and sale of livestock, above 77.3 per cent decisions are taken jointly by men and women in the family. Above 77 per cent respondents were involved when major decisions regarding the purchase and sale of milk and milk products and purchasing feed for livestock are take into account.

Dudiand Meena (2017) revealed that the farm women participated in decision making process in each and every farm activities. The data indicated that the higher number of farm women (57.11%) were observed in low category of decision making followed by medium category of decision making with (27.74%) and high category of decision making (15.15%) also found that the more number of farm women in agricultural activities taken low decision making involvement. And also found that more number of farm women were found to have overall high level of participation in agricultural operationsi.e. 53.57 per cent followed by medium participation with 30.73 per cent and low participation of 15.70 per cent. Also found higher participation of farm women in agricultural activities. Further data revealed that the farm activities in which farm women obtained the highest score at high level of participation were weeding (mean score 2.52), selection of seed variety (mean score 2.23), harvesting (mean score 2.57), winnowing process (mean score 2.59), seed treatment (mean score 2.63), plant

protection (mean score 2.5), sowing (mean score 2.67), manure and fertilizer application (mean score 2.57), collection of harvested crops (mean score 2.38) and soil treatment (mean score 2.49). The activities in which farm women obtained the highest score at medium level of participation were grain storage (mean score 2.17), soil testing (mean score 2.27), threshing process (mean score 2.13), seed processing (mean score 2.17), irrigation management (mean score 2.13) and preparation of land (Mean Score 1.94). The activities in which farm women obtained the highest score at low level of participation was marketing (mean score 2.09) respectively.

Patel *et al.* (2017) indicate that 84 per cent and 75.50 per cent of the farm women took participation in decision about choosing the type and breed of milch animals, respectively. However, majority of them (71.50 % and 67%) of the farm women did not participation in decision about taking loan for purchase of milch animals and purchase of feed and fodder, respectively. The data further, shows that majority (79 % and 72.50 %) of the farm women participated in taking decision about purchase of improved/cross breed and culling of uneconomic animals, respectively. From above discussion it can be concluded that decisions regarding general aspects of dairy farming were taken jointly with family.

Association between profile of the farm women and their decision making abilities in various agriculture activities

Warkade (2010) concluded that age had significant association and influenced the role in decision making process related to agriculture operations, whereas education, family size, size of land holding, social participation, extension contact and annual income had non-significant association with decision making process of agricultural operations of the tribal farm women.

Gondaliya (2012) concluded that the independent variables viz. education, social participation, extension contact, land holding and annual income had positive and significant relation with the extent of participation decision making process by farm women in relation to agriculture activities, whereas age and size of family failed to show any co-relation.

Chayal *et al.* (2013) concluded that farm women are actively involved in agricultural operations but their involvement in decision making in agriculture is very poor. The study

also revealed that age, family income, land holding, education were the major factors that influenced the involvement of farm women in decision making process in agriculture.

Singh (2013) concluded that age, annual income and extension contact had significant association and influenced the role in decision making process related to agriculture operations.

Sharma *et al.* (2014) cleared that the higher number (58.33 per cent) of farm women were observed in low category of decision making process. Study further revealed that age, education, size of family, size of land holding, social participation, extension participation and information seeking behaviour factors had significantly influenced the participation and decision making pattern of farm women.

Pal and Haldar (2016) concluded that the farm women's participation in agricultural activities as well as decision-making were not satisfactory. Age of farm women was positively and significantly correlated with level of involvement of farm women in decision making. In rural families, size of the family, size of land holding, education level of rural women have significant influences on the involvement in decision-making.

Dudiand Meena (2017) revealed that out of all economic factors, only four factors, namely caste, socio-economic status, mass media exposure and Innovativeness (vales 0.212^{NS}, 0.113^{NS}, 0.108^{NS} and 0.137^{NS}) were found to non-significant. Study also revealed that socio-economicfactors, whose values were found to be positive and significant were age (1.338*), education (0.755*), size of family (0.966*), marital status (0.844*), size of land holding (2.370*), social participation (1.776*), extension participation (0.590*), information seeking behavior (1.865*), cosmopolitans (0.611*), economic motivation (0.878*), exposure to training (0.678*) and management orientation (0.790*) respectively. This clearly shows the influence of these characteristics on agricultural operations. On the other hand, in case of decision making pattern only two factors namely caste and marital status (values 0.023^{NS} and 0.213^{NS}) were found to be non-significant.

Godara and Varsha (2017) analyzed that women participation and selected variables have been directly related each another. The coefficients of all predictors are found negative and statistically significant. The largest beta coefficients -0.402 and -0.335 have been found and statistically significant in case of Husband income and Number of male workers in the family. It means that these variables make the strongest

unique contribution to explaining the women participation. The coefficient of age has been found negative and statistically significant at 1 per cent level of significance. The value of coefficient is -0.193 which can be describe as if age is increased by 1 per cent than women participation shall decrease by -0.193 per cent. The results show that the impact of education on rural women participation has found to be negative but statistically significant with negative sign. With higher education, women migrate from agricultural to industrial and services sector for better job opportunities. In the case of income, the results indicated that with the increasing of family income, women participation has been decreased in agricultural sector. Income has a statistically significant contribution in independent variable at 1 per cent level of significance. The result related to farm size explains that the relationship between women participation and farm size found to be statistically significant with beta -0.183.

Patel *et al.* (2017) fount that the variable age, education, caste, annual income, size of land holding, information seeking behaviour was highly significant at 5 % level with the decision making process of farm women, while size of family and occupation of the respondents was not significant with decision making process of farm women.

Constraints Faced and the Suggestions Made by the Farm Women in Decision Making Behaviour about Agriculture

Constraints

Warkade (2010) indicated that 71.66 percent respondents reported male dominance in decision making in agriculture operations, 65.00 per cent respondents had no knowledge about improved technology, 54.16 per cent respondents had lack of education, 48.33 per cent respondents had poor economic status of the family, 42.50 per cent respondents had no management of time for farm and home activities, 40.83 per cent respondents had lack of information about the solution to problem.

Yusuf *et al*. (2010) reported that majority of women farmers practice farming on a subsistence basis. They also reported that, vast majority 96.00 per cent claim that their productive potential is not maximized while 83.64 per cent encounter several socio-economic constraints among which were financial and socially- embedded constraints with (33.18 per cent and 87.27 per cent) responses, respectively.

Gondaliya (2012) reported that social/cultural norms (79.17 per cent), lack of self confidence in decision (75.00 per cent), dominance of other family members (69.17 per

cent), less contact with extension workers (60.00 per cent), lack of technical know-how (58.33 per cent), busy schedule due to house hold activities (50.83 per cent) and poor educational background (41.67 per cent) had the constraints faced by the farm women.

Khan *et al.* (2012) reported that lack of training, extension services, cultural constraints and financial problems emerged as a main problems encountered by farm women.

Chayal *et al.* (2013) reported that low self-confidence, lack of knowledge, belief that women are subordinate to male counterparts, illiteracy, poor access of to farm information were the major constraints perceived by farm women in decision making.

Singh (2013) indicated that 80.00 per cent respondents reported male dominance in decision making in vegetable operations, 70.90 per cent respondents were lack knowledge about improved technology, 55.45 per cent respondents were lack of education, 50.00 per cent respondents were poor economic status of the family, 49.09 per cent respondents were no management of time for farm and home activities, 42.72 per cent respondents were lack of information about the solution to problems.

Chouhan *et al.* (2014) reported that as far as constraints faced by farm women in decision making on vegetable cultivation is concerned, male dominance, no knowledge about improved technology and lack of education were the top most constraints reported by majority of the farm women. Also concluded that besides education, land holding, social participation, farm power, economic motivation, scientific orientation, market orientation and mass-media exposure, the constraints mentioned by the farm women may also be responsible for their medium level of participation in decision making on vegetable cultivation.

Suggestions

Devendra *et al.* (2010) suggested that in order to increase the role of farm woman in decision making for agricultural production, dairy and other allied activities of technical nature, it is necessary to equip them with latest information so that they can play a vital role in decision making in the family.

Warkade (2010) suggested that contact of tribal farm women with extension workers and need-based seasonal training programme should be organized to increase

skill and knowledge about agricultural technology. Campaigns for exposure to new ideas should be increased for making the on-going programme successful.

Gondaliya (2012) cleared that farm women suggested that more technical guidance regarding scientific farming should be given to farm women (81.67 per cent), training should be imparted at village level (66.67 per cent), more women exposure visit should be arranged (62.50 per cent), policy decision should be made for women empowerment (51.67 per cent), more women extension workers should be recruited (30.83 per cent) and Government should initiate policies to motivate farm women (29.17 per cent).

Chayal *et al.* (2013) recommended that to improve the productivity of agriculture involvement of farm women in decision making needed to increase. This requires capacity building of farm women regarding latest technical know-how, agriculture information acquisition and processing.

Singh (2013) suggested that level of education, size of land holding and social participation of farm women should be take more decision for decision making. Therefore, efforts may be directed to organize training in such areas by extension workers or agriculture and social welfare department and NGOs. This will help to increase knowledge and skill of farm women. It is suggested that contact of farm women with extension workers and need-based seasonal training program mess hold be organized to increase skill and knowledge about vegetable technology. Campaigns for exposure to new ideas should be increased for making the on-going programme successful.

CHAPTER - III

RESEARCH METHOLODGY

Research methodology is a detailed action plan of investigation. This chapter narrates the methods and procedure of investigation used during the entire course of study and is presented under the following heads:

1. Location of the study area

2. Research Design

3. Sampling techniques used

4. Operationalization of variables

5. Source of data collection

6. Method of data collection

7. Statistical analysis of the data

8. Hypotheses

1 .Location of the study area

The study was conducted in Khargone district of Madhya Pradesh. Khargone district formerly known as West Nimar district and lies between 21°22' and 22°35' North latitude and 74°25' and 76°14' East longitude. The district is surrounded by Dhar, Indore and Dewas in the north side, state of Maharashtra state in the south side, Khandwa, Burhanpur in the east side and Barwani in the Westside. Khargone district covers the 8030 km^2 area. Area of the district is 8030 km^2 and According to the 2011 census Khargone District has a population of 1,872,413. The district is divided into 5 sub-divisions, which are further divided into 8 tehsils. Barwaha sub-division has only one tehsil, Barwaha with the town bigger than Barwaha name Sanawad. Bhikangaon sub-division has two tehsils, Bhikangaon and Jhiranya. Kasrawad sub-division has only Kasrawad tehsil while Khargone sub-division has three tehsils, Khargone, Bhagwanpura and Segaon. Mandaleshwar sub-division hasone tehsil, Maheshwar. Khargone town is the administrative headquarters of the district. Other towns are Maheshwar, Kasrawad, Segaon, Bhagwanpura, Jhiranya, Bhikangaon and Barwah. Maheshwar is a place of tourist attraction as the former capital of the Haihayas and the Holkars of Indore.

2. Research Design

The design of research is the most important and crucial aspect of the research methodology. It is the whole process of design and carrying out the research. To seek the answers for the research question, a descriptive research design was used in the investigation because it is describing phenomena with sufficient interpretation. It clearly states the characteristics of the specific situation of group or individuals. In this design the variables are to be known.

3. Sampling technique used

The sample of the present study was selected by proportionate random sampling method. The various stages of the sample were -

I. Selection of the blocks

II. Selection of the villages

III. Selection of the respondents

i. Selection of Blocks

There are nine blocks in Khargone district. Namely- Barwaha, Bhagwanpura, Bhikangaon, Goganwa, Kasarawad, Maheshwar, Segoan, Zirnya, Khargone. Out of these only one block i.e. Kasarawad will be selected purposively for present study. A list of all the villages of the selected block will be and taken from block office out of them one block will be selected purposively I.e. Kasarawad.

II. Selection of the villages

Kasrawad block comprises of 220 villages, Out of these 6 villages will be selected randomly for the ongoing study.

III. Selection of the respondents

In Kasrawad block, the majority of the women have been found to be involved in agriculture activities *viz*, Vegetable production, Masala processing, Vermi-culture, Goatry and Dairy enterprise for their livelihood. From this block six villages were selected for the study, and prepared of the list of respondents on the basis of higher number of rural farm women members. This list of farm women were selected through proportionate random sampling method to make a sample of 120 respondents. Hence finally the sampling consisted of 120 respondents.

Table- 3.1 List of selected villages and number of selected respondents

S.N.	Name of village	No of selected respondents
1	Kathora	20
2	Dogava	20
3	Khamkheda	20
4	Multhan	20
5	Pipalgone	20
6	Amltha	20
Total		**120**

4. Operationalization of variables

Social scientists hold the view that there exists a gap between theory and experimental research. The hypothesis use conceptual variables that are formulated at high level of abstraction. Most of the social scientists attempt to solve measurement problems by operationally defining the conceived variables and then by either using available measures or by designing one's own measure.

A number of terms and variables have been used in the present study with specific meaning. Obviously these terms require operationalization.

(A) Independent Variables

1. Age

It refers to actual age of the respondents in complete year, i.e. chronological age of the respondent. The actual age was recorded as told by the respondents at the time of interview. The respondents were grouped into following three age groups on the basis of maximum and minimum age of the respondents recorded during data collection.

S.No.	Categories	Age (years)
1.	Young	23-35
2.	Middle	35-47
3.	Old	Above 47

2. Education

It refers to the number of classes of the formal education passed by the respondents. The respondents were grouped into the following three categories on the basis of their educational level.

S.No.	Category	Education	Score
1.	Up to primary level	Educated up to primary	1
2.	Up to middle level	Educated up to middle	2
3.	High school& above level	Educated high school and above	3

3. Caste

The caste refers to an individual's religious ritual caste in which she was born. The respondents were grouped into the following four categories on the basis of their caste.

S. No.	Categories	Score
1.	Schedule Caste	1
2.	Schedule Tribe	2
3.	Other Backward Caste (O.B.C.)	3
4.	General	4

4. Size of family

The type of family included whether it is a joint or a nuclear family. Nuclear family:- This includes the families limited to husband, wife and their children. Joint family: This includes the families who were having a great number of members living together and where individual earning and common mode of cooking were pooled together to run the family by family head.

S. No.	Category	Score
1	Nuclear type	1
2	Joint type	2

5. Annual family income.

It refers to the total income of the all members of a respondent's family obtained from farming and allied occupations. The respondents were classified into three categories on the basis of the following range of income.

S. No.	Categories	Annual income	Score
1.	Low	Up to Rs. 70,000	1
2.	Medium	Rs. 70,001 to 100,000	2
3.	High	Above Rs. 100,000	3

6. Farm size

The concept of land holding is the area of cultivated land in terms of acres possessed by the respondents. The farmers were categorized into seven groups. The scores given was 0 for landless, 1 to less than one acre, 2 was given to less than 5 acres, 3 was given to less than 10 acres, 4 score was given to less than 15 acres, respondents having less than 20 acres was allotted 5 score, and those who have more than 20 acres of land was allotted maximum score of 6. The score so obtained were categorized into low, medium, and high groups

S.No.	Categories	Score
1.	Low	Less than 3
2.	Medium	3 – 4
3.	High	Above 4

7. Farm mechanization

Farm machineryrefer to the numbers of farm equipments possessed by an individual and used in the farming such as tractor, seed drill, drip irrigation, sprayers, dusters, pump sets, thresher and sprinkler irrigation etc. on the basis of maximum and minimum obtained score the respondents.

S. No.	Categories (no. of implement)	Score
1.	Low farm implement (up to 5)	1
2.	Medium farm implement (5 to 9)	2
3.	High farm implement (above 9)	3

8. Marketing behavior

It mention to activity success in terms of maximization and useful information and its proportional value of an individual point on market behaviour. It was measured with the help of "market orientation scale" of Supe and Singh (1969), The scale consisted of four items. The responses for each item were recorded on 5- point continuum as strongly agree, agree, undecided, disagree and strongly disagree and were given 5, 4, 3, 2, 1 scores, respectively. The total scores indicated the point of marketing behaviour of an individual. On the basisof maximum and minimum acquire scores, the respondents were categorized as below.

S.No.	Categories	Range	Score
1	Low	Up to 3	1
2	Medium	3 - 5	2
3	High	Above 7	3

9. Mass media exposure

It was operationalized as the degree to which a respondent was exposed to the different messages or information from various mass media like radio, T.V., newspaper and farm magazine etc. The responses were recorded on 3-point continuum as regularly,

frequently, never and assigned 3, 2 and 1 scores, respectively. The total scores revealed the degree of exposure of a respondent. The respondents were categorized as low, medium and high categories for measuring the frequency:

S. No.	Categories of mass media exposure	Score
1.	Low (up to 6)	1
2.	Medium (6-12)	2
3.	High (above 12)	3

10. Information seeking behavior

It has been operationalized as the degree to which a respondent was adjusted to the governmental and non-governmental development agencies for obtaining agriculture information. It was measured with the help of scale developed by Siddaramaiah and Jlihal (1983) with slight modification.

The responses were recorded on a 3 point continuum as stronglyagree, partial agreeand undecided were given 3, 2 and 1 scored respectively. On the basis of range of scores, the following three categories were developed as range of score obtained.

S.No.	Categories	Score
1	Low	1
2	Medium	2
3	High	3

Dependent variable

Decision making ability of farm women and their participation

The decision making ability of a farm women is operationally defined as the degree of weighing the available alternatives in terms of their desirability and their likelihoods and choosing the most appropriate one for achieving maximum profit on his farming. The scale developed by Supe (1969), and as adopted by Nagesh (2006) with suitable modifications was used. The scale consisted the weight ages of 3, 2 and 1 were

assigned to the three rationality levels namely ‘rational’, ‘intermediate’ and ‘less rational’, respectively. Based on the total score obtained by respondents on decision making, they were grouped into following three categories:

S.No.	Categories	Age (years)
1.	Low	1
2.	Medium	2
3.	High	3

Validity and reliability of instrument:

Validity refers to whether the data collection instruments measures what it is supposed to measure. Validity of the interview schedule for this study was maximized by taking the following steps:

(i) The interview schedule was thoroughly discussed with the members of the advisory committee, experts and scientists of concerned discipline and their suggestions were incorporated.

(ii) Pre-testing of the interview schedule served as an additional check for improving the instrument.

(iii) The relevance of each question in terms of the objectives was used carefully.

The reliability of an interview schedule refers to its consistency. It was observed properly that the interview schedule had reliability before it was used as a data collection instrument.

5. Sources of data collection

The following sources were used for the purpose of data collection.

(i) Primary data

The researcher collected the primary data personally by interviewing the selected respondents with the help of structured and pre - tested interview schedule.

(ii) Secondary data

The secondary data were obtained from the various government offices and publications.

6. Method of data collection

An interview schedule was designed for collecting the relevant information of selected variables. The data were collected personally with the help of pre tested interview schedule on the researcher personally contacted the respondents. They were assured that the information given by them would be kept confidential and it would only be used for the academic purposes.

7. Statistical analysis of data

Data collected were qualitative as well as quantitative. The quantitative data were taken in terms of percentage and qualitative data were tabulated on the basis of authorized categorization method as described earlier, the following statistical techniques were used for the study.

I. Frequency

This measure was used to know the distribution pattern of respondent variable wise and to categories the problem by respondents in order of importance

II. Percentage

This measure was used for sample comparisons

$$P = \frac{\text{Frequencies}}{N} \; x \; 100$$

Where,

P= Percentage

N= Total no. of respondents

III. Arithmetic mean

Arithmetic mean is defined as the sum of all values of observation divided by the total number of observations. Mean is a measure of central tendency of the observed phenomena. Symbolically it is represented as:

$$\text{Arithmetic Mean} = \frac{\sum X}{N}$$

Where,

X = Arithmetic Mean

$\sum x$ = Sum of all the value of observations

N = Total number of observation in the sample

IV. Standard Deviation (S.D.)

It is defined as the square root of the sum of the squared deviations about the mean divided by the number of cases. Mathematically, it can be expressed as:

$$\text{Standard Deviation (S.D.)} = \frac{\sum Xi^2}{N}$$

Where,

$\sum Xi^2$ = sum of the squares of the individual scores

N = number of observation in the sample

V. Chi-square test

The association of different attributes of the respondents with their adoption level was tested by chi-square test (x^2). For this purpose the following formula was used.

$$\chi^2 = \sum \frac{(Oi - Ei)^2}{Ei}$$ With d.f. (r - 1) (c - 1)

Where,

O_i = observed frequency

Ei = Expected frequency

r = Number of rows

c = Number of columns

d.f. = Degree of freedom

The extent of association was calculated by using Pearson's contingency coefficient 'C' formula

$$C = \sqrt{\frac{\chi^2}{\chi^2 + N}}$$

Where,

χ^2 : Value of chi-square
N : total number of observation
C : Co-efficient of association

For practical explanation of the extent of association, the contingency co-efficient of association values were interpreted as -

I. To 0.20 (negligible association)

II. 0.21 to 0.40 (fair association)

III. 0.41 to 0.60 (good association)

IV. Above 0.60 (excellent association)

VI. Correlation Analysis:

The relationship of selected independent variables with dependent variable was ascertained with the help of person`s product moment correlation coefficient. The value of correlation coefficient was worked out by using the following formula.

$$r_{xy} = \frac{COV(X.Y)}{\sqrt{(V(x) \times V(y)}}$$

Where,

r_{xy} = Correlation coefficient between x and y.

COV(X.Y) = Co-variance between x and y

V(x) = Variance of x

V(y) =Variance of y

8. Hypotheses

On the basis of objectives and variables incorporated in the study, the following null hypotheses were formulated for the study.

1. There is no association between age of the respondents and their decision making in agriculture activities.
2. There is no association between education of the respondents and their decision making in agriculture activities.
2. There is no association between Caste of the respondents and their decision making in agriculture activities.
3. There is no association between size of family of the respondents and their decision making in agriculture activities.

4. There is no association between annual income of the respondents and their decision making in agriculture activities.
5. There is no association between farm size of the respondents and their decision making in agriculture activities.
6. There is no association between Farm mechanization of the respondents and their decision making in agriculture activities.
7. There is no association between marketing behaviour of the respondents and their decision making in agriculture activities.
8. There is no association between Mass media exposure of the respondents and their decision making in agriculture activities.
9. There is no association between Information seeking behavior of the respondents and their decision making in agriculture activities.

CHAPTER - V

RESULTS

This chapter deals with the methods and process designed for planning and management the research study. It consists of the following subheading.

1. Socio personal, socio economic and communicational attribute of farm women.
2. Decision making ability of farm women and their participation in various agriculture activities.
3. Association of socio personal, socio economic and communicational attribute and decision making ability of farm women and their participation in various agriculture activities.
4. Constraints and suggestions in relation to participation of farmwomen in various agriculture activities.

4.1 Socio personal, socio economic and communication attribute of farm women

Table 4.1:Arrangement of the farm women reported to their age groups

Categories of age groups	Number of respondents	Percentage
Young	57	47.50
Middle	42	35.00
Old	21	17.50
Total	120	100

Table 4.1 exhibits that out of 120 respondents, 47.50% farm women found to young age group,35.00%farm women found to middle age group, and 17.50% were from old age group.

Table 4.2: Arrangement of the farm women reported to education.

Education	Number of respondents	Percentage
Primary education	74	61.67
Middle	33	27.50
High school & above	13	10.83
Total	120	100

Table 4.2 indicates that out of 120 respondents 61.67 per cent was found to be in up to primary education level category, 27.50 per cent had middle school, while10.83 per cent were up to high school level.

Thus, majority of the respondents were found to have up to primary education standard group of farm women followed by middle school, high school and above.

Table 4.3: Arrangement of the farm women reported to their caste

Caste group	Number of respondents	Percentage
SC / ST	66	55.00
OBC	39	32.50
General	15	12.50
Total	120	100

Table 4.3 indicates that out of 120 respondents 55.00 per cent belonged to ST/SC cast group, 32.50 per cent belonged to other backward caste group and remaining 12.50 per cent belonged to general caste group.

Thus, majority of the respondents were found to have Schedule Tribe & Schedule caste of farm women followed by OBC and General.

Table 4.4: Arrangement of the farm women reported to size of family

Level of family size	Frequency	Percent
Small	83	69.17
Large	37	30.83
Total	120	100

Table 4.4 indicates that out of 120 respondents 69.17 per cent belonged to small size of family group and remaining 30.83 per cent belonged to large size of family group.

Thus, majority of the respondents were found to have small size of family group of farm women followed by large size of family group.

Table 4.5: Arrangement of the farm women reported to annual income

Income group	Number of respondents	Percentage
Low	38	31.67
Medium	71	59.17
high	11	09.16
Total	120	100

Table 4.5 shows that out of 120 respondents 59.17 per cent had medium family income of farm women,31.67 per cent had low income of farm women group while 9.16 per cent had high income group of farm women.

Thus, majority of the respondents were found to have medium family income of farm women group followed by low and high.

Table 4.6: Arrangement of the farm women reported to farm size

Categories	Frequency	Percent
Small	42	35.00
Marginal	56	46.67
Large	22	18.33
Total	120	100

Table 4.6 shows that 46.67% farm women had marginal farm size group of farm women, 35.00% farm women had smallfarm size group of farm women, while 18.33% farm women had large farm size group of farm women.

Thus, majority of the respondents were found to have marginal farm size group of farm women followed by small and large farm size.

Table 4.7: Arrangement of the farm women reported to farmmechanization

Categories	Number of respondents	Percentage
Low	39	32.50
Medium	61	50.83
High	20	16.67
Total	120	100

Table 4.7 shows that out of 120 respondents 50.83 per cent had medium farm mechanization, 32.50 per cent had low farm mechanization, while 16.67 per cent had high farm mechanization group of farm women.

Thus, majority of the respondents were found to have medium farm mechanization group of farm women followed by low and high farm mechanization group.

Table 4.8: Arrangement of the farm women reported to marketing behaviour

Categories	Number of respondents	Percentage
Low	45	37.50
Medium	61	50.83
High	14	11.67
Total	120	100

Table 4.8 shows that out of 120 respondents 50.83% farm women found to medium level of marketing behaviour group of farm women, 37.50% farm women found to low level of marketing behaviour group of marketing behaviour of farm women, while 11.67% farm women found to high level of marketing group of farm women.

Table 4.9: Distribution of the farm women according to their mass media explore

Categories	Number of respondents	Percentage
Low	48	40.00
Medium	55	45.83
High	17	14.17
Total	120	100

Table 4.9 shows that out of 120 respondents 45.83% farm women found to medium mass media explore, 40.00% farm women found to low mass media explore, while 14.17% farm women to high mass media explore of farm women.

Table 4.10:- Distribution of the farm women according to their information seeking behaviour

S.No.	Categories	Number of respondents	Percentage
1.	Low	43	35.83
2.	Medium	63	52.50
3.	High	14	11.67
	Total	120	100

Table 4.10 shows that out of 120 respondents 52.50% farm women found to medium level of information seeking behaviour of farm women, 35.83% farm women found to low level of information seeking behaviour, while 11.67% farm women found to high level of information seeking behaviour.

4.2 Measure the decision making ability of farm women and their participationin various agriculture activities.

Table : 4.11 measure the decision making ability of farm women n=120

S.No.	Agriculture activities	Decision making ability			Mean score
		Low	Medium	high	
1.	Field preparation	69	29	22	1.60
2.	Selection of variety / seed	73	24	23	1.58
3.	Sowing Methods	35	53	32	1.97
4.	Weeding	64	34	22	1.65
5.	Soil testing	79	27	14	1.44
6.	Seed treatment	73	35	12	1.49
7.	Irrigation management	65	23	32	1.72
8.	Manures and fertilizer application	71	32	17	1.55
9.	Pest and disease management	83	19	18	1.45
10.	Harvesting	79	21	20	1.50
11.	Collection of harvested crop	63	31	26	1.69
12.	Winnowing process	55	22	43	1.90
13.	Seed processing	38	59	23	1.87
14	Storage	57	44	19	1.68
15	Marketing	74	23	23	1.57
Overall		**65**	**32**	**23**	**120**

The table 12 that more number of farm women were found to have level of decision making ability the highest decision-making behaviour in sowing (mean score 1.97) followed by winnowing process (mean score 1.90), seed processing (mean score 1.87), irrigation management (mean score 1.72), collection of harvested crop (mean score 1.69), storage (mean score 1.68), weeding (mean score 1.65), field preparation (mean score 1.60), selection of seed/variety (mean score 1.58), marketing (mean score 1.57),

Manures and fertilizer application (mean score 1.55), harvesting (mean score 1.50), seed treatment (mean score 1.49), Pest and disease management (mean score 1.45) and soil testing (mean score 1.44).

Table: 4.12 measure the participation of farm women in various agriculture activities **n=120**

S.N.	Agriculture activities	Extent of participation			Mean score
		Low	medium	high	
1.	Field preparation	35	43	42	2.05
2.	Selection of variety / seed	24	44	52	2.23
3.	Sowing Methods	49	38	33	1.86
4.	Weeding	26	53	41	2.12
5.	Soil testing	19	45	56	2.30
6.	Seed treatment	21	38	61	2.33
7.	Irrigation management	18	40	62	2.36
8.	Manures and fertilizer application	21	28	71	2.41
9.	Pest and disease management	29	18	73	2.36
10.	Harvesting	16	38	66	2.41
11.	Collection of harvested crop	29	26	65	2.30
12.	Winnowing process	12	32	76	2.53
13.	Seed processing	21	35	64	2.35
14	Storage	29	31	60	2.25
15	Marketing	23	35	62	2.32
	Overall	**25 (20.83%)**	**36 (30.00%)**	**59 (49.17%)**	**120 (100%)**

It is clear from Table 4.12 that more number of farm women were found to participation in agricultural operationsi.e. 49.17 per cent followed by medium participation with 30.00 per cent and low participation of 20.83 per cent. Also found higher participation of farm women in agricultural activities. Further data revealed that the farm activities in which farm women obtained the highest score at high level of

participation were winnowing process (mean score 2.53), followed by manure and fertilizers application (mean score 2.41), harvesting (mean score 2.41), pest and disease management (mean score 2.36), irrigation management (mean score 2.36), seed processing (mean score 2.35), seed treatment (mean score 2.33), marketing (mean score 2.32), collection of harvested crops (mean score 2.30) soil testing (mean score 2.30), storage (mean score 2.25), selection of variety (mean score 2.23), weeding (mean score 2.12), field preparation (mean score 2.05) and sowing method (mean score 1.86).

Table 4.13: measure the over all participation of farm women in various agriculture activities **n=120**

S.No.	Categories	Number of respondents	Percentage
1.	Low	25	20.83
2.	Medium	36	30.00
3.	High	59	49.17
	Total	**120**	**100**

Table 13 shows that out of 120 respondents 49.17 per cent found the overall high level of participation in agricultural operations, 30.00 per cent had medium level, while 20.83 per cent had low level of participation in agriculture activities farm women.

4.3 Association of socio personal, socio economic and communicational attribute and decision making ability of farm women and their participation in various agriculture activities.

Table 4.14: Aanalyze the association of socio personal, socio economic and communicational attribute of decision making ability of farm women and their participation in various agriculture activities.

S.No.	Variables	Association (chai square χ^2value)			
		Decision making activities		Participation in agriculture activities	
		Value	D.f.	Value	D.f.
1.	**Age**	6.10	4	9.53*	4
2.	**Education**	11.73*	4	9.63*	4
3.	**Caste**	8.71^{NS}	4	9.74*	4
4.	**Size of family**	1.33^{NS}	2	2.93^{NS}	2
5.	**Annual income**	7.22^{NS}	4	4.86^{NS}	4
6.	**Farm size**	11.27*	4	5.06^{NS}	4
7.	**Farm mechanization**	20.70**	4	12.23*	4
8.	**Market behaviour**	12.54*	4	8.14^{NS}	4
9.	**Mass media explore**	24.25**	4	3.61^{NS}	4
10.	**Information seeking behaviour**	14.35**	4	9.43^{NS}	4

NS = non - significant

***= significant at 5% level**

****= significant at 1% level**

Associationof socio personal, socio economic and communicational attribute of decision making ability

Age and decision making ability:

"There is no relation between age of respondents and decision making. The chai square was found to be 6.10 which shows non significant relationship at 0.05 level of

probability. Therefore, relation was not significant. That the clear on observations, hypothesis was accepted and age of respondents was not significant.

Education and decision making ability:

"There is no relation between education of the respondents and decision making. The chai square value 11.73* which shows significant relationship at 0.05 level. Therefore, relation was significant. Finding above observations, null hypothesis was rejected and education of the respondents had significant relation.

Caste and decision making ability:

"There is no relation between caste of the respondents and decision making. The chai square was found to be 8.71 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was no significant. Finding the observations, null hypothesis was accepted and caste of the respondents had no significant relation.

Size of family and decision making ability:

"There is no relationbetween size of family and decision making. The chai square was found to be 1.33 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was not significant. Finding the above observations, null hypothesis was accepted and size of family of the non significant relation.

Annual income and decision making ability:

"There is no relation between annual income and their decision making. The chai square was found to be 7.22 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was not significant. Finding above observations, null hypothesis was accepted and annual income of the farm women had no significant relation.

Farm size and decision making ability:

"There is no relationbetween farm size decision making. The chai square was found to be 11.27* which shows significant relationship at 0.05 level of probability. Therefore, the relation was significant. Finding the above observations, the null hypothesis was rejected and farm size of the farm women had significant relation.

Farm mechanization and decision making ability:

"There is no relation between farm mechanization decision making.The chai square was found to be 20.70** which shows significant relationship at 0.01 level of probability. Therefore, the relation was significant. Finding above observations, null hypothesis was rejected and farm mechanization of the farm women had significant relation.

Market behaviour and decision making ability:

"There is no relation between market behaviour and their decision making. The chai square was found to be 12.54* which shows significant relationship at 0.05 level of probability. Therefore, the relation was significant. Finding above observations, null hypothesis was rejected and market behaviour had significant relation.

Mass media explore and decision-making ability:

"There is no relation between mass media explore and their decision making. The chai square was found to be 24.25** which shows significant relationship at 0.01 level of probability. Therefore, the relation was significant. Finding above observations, null hypothesis was rejected and mass media explore of the farm women had significant relation.

Information seeking behaviour and decision-making ability:

"There is no relation between information seeking behaviour and their decision making. The chai square was found to be 14.35** which shows significant relationship at 0.01 level of probability. Therefore, the relation was significant. Finding above observations, null hypothesis was rejected and mass information seeking behaviour had significant relation.

Participation of farm women in various agriculture activities

Age and participation in various agriculture activities:

"There is no relation between age and participation. The chai square was found to be 9.53* which shows significant relationship at 0.05 level of probability. Therefore, the relationship was significant.Finding the above observations, null hypothesis was rejected and age of the farm women had significant relation.

Education and participation in various agriculture activities:

"There is no relation between education and participation. The chai square was found to be 9.63* which shows significant relationship at 0.05 level of probability. Therefore, the relation was significant. Finding observations, null hypothesis was rejected and education was significant relation.

Caste and participation in various agriculture activities:

"There is no relation between caste and their participation. The chai square was found to be 9.74* which shows significant relationship at 0.05 level of probability. Therefore, the relation was significant. Finding on the above observations, the null hypothesis was rejected and caste was significant relation.

Size of family and participation in various agriculture activities:

"There is no relation between size of family and their participation. The chai square was found to be 2.93 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was not significant. Finding the above observations, the null hypothesis was accepted and size of family had non significant relation.

Annual income and participation in various agriculture activities:

"There is no relation between annual income and their participation. The chai square was found to be 4.86 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was not significant. Finding the above observations, null hypothesis was accepted and annual income had not significant relation.

Farm size and participation in various agriculture activities:

"There is no relation between farm size and their participation.The chai square was found to be 5.06 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was not significant. Finding above observations, null hypothesis was accepted and farm size had non significant relation.

Farm mechanization and participation in various agriculture activities:

"There is no relation between farm mechanization and their participation.The chai square was found to be 12.23* which shows significant relationship at 0.05 level of probability. Therefore, the relationship was significant. Finding observations, the null hypothesis was rejected and farm mechanization had significant relation.

Market behaviour and participation in various agriculture activities:

"There is no relation between market behaviour and their participation. The chai square was found to be 8.14 which shows no significant relationship at 0.05 level of probability. Therefore, the relationship was significant. Finding the observations, the null hypothesis was accepted and market behaviour of the farm women had no significant relation.

Mass media explore and participation in various agriculture activities:

"There is no relation between mass media explore and their participation.The chai square was found to be 3.61 which shows no significant relationship at 0.05 level of probability. Hence, the relationship was no significant. Finding observations, the null hypothesis was accepted and mass media explore had not significant relation.

Information seeking behaviour and participation in various agriculture activities:

"There is no relation between information seeking behaviour and their participation. The chai square was found to be 9.43 which shows no significant relationship at 0.05 level of probability. Therefore, the relation was no significant. Finding above observations, the null hypothesis was accepted and information seeking behaviour was non significant relation.

4.4. Constraints and suggestions in relation to participation of farm women in various agriculture activities.

Table 4.15: Constraints in relation to participation of farm women in various agriculture activities: (N=120)

S. No.	Constraints	No. of respondents	Percentage	Rank
1.	Difficulty management of time for farm and home activities	87	72.50	**III**
2.	Lack knowledge about improved technology	98	81.67	**I**
3.	Poor economic status	93	77.50	**II**
4.	Lack of self confidence	46	38.33	**VII**
5.	Lack of information	66	55.00	**VI**
6.	Poor education	76	63.33	**IV**
7.	Less contact with extension workers	70	58.33	**V**

Table 4.15 indicate that problems faced by the farm women participation in various agriculture farm activities: the highest problem faced by farm women to lack knowledge about improved technology 81.67 per cent and second highest problem faced by farm women in poor economic status of the family 77.50 percent followed by difficulty management of time for farm and home activities 72.50 per cent, poor education 63.33 per cent, Less contact with extension workers 58.33 per cent, lack of information about the solution to problem 55.00 per cent and last one was lack of self confidence in decision 38.33 per cent.

Table4.16: Suggestion is overcome to constraints:

(n=120)

S. No.	Constraints	No. of respondents	Percentage	Rank
1.	Government should initiate policies to motivate farm women	73	60.83	**VI**
2.	Loan should be available at low interest rate	85	70.83	**IV**
3.	Need-based seasonal training programme should be organized	101	84.16	**II**
4.	Provide adequate formal and informal education	66	55.00	**VII**
5.	Make easy contact of tribal farm women with extension workers	94	78.33	**III**
6.	Policy decision should be made for women empowerment	78	65.00	**V**
7.	Providing technical guidance regarding scientific farming should be given to farm women	112	93.33	**I**

Table 4.16 indicate suggestion that in order to increase the decision making of farm woman in various agriculture activities: the highest number of farm women suggest to providing technical guidance regarding scientific farming should be given to farm women 93.33 per cent followed by need-based seasonal training programme should be organized 84.16 per cent, make easy contact of tribal farm women with extension workers 78.33 per cent, loan should be available at low interest rate 70.83 per cent, policy decision should be made for women empowerment 65.00 per cent, government should initiate policies to motivate farm women 60.83 per cent and last one was provide adequate formal and informal education 55.00 per cent.

CHAPTER - V

DISCUSSION

The primary collection of the study have been obdurate in this chapter

Objectives:

1. Socio personal, socio economic and communicational attribute of farm women.
2. Decision-making ability of farm women and their participation in various agriculture activities.
3. Association of socio personal, socio economic and communicational attribute and decision-making ability of farm women and their participation in various agriculture activities.
4. Constraints and suggestions in relation to participation of farm women in various agriculture activities.

1. Socio personal, socio economic and communicational attribute of farm women.

I. Out of 120 respondents, majority 47.50 per cent belonged to young age group, where, as 35.00 per cent were from middle age group, and 17.50 per cent were from old age group. Farm women of middle and old age group was more experience than younger. by Haldar (2016) and Srichandan (2016).

II. The finding regarding level of education shows that out of 120 respondents 61.67 per cent was found to be in up to primary education level category, 27.50 per cent had middle school, while10.83 per cent were up to high school and above education level. Educated farm women can easily handled all farm activities. By Patel *et al.* (2017).

III. The 55.00 percentage distribution of respondents according to their caste ST/SC cast group, 32.50 per cent belonged to other backward caste group and remaining 12.50 per cent belonged to general caste group. Farm women who belonged to upper caste has more knowledge and higher decision making capacity. By Patel *et al.* (2017).

IV. In respect of size of family, majority 69.17 per cent belonged to small size of family group and remaining30.83 per cent belonged to large size of family group. Farm women of small family size can devote more time on field. By Srichandan (2016).

V. Out of 120 respondents 59.17 per centhad medium family income of farm women,31.67 per cent had low income of farm women group while 24.17 per cent had high income group of farm women. Farm women of higher annual income can

generate income using the new technology by taking higher risk. By Gondaliya (2012) and Singh (2013).

VI. The percentage distribution of respondents according to their land holding46.67 per cent had marginal farm size group of farm women,35.00 per cent had small farm size group of farm women, while 18.33 per cent had large farm size group of farm women. By Chayal *et al*. (2013).

VII. In respect of farm power, 50.83 per cent had medium farm mechanization, 32.50 per cent had low farm mechanization, while 16.67 per cent had high farm mechanization group of farm women. Income can be generated by using machines to do more work in less time. By Ravindra (2012).

VIII. The percentage distribution of respondents according to their marketing behaviour majority 50.83 per cent had medium level of marketing behaviour group of farm women,37.50 per cent had low level of marketing behaviour group of marketing behaviour of farm women, while 11.67 per cent had high level of marketing group of farm women. The behaviour of the market increase the information of the market and helps in selling the product. By Singh (2013).

IX. The percentage distribution of respondents according to their mass media explore, majority 45.83 per cent had medium mass media explore, 40.00 per cent had low mass media explore, while 14.67 per cent had high mass media explore of farm women. By Doddamani (2010).

X. The percentage distribution of respondents according to their information seeking behaviour. 52.50% had medium level of information seeking behaviour of respondents, 35.83 per cent had low level of information seeking behaviour, while 11.67 per cent had high level of information seeking behaviour of farm women. By Singh (2011) and Shiroya (2014).

2. Decision making ability of farm women and their participation in various agriculture activities:

Decision making ability of farm women

More number of farm women were found to have level of decision making ability the highest decision making behaviour in sowing because sowing process is easily handled by farm women followed by winnowing process because women is expert in this process, seed processing, irrigation management, collection of harvested crop, storage, field preparation, selection of seed/variety, marketing, Manures and fertilizer application,

weeding, harvesting, seed treatment, Pest and disease management and soil testing. By Singh (2013), Bhairve (2013) and Dudiand Meena (2017).

Participation in various agriculture activities:

More number of farm women were found to participation in agricultural operationsi.e. 49.17 per cent followed by medium participation with 30.00 per cent and low participation of 20.83 per cent. Also found higher participation of farm women in agricultural activities. Further data revealed that the farm activities in which farm women obtained the highest score at high level of participation were winnowing process, followed by manure and fertilizers application, harvesting, pest and disease management, irrigation management, seed processing, seed treatment, marketing, collection of harvested crops, soil testing, storage, selection of variety, weeding, field preparation and sowing method. By Balian (2014) and Pal and Haldar (2016).

3. Association of socio personal, socio economic and communicational attribute and decision making ability of farm women and their participation in various agriculture activities:

Associationof socio personal, socio economic and communicational attribute of decision making ability:

The variable age, caste size of family and annual income was non-significant relationship with decision making capacity and variables education, farm size and marketing behaviour was significant relationship with decision making capacity at 5 % level of significance and variables farm mechanization, mass media explore and information seeking behaviour was significant relationship with decision making capacity with 1 % level of significance. By Gondaliya (2012) and Singh (2013).

Variable education, educated farm women can easily handled all farm activities and increase the income in less time. Hence, education was significant with decision making capacity.

Variable farm size, due to large farm size, more experiments can be done and due to the presence of more than one crop on the large farm, they can be easily compared. Hence, farm size was significant relationship with decision making capacity.

Variable market behaviour, behaviour of the market increase the information of the market and helps in selling the product. Hence, market behaviour was significant relationship with decision making capacity.

Variable farm mechanization, due to available of more number of farm machine Income can be generated by using machines to do more work in less time. Hence, farm mechanization was positive relation with decision making capacity.

Associationof socio personal, socio economic and participation of farm women in various agriculture activities:

The variable size of family, annual income, farm size, market behaviour, mass media explore and information seeking behaviour was non - significant relationship with participation of farm women in various agriculture activities and variables age, education, caste and farm mechanization was significant relationship with participation of farm women in various agriculture activities at 5 % level of significance. By Warkade (2010) and Chayal *et al.* (2013).

Variable age, Farm women of middle and old age group was more experience than younger, and flexibility is increase with increase the age group. Hence, age was significant relationship with agriculture farm activities.

Variable education, educated farm women can easily handled all farm activities and increase the income in less time. Hence, education was significant with farm activities.

Variable caste, farm women of upper caste has more knowledge and higher decision making capacity and have good managing capacity. Hence, caste was significant relationship with farm activities.

Variable farm mechanization, due to available of more number of farm machine Income can be generated by using machines to do more work in less time. Hence, farm mechanization was positive relation with farm activities.

4. Constraints and suggestions in relation to participation of farm women in various agriculture activities:

Major problems faced by the farm women participation in various agriculture farm activities the highest problem faced by farm women to lack knowledge about improved technology 81.67 per cent and second highest problem faced by farm women in poor economic status of the family 77.50 percent followed by difficulty management of time for farm and home activities 72.50 per cent, poor education 63.33 per cent, Less contact with extension workers 58.33 per cent, lack of information about the solution to problem 55.00 per cent and last one was lack of self confidence in decision 38.33 per cent. Suggestion to overcome constraints that in order to increase the decision making of farm woman in various agriculture activities the highest number of farm women suggest to providing technical guidance regarding scientific farming should be given to farm women

93.33 per cent followed by need-based seasonal training programme should be organized 84.16 per cent, make easy contact of tribal farm women with extension workers 78.33 per cent, loan should be available at low interest rate 70.83 per cent, policy decision should be made for women empowerment 65.00 per cent, government should initiate policies to motivate farm women 60.83 per cent and last one was provide adequate formal and informal education 55.00 per cent.

CHAPTER- VI
SUMMARY,CONCLUSION& SUGGESTIONS FOR FURTHER WORK

INTRODUCTION

Decision-making and accurate performance of all activities helps in making an enterprise more viable, feasible and profitable. Before performing any operation task a person thinks over various options available to him/her and selects only those which are simple, profitable, compatible and relatively better. If a person before implementing a task also plans and decides about various activities, can produce excellent results.

Agriculture and allied sectors are unique because of their diversity and location specific requirements, adaptation of technologies to a range of agro-ecological conditions. Women constitute almost half of our country's population and have been the major components of the working force since from the beginning of agriculture. Their contribution to the economic growth has been quite substantial. Farm women play many roles inside as well as outside the home. She spends about 304 days of her life span only in the Kitchen annually, which remains unaccounted in the national income estimates. Farm women have always worked along with men in fields and have helped them in other vocation such as handicrafts, small scale cottage industries etc. One must therefore not to overlook the major role played but the women in an agricultural setting where the distinction between farm and house work gets blurred. Even the household work by women which accounts for 40 per cent of our gross national product and involves much drudgery is totally left out of economic account. Though women have been playing major part in agriculture, her role in the decision-making ability related agricultural activities is seen to be minimal. But history is proof to show that women if given an opportunity can be very effective agents of change for a better home and better society.

The role of women has always been a multi-dimensional and significant as women have performed well in case of agricultural activities, domestic activities, marketing activities as far as labour requirement is considered. The decision-making ability is an important segment of every household because the functioning of family resource management depends on the efficiency of decision-making progress. So, women involvement in decision-making ability has been of great importance because

women play an important role in every household activity and gives excellent performance most of the time. It may be related to household activity or for the decision-making at household or any other level. In rural society, there has been noticed a considerable fluctuation regarding the decision-making power of women. The state like Punjab and Haryana show positive role of women in decision-making ability in many of the families. But it has become insignificant and negligible in rural families due to illiteracy of women. The contribution of rural women has not taken seriously.

Objectives:

1. Socio personal, socio economic and communicational attribute of farm women.
2. Decision making ability of farm women and their participation in various agriculture activities.
3. Association of socio personal, socio economic and communicational attribute and decision-making ability of farm women and their participation in various agriculture activities.
4. Constraints and suggestions in relation to participation of farm women in various agriculture activities.

METHODOLOGY

Selection of Blocks

There are nine blocks in Khargone district. Namely- Barwaha, Bhagwanpura, Bhikangaon, Goganwa, Kasarawad, Maheshwar, Segoan, Zirnya, Khargone. Out of these only one block i.e. Kasarawad will be selected purposively for present study. A list of all the villages of the selected block will be and taken from block office out of them one block will be selected purposively I.e. Kasarawad. Kasrawad block comprises of 220 villages, Out of these 6 villages will be selected randomly for the ongoing study.

Selection of the respondents

In Kasrawad block, the majority of the women have been found to be involved in agriculture activities *viz,* Vegetable production, Masala processing, Vermiculture, Goatry and Dairy enterprise for their livelihood. From this block six villages were selected for the study, and prepared of the list of respondents on the basis of higher number of rural farm women members. This list of farm women were selected through proportionate random

sampling method to make a sample of 120 respondents. Hence finally the sampling consisted of 120 respondents.

Independent variable

Age,education, caste, size of family, annual family income, farm size, farm mechanization, market behaviour, mass media explore and information seeking behaviour,

Dependent variable

Decision making ability of farm women and their participation

Conclusions

The conclusion of the study has been presented in line with the objectives of study. The findings are presented under the following sub-heads.

Socio-economic profile of commercial

I. Out of 120 respondents, majority 47.50 per cent belonged to young age group.

II. The finding regarding level of education, majority 61.67 per cent was found to be in up to primary education level category.

III. The finding regarding level of education shows that out of 120 respondents majority 55.00 per cent belonged to ST/SC cast group.

IV. In respect of size of family,majority 69.17 per cent belonged to small size of family group.

V. Out of 120 respondents majority 59.17 per cent had medium family income of farm women.

VI. The percentage distribution of respondents according to their land holding, majority 46.67 per cent had marginal farm size group of farm women.

VII. In respect of farm power, majority 50.83 per cent had medium farm mechanization.

VIII. The percentage distribution of respondents according to their marketing behaviour, majority 50.83 per cent had medium level of marketing behaviour group of farm women.

IX. The percentage distribution of respondents according to their mass media explore, majority 45.83 per cent had medium mass media explore

X. Out of 120 respondents majority 52.50 per cent had medium level of information seeking behaviour of farm women.

2. Decision making ability of farm women and their participation in various agriculture activities:

Decision making ability of farm women

More number of farm women were found to have level of decision making ability the highest decision making behaviour in sowing followed by winnowing process, seed processing, irrigation management, collection of harvested crop, storage, field preparation, selection of seed/variety, marketing, Manures and fertilizer application, weeding, harvesting, seed treatment, Pest and disease management and soil testing.

Participation in various agriculture activities:

More number of farm women were found to participation in agricultural operationsi.e. 49.17 per cent followed by medium participation with 30.00 per cent and low participation of 20.83 per cent. Also found higher participation of farm women in agricultural activities. Further data revealed that the farm activities in which farm women obtained the highest score at high level of participation were winnowing process, followed by manure and fertilizers application, harvesting, pest and disease management, irrigation management, seed processing, seed treatment, marketing, collection of harvested crops, soil testing, storage, selection of variety, weeding, field preparation and sowing method.

3. Association of socio personal, socio economic and communicational attribute and decision making ability of farm women and their participation in various agriculture activities:

Associationof socio personal, socio economic and communicational attribute of decision making ability:

The variable age, caste size of family and annual income was non - significant relationship with decision making capacity and variables education, farm size and marketing behaviour was significant relationship with decision making capacity at 5 % level of significance and variables farm mechanization, mass media explore and information seeking behaviour was significant relationship with decision making capacity with 1 % level of significance.

Associationof socio personal, socio economic and participation of farm women in various agriculture activities:

The variable size of family, annual income, farm size, market behaviour, mass media explore and information seeking behaviour was non - significant relationship with participation of farm women in various agriculture activities and variables age, education, caste and farm mechanization was significant relationship with participation of farm women in various agriculture activities at 5 % level of significance.

4. Constraints and suggestions in relation to participation of farm women in various agriculture activities:

Major problems faced by the farm women participation in various agriculture farm activities: the highest problem faced by farm women to lack knowledge about improved technology 81.67 per cent and second highest problem faced by farm women in poor economic status of the family 77.50 percent followed by difficulty management of time for farm and home activities 72.50 per cent, poor education 63.33 per cent, Less contact with extension workers 58.33 per cent, lack of information about the solution to problem 55.00 per cent and last one was lack of self confidence in decision 40.00 per cent. Suggestion to overcome constraints that in order to increase the decision making of farm woman in various agriculture activities the highest number of farm women suggest to providing technical guidance regarding scientific farming should be given to farm women 93.33 per cent followed by need-based seasonal training programme should be organized 84.16 per cent, make easy contact of tribal farm women with extension workers 78.33 per cent, loan should be available at low interest rate 70.83 per cent, policy decision should be made for women empowerment 65.00 per cent, government should initiate policies to motivate farm women 60.83 per cent and last one was provide adequate formal and informal education 55.00 per cent.

Suggestions for Future Research

1. The study was confined to Khargone districts of Madhya Pradesh on sample of 120 respondents and the results are applicable to the area only. Hence, further research in this field may be carried out in other areas so that generalization of results could be possible.
2. The limited independent variables were included in the study. Other relevant variables may also be included for further study.