Chapter-II

REVIEW OF LITERATURE
The purpose of this chapter is to review and summarize all available literature related to the present study. There have, a large number of studies, been reported by various departments, research organizations, private institutions, universities and individual researches in India. These studies are different in nature and objectives and examine various aspects of the training programmes and impact of KVK and its adoption of agricultural technology. These studies have revealed past progress and pit falls of the programme. However, an attempt has been made to include as many studies as could be available on the and subject related areas.

A brief resume of researches related to the study is presented in chronological order under the following sub-heads:

2.1 Personal profile of the respondents.

2.2 Socio-economic status of the respondents.

2.3 Knowledge level of the respondents.

2.4 Attitude of the respondents towards training programmes.

2.5 Impact of training programme on the adoption of farm technologies.

2.6 Relationship between socio-economic personal profiles of the respondents and adoption of farm technologies.

2.7 Constraints experienced by the trainees for adoption of farm technologies.

2.8 Constraints experienced by the trainers for organizing training programmes.
2.1 PERSONAL PROFILE OF THE RESPONDENTS

2.1.1 Age:

Choudhary et al. (1988) Singh and Singh (1990) found age to be significantly associated with adoption and symbolic adoption level of trained farmers, respectively.

Atwal et al. (1991) found that majority of trainees was of young age group and most of the respondents had primary level of education followed by high school and illiterate.

Kothikhan e et al. (1991) reported that farmers who attended the training programmes were of different categories. Majority of them was 25-35 years age group. As regards education level, all were educated and had social participation. Most of the trainee farmers possessed land holding between 1 to 9 hectares.

Mande (1991) revealed that most of the trained youths were in the age group of 15-25 years educated up to primary level, held land between 1 to 5 hectares, possessed farming experience between 6-10 years and were participating in one social organization. Whether untrained rural youth were in middle age group, educated up to primary level, possessed land 1.1 to 5 hectares, farming experience up to 11-15 years and participating in one social organization,

Patil and Deshmukh (1991) revealed that both categories of farmers were almost equal in age whether education level of contact farmers was high than the potential diehtele and contacts dientel were slightly better placed than their counter part i.e. potential farmers.
Patil and Thakkar (1991) found that most of the trained respondents were of middle age (80 per cent) with primary education. A large majority (80 per cent) of respondents were the member only of one organization whereas, majority of untrained respondents were found in middle age group (84 per cent) and possess medium land holding and none of them were participating in more than one organization.

Umate and Ingle (1991) found that majority of farmers trainees were middle aged (46 per cent) having education up to primary school (28 per cent) whereas 24 per cent of them had not received any formal education and equal number of trainees were educated up to high school level. The respondents had fairly good social participation (65 per cent) having membership in two or more organization.

Prasad (1992) found that farmer’s who were middle and old aged required more training in dairy farming.

Singh (1993) observed that highest percentage of respondents, i.e. 56 per cent in project area and 76 per cent in non-project area were under middle age category. Remaining 12 per cent respondents of project area and 16 per cent respondents of non-project area formed the young age category. The number of respondents belonging to old age category was more in project area (22 per cent) than in non-project area (8 per cent). It was reported from the studies of many researches that the majority of the trainees were of the middle age category (Fulzele, 1986; Babu and Singh, 1986; Mishra, 1994; Fulzele et.al; 1995).

Jha (2002) revealed that the majority of trainees (52.46 per cent) were young age group (18-22 years). The percentage of educated trainees was higher (59.39), women respondents had also high education.
Singh and Tyagi (2002) reported that most of the farmers 70 per cent in middle age (30-56 years) followed by 16.66 per cent in bellow 30 years and 13.33 per cent in above 56 years.

Vaish et al. (2002) found that maximum number of the respondents (57 per cent) were in middle age group i.e. (30 to 35 years) followed by 22 per cent in old and 21 per cent in young age group. Observed that 19 per cent of the total Kannaujia et al. (2003) women respondents belonged to 30 years of age and 59 per cent were between the age group of 30-50 years and remaining above 50 years.

Bharti (2004) indicate that 37.5 per cent respondents belonged to age group of 40-60 years while 32.5 and 30 per cent belonged to up to 40 years and above 60 years respectively.

Kumar (2005) reported that the majority of KVK beneficiaries belonged to the age group of 25 to 50 years and 52.50 per cent who were growing wheat in study area.

2.1.2 Caste:

Patel and Singh (1970) reported that in adopter category majority of respondents were found in middle and upper middle classes and non-adopter belonged to lower middle class and middle class. The adopter farmers belonged to higher caste, superior in use of information sources and higher in educational level where as non-adopter belonged to lower caste, lower education and inferior in use of information sources.

Narayan (1973) stated that the adoption of improved practices was higher among the higher and middle caste group of trained respondents than lower caste group.

Wilson and Chaturvedi (1985) reported that caste was significantly associated with adoption which was mostly cultivated by upper caste farmers whose socio-economic status a' so high.

Kannaujia et al. (2003) observed that majority of trained women 54 per cent were belonging to schedule caste where as among untrained woman 49 per cent were belonging the forward caste.
Bharti (2004) indicated the most of the respondents belonged to backward caste i.e. 45 per cent this was followed by 28.75 and 26.25 per cent respondents belonged to schedule caste and higher caste, respectively.

Kumar (2005) reported that 53.75 per cent trainees belonged to backward class, while 23.75 per cent and 12.50 per cent general caste and schedule caste, respectively.

2.1.3 Education:

Education is generally believed to have the effect on widening the mental horizon of a person and thereby prepares or predisposes him to be respective to new ideas. This premise may be valid only at certain level of education and gain depends on the utility of education.

Singh et al. (1978) found that majority of the respondents were found to be illiterate, landless, whereas some of them had education up to primary level and belonged to small farmers category.

Mani and Knight (1981) found that the respondents of both categories were fairly educated. Hence there was no variability in this group, but the respondents were different according to social participation, socio-economic status and mass media exposure.

Reddy et al. (1982) found that education showed a positive response in gaining knowledge through training programme. The size of the land holding did not indicate any influence on learning.

Mishra (1994) found that majority of the trained dairy farmers had primary level of education.
Fuizele et al. (1995) reported that more than 30 per cent of the trained farmers had education up to higher secondary.

Kumar and Dutta (2000) revealed that more than three forth of the participant (76.47 per cent) was having graduate level qualification followed by post graduate (17.65 per cent) and diploma (5.88 per cent)

Meghwal (2002) revealed that 48.33 per cent of total respondents were illiterate 27.5 per cent educated up to primary standard and 13.30 per cent respondents educated up to middle standard and 10.84 per cent respondents educated above middle school.

Rayuda et al. (2003) indicated that majority of respondent farmers had high school education (68.89 per cent) followed by graduate, can read & write and can read only with 20 per cent, 6.67 per cent and 4.44 per cent, respectively.

Bharti (2004) indicated that majority 87.5 per cent of the respondents were literate and only 12.50 per cent were illiterate.

Kumar (2005) reported that the highest majority (90 per cent) of respondents were found literate and only (10 per cent) respondents were found illiterate.
2.1.4. SIZE OF FAMILY:

Sharma (1990) observed that 55.8 per cent respondents were from large family (above 5 members) while remaining 44.2 per cent respondents were from small family (up to 5 members).

Megawal (2002) presented that 63.33 per cent respondents had large family composition (i.e. more than 5 members) while 36.37 per cent respondents belonged to small families having less than five members.

Mishra (2002) reported that maximum participation of farm women 55 per cent were from medium (6 to 12 members) size of family followed by small (less than 6 members) 42.5 per cent and large (more than 12 members) in KVK’s & training programme.

Bharti (2004) indicated that majority 65 per cent respondents were having more than 5 members.

2.1.5 TYPE OF FAMILY:

Deepak (1978) reported that those participating farmers who belonged to joint family had greater interest in the farmers training.

Singh (1985) reported that those participating farmers who belonged to joint family had greater interest in the farmers training.

Singh (1991) reported that the majority of the respondents (67.55 per cent) were from joint family and interests (32.42 per cent) of the respondents were from nuclear family.
Gil and khar (1994) reported that the type of family 51.22 per cent of the respondents belonged to the joint family and 48.78 per cent belonged to nuclear type of family.

Mishra (2002) reported that the type of family was not significantly differing but joint families were leading in participating of farm women in KVKs training programme.

Bharti (2004) indicated that majority 66.25 per cent of the respondents were residing in a joint family systems.

Kumar (2005) reported that the majority 60 per cent of the respondents were residing in joint family system.

2.1.6 OCCUPATION

Sakia (1982) stated that 78.13 per cent contact farmers had cultivation as primary occupation and 21.87 per cent secondary occupation, whereas 23.43 per cent non-contact farmers had cultivation as primary occupation and 75.57 per cent respondents had secondary occupation.

Deepak (1978) found that 62 per cent of the trainees where those whose business was related to farming while only 26 per cent trainees were those whose business was not related to farming.

Singh (1991) reported that the farmers doing cultivation participate more in KVK trainings and highest significant difference found between trained and untrained farmers.

Kumar (2005) reported that majority 56.22 per cent of the respondents were doing agriculture as main occupation.
2.1.7 Operational Land Holding:

Kokate (1980) and Mishra (1994) observed that the majority of the trained farmers possessed small land holding.

Bharti (2004) indicated that maximum 67.50 Per cent KVK trainee’s possessed marginal size of holding and 31.25 per cent were having big size of holding.

Kumar (2005) reported that maximum 45 per cent respondents were having the marginal level of holding size and remaining 22.25 and 17.25 per cent respondents were having small and big size of holding, respectively.

Fulzele (1986) observed that 56 per cent of the trainees were in the medium category having up to 6 hectares of land and 31 per cent of the trainees had below one hectares of land and fell in the small category.

Land size was found to be non-significantly associated with the gain in knowledge as reported by Katarya and Singh (1987) and adoption level of trained farmers (Choudhary et. Al. 1988).

2.1.8 Herd Size:

Gill and Minhas (1978) observed that herd size was significantly associated with training needs of dairy farmers in all innovation areas except breeding. They explained the respondents having large herds and comparatively lower training needs than the ones with small herd.

Pawar (1979) found there was no significant relationship between herd size and perceived training needs as well as herd size knowledge gap.
Kokate (1980) revealed that 40 per cent of the trained farmers possessed a small herd size. In contrast, Fulzele (1986) and Mishra (1994) reported a medium herd size for majority of the respondents (trained farmers) in their studies.

Singh (1993) indicated that majority of the respondents in project area (54 per cent) as well in the non-project area (44 per cent) was having 3 to 4 dairy animals.

Similarly, herd size was found to be positively and significant correlated with the knowledge and adoption level of dairy farming practices of the trained farmers as reported by Fulzele et. Al. (1995).

2.1.9 Social Participation:

Social participation refers to the involvement of the respondents in the social institution as a member of office bearer.

Fulzele (1986) and Mishra (1994) indicated that majority of the trainees were found to have a medium level of social participation.

Parkas’ Om (1991) reported positive and highly significant relationship between social participation and symbolic adoption of farmers of ICDP and non ICDP villages.

Fulzele et.al. (1995) Roji et. al. (1995) indicated a positive and significant relation between social participation and adoption level of trained farmers.

Mishra (2002) reported that the most of the farm women were having no membership of any organization (92.50 per cent) followed by 7.50 per cent with membership of one organization and with membership of two or more than two organization the beneficiaries were most of the farm women were nill.
Rayuda et al. (2003) indicated that majority of the respondents farmers (53.33 per cent) had less socio-political participation followed by average 37.78 and high 8.89 per cent.

Bharti (2004) indicated that majority 62.50 per cent respondents were not having membership of any organization followed 33.75 per cent, 3.75 per cent respondents were having membership of one organization and more than one organization, respectively.

Kumar (2005) reported that majority 67.50 per cent of the respondents were having no membership of organization and remaining 33 per cent respondents were having membership of one organization or two organizations.

2.1.10 Farm experience:

Gopal (1974) observed that average knowledge level of farmers was high in case of those farmers who had more farming experience.

Khara (1974) found that farm experience was positively correlated with managerial ability, job involvement, interest in reading.

2.1.11 Extension contact:

It refers to both acquaintance and frequency of farmers' contact with the expert, extension personnel etc. with respect to cereal crops, dairy farming and fodder crops.

Fulzele (1986) and Mishra (1994) reported that the majority of respondents i.e.; 72 per cent, and 65 per cent, respectively were having high and medium level of extension contact.
Mishra and Tripathi (1991) reported that the women had very little contact with extension staff and were not exposed to formal sources of information. They had more contact with friends, relatives and neighbors and hence received information through information sources. While most of the respondents pleased to the radio, some watched the television and very few saw films. The exposure to print media was minimal.

Fulzele et al. (1995) reported that extension-contact and adoption level of scientific dairy practices was found to be highly correlated.

Roji et al. (1995) also found a significant relation between the extension contact and the adoption of irrigation management practices in paddy by the trained frames.

2.1.12 Mass Media Exposure:

Various scientists have studied the mass media exposure of trained farmers. Some of the findings are as follows:

Kokate (1980) found low mass media exposure to be the cause of low adoption of dairy innovation by majority of the respondents.

Mehta (1980) reported that the information sources used as the adoption stage of package of practices of major crops come out to be progressive farmers, farm literature and news paper and the sources which the farmers liked most were the progressive farmers, radio, and Kisan Mela least liked Sources were extension agencies and exhibition/ demonstrations in their level of importance and over all performance in the adoption of agricultural technology.

Ganga Ram and Mathur (1981) observed that sources of information of total training needs of the farmers were positively and significantly correlated while there was no
significant association between mass media exposure and training needs in different areas of wheat cultivation.

Fulzele (1986) while studying the profile of the respondents of on-campus training programme found that the majority (57 per cent) of the respondents had a medium level of mass media exposure, whereas 25 percent and 18 per cent of the respondents had low and high mass media exposure, respectively.

Rajput (1993) reported that television was major source of information in progressive villages, whereas radio was most frequently used source in non-progressive villages. However, VLW/Block officials were frequently used interpersonal channel for agricultural practices in both the villages.

Rathore (2000) reported that majority of the respondents (66.80 per cent) were having medium level of mass media exposure.

Bhairamkar et.al. (2003) reported that the interpersonal communication channels are still important among paddy growers in India. Thus, while introducing advanced information communication technologies balanced interpersonal communication channels may be considered by the extension agencies for its proper impact.

Veeramay et.al. (2003) reported that the efforts need to be taken up for reducing distortion of message "by increasing the frequency of exposure to the farmers through radio, television and extension literature.

Bharti (2004) reported that the majority of respondents (83.75 per cent) were having radio and 36.25 per cent were having TV.
Kumar (2005) reported that the majority of the respondents (81.25 per cent) were having radio and TV as household equipment.

Prajapati (2005) reported that 93.33 per cent respondents possessed television followed by 78.33 per cent having radio and 48.33 per cent having telephone.

2.2 SOCIO-ECONOMIC STATUS OF THE RESPONDENTS:

Patel and Patel (1968) found that majority of trained farmers belonged to higher economic status and occupied higher position in village organizations as against the untrained farmers, with regard to the information sources most of the trained farmers used more frequently as compared to the untrained farmers.

Rai and Mishra (2002) presented that majority 56.28 per cent have low status, 25 per cent had medium socio-economic status and only 18.75 per cent belong to high-economic status. This means that majority of the farmers had low socio-economic status.

2.3 KNOWLEDGE LEVEL OF THE RESPONDENTES:

Gain in knowledge refers to the additional information gained by the respondent about scientific cereal farming practices as a result of attending the training programme.

A significant rise in the knowledge level of respondents as a result of attending the training programme was reported by Singh (1968), Renukaradhaya (1971) Gour and Shrivastava (1983), babu and singh (1986), vashitha (1987), and chauhan et. al. (1990)

Haque (1975) reported that there was significant in the mean knowledge and adoption scores of trained and untrained farmers with respect to high yielding varieties of paddy and
wheat. The trained farmers had significant higher knowledge and higher adoption score about high yielding varieties of paddy and wheat than untrained farmers.

Every trained farmers was found to possess some knowledge of improved agricultural practices as reported by Singh (1975).

Similarly, Kamalsen (1979) also reported that there was a significant increase in the knowledge level of trainees. He further reported that 83 per cent of the trained farmers had gained more knowledge about high yielding varieties (HYV) of paddy after attending the training.

Rungta (1985) studied the impact of Krishi Vigyan Kendra training in adoption behavior of trainees with respect to paddy and reported that there was significant improvement in level of knowledge, skill and symbolic adoption of trainees. The finding also indicated risk differences, contact with extension agencies social participation and education had direct impact on improvement in skill during training. Education and contact with extension agencies had significant association with knowledge, attitude, skill and symbolic adoption.

Babu and Singh (1986) reported that the gain in knowledge about the technology imparted through national training course for young farmers ranged from 1.66 per cent to 38.33 per cent with an average of 20.28 per cent.

Babu and Singh (1986) reported that the average gain in knowledge of technology after attending the training programme was 20.48 per cent.

Futzele (1986) also reported the knowledge gain as the result of attending the training programme was found to be 89.26 per cent.
Ratna Sree (1992) revealed that majority of farmers belong to medium category in all independent variables, among both the trained and untrained groups. Maximum number of trained farmers high in both knowledge and adoption and medium, favorable attitude as compared to untrained farmers.

Kumar et. al. (1994) while studying the effectiveness of the training programme for agricultural assistants reports that there was a substantial gain in knowledge due to training.

Roji et. al. (1995) while studying the relationship between the knowledge and adoption behavior of the trained and untrained farmers with their socio-personal characteristics found that knowledge had a positive and significant association with the adoption behavior of the trained farmers.

Mahipal and Prasad (1995) made the inference that there was a significant knowledge gain in all the four training programme. There was maximum mean gain in knowledge (17.88 per cent) in the case of trainees of soil and water conservation measures (black soil). Whereas, it was found to be the lowest in case of trainees of alternate land use system. However, the overall mean knowledge gain of the participants for all the training course was found to be 11.24 per cent. It means that training has contributed significantly in acquisition of higher knowledge of the participants of various aspect of dry-land agriculture technologies. The majority of the respondents expressed their satisfaction with the conduct of the training programme as the reflected in their impression not only about physical arrangement but also in achieving the object of training. Besides, it may be due to the fact that the training schedule might have covered more topics of their job requirement.

Reddy et. al. (1997) reported that farm size, extension contact, management orientation were found to have had the largest direct effect of knowledge, extension contact,
mass media exposure whereas radio, education scientific orientation. Socio-economic status and extension participation activity had indirect effects.

Ahmed and Philip (1999) found that 50 per cent of the trainees gained a medium level of knowledge and acquired a medium skill level in all the training programme.

Murthy and Veerbhadraiah (1999) observed that the highly significant difference between trained and untrained farmers with respect to knowledge index.

Awasthi et. al. (2002) reported that dairy farmers (38.75 per cent) were having medium level of knowledge where as 33.75 and 27.50 per cent possessed high and low level of knowledge, respectively.

Arya et. al. (2003) reported that majority of farmers had low to moderate knowledge level about improved sugarcane crop production technology. Knowledge has been considered as one of the important factors influencing adoption of an innovation.

Ghosh and Pandey (2003) revealed that the trainee farmers of KVK had higher knowledge about rice cultivation technologies than the non-trainees, therefore, it may be suggested that similar training programmes based on the principles of KVK may be extended to the other farmers especially small and marginal to augment their knowledge base about improved rice cultivation technologies.

Singh et.al. (2003) that the knowledge of farmers about improved varieties, agronomic practices and fertilizers was found to be sufficient but was poor in case of plant protection measures there is a need to step up extension efforts to motivate them to adopt all the recommended practices.
Vaish et. al. (2003) reported that a maximum percentage of the respondents were found having medium level of knowledge. Extent of knowledge was nil for rat control and disease control and disease control. The overall extent of knowledge indicated that women had poor knowledge about rice production technology. There is a need to training of above practices of rice production technology for rural women.

2.4 ATTITUDE OF THE RESPONDENTS TOWARDS TRAINING PROGRAMMES:

Attitude is considered as an organized pre-disposition to think, feel, perceive and behave towards a cognitive object. It is an enduring structure of belief that pre-disposes the individual to have selectively towards attitude reference.

Attitude was found to have positive and highly significant association with the total knowledge level of the respondent as reported by Shindhu (1980), Babu and Singh (1986), anonymous (1990-91) and Satyanarayana et. al. (1994) in their studies. They reported that there was significant change in attitude of respondents as a result of attending the training.

Prabhatkumar and veerbhadraiah (1998) observed that significant change in management attitude and knowledge after the training.

Chhaya et. al. (2001) found that majority of the farm women (89.83 per cent) and students (88.75 per cent) have a favorable attitude towards the training programme.

Mishra (2002) concluded that maximum farm women were got benefited from KVK and there were favoring to it. Maximum farm women benefited to poor section and they perceived change in their attitude.
Shanker et. al. (2002) revealed that majority trained farmers had medium level of critical skill learnt in case of Govt.- KVK, it was high level in NGO-KVK. Z test statistically proved that NGO-KVK was better regarding the critical skill learnt by the trained farmer compared to Govt.-KVK.

Veeriah et. al. (2005) observed that 55 per cent respondents developed favorable attitude 20 per cent had less favorable and 25 per cent indicated medium attitude towards IPM technology.

Singh and Singh (2006) concluded that the attitude has played a significant role in gaining the knowledge of enterprise. It was also concluded that more the favorable attitude towards improved dairy husbandry enterprise, greater is the possibility of gaining its knowledge, skill and adoption of enterprise,

2.5. IMPACT OF TRAINING PROGRAMME ON THE ADOPTION OF FARM TECHNOLOGIES:

The studies of Patel and Patel (1968), Singh (1968), Vashishta (1987) and Reddy (1983) reported a considerable impact of training on the adoption of improved farm practices by respondents.

A Significant rise in adoption level of trainees after attending the training was reported by Jati and Mahapatra (1975 ),Gout and Shrivastava (1983 ),Fulzele (1986), Sibal and Fulzele (1986 ) and Fulzele et al. (1995 ).
Nandpurkar and Sardeshpande (1980) reported that majority of respondents were in low and medium adoption category. But after the training there was considerable change in the level of adoption of improved practices. Therefore, it can be concluded that training has significant impact on adoption.

Sohal and Fulzele (1986) analysed the impact of on campus as well as off campus training programme of Krishi Vigyan Kendra NDR Land found that adoption of recommended practice in area of dairying, fodder careal crops, it was 98.25, 69.35 and 54.0 per cent, respectively after on campus training and 77.93, 76.42 and 142.73 per cent, respectively after off campus training programmes.

Rade and Patil (1987) reported increase in the level of knowledge of adoption of the tribal farmers after undergoing training.

Singh and Singh (1990) analysed the effect of training on the extent of adoption by the farmers within the purview of KVK Munger and found that there occurred definite shift in the level of symbolic adoption on account of training indicating thereby that training can bring change in symbolic adoption.

Patel and Vekaria (1991) reported that majority of the trained farmers had high and medium level of adoption of improved practice rice and sugarcane.

Patil et. al. (1991) revealed that trained rice growers have adopted most of the technology and higher degree than that of the untrained rice growers.

Reddy et. al(1991); Singh and Singh (1991) and Shelar (1991) reported that there was a significant increase in adoption level of recommended practices by trained farmer than that of the untrained farmers.
Singh (1994) reported that the level of increase in adoption from untrained to trained farmers was found to be quite substantial in case of three knowledge segments; i.e. HYV, cultural practice and irrigation.

Kubde et. al. (1994) concluded from the study that the impact of T&V system on agricultural development among contact farmers’ distinctly more than non-contact farmers as adoption was more in contact farmers than non contact farmers

Krishnamurthy and Veerbhadrash (1999) found that the adoption score of trained farmers was higher than the untrained farmers.

Latoria et. al. (2001) suggested that the KVK has an impact on the adoption level of improved cultivation practices of major crops during rabi season in the study area.

Sharma et. al. (2000) found that majority of the trained farmers had completely adopted improved varieties seed treatment, and culture methods. Majority of the farmers had partially, adopted fertilizer application practices, while majority did not adopt plant protection measures.

Singh (2002) found that adoption to be significantly higher in beneficiary farmers than the non-beneficiary farmers in the seed rate, seed treatment, time of sowing, fertilizer application and plant protection measure. There is no significantly difference in respect of high yielding varieties showing because both categories of farmers of using high yielding varieties to similar extant.

Patel et. al. (2003) explained that 57 per cent respondents had medium level of adoption while 23 per cent and 20 per cent had high and low level of adoption respectively about wheat production technology.
Dubey and Srivastava (2005) showed that most of trainees (80 per cent) had higher level of adoption followed by medium level (20 per cent) whereas most of the non-trainees had medium level of adoption (64 per cent) followed by low level of adoption (32 per cent).

Bairwa (2006) noted that maximum 40 per cent beneficiary respondents belonged to medium adopter category followed 36.67 and 23.33 per cent of beneficiary respondents belong to low adopter and high adopter, respectively regarding NADEP compost in wheat crop.

2.6 RELATIONSHIP BETWEEN SOCIO-ECONOMIC PERSONAL PROFILE OF THE RESPONDENTS AND ADOPTION OF FARM TECHNOLOGIES:

Muthiah et al. (1978) revealed that age, education and farm size had no significant relationship with the adoption of recommended practices.

Shushama et al. (1981) revealed that socio personal attributes like; farm size, income, socio-economic status and use of information sources had positive and significant relationship with adoption.

Roy et al. (1984) reported that people who had more social participation (leaders) were higher in adoption level. In other words, there was positive and significant relationship between the social participation and adoption.

Sethy et al. (1984) reported that small and marginal farmers did not have any substantial income from their farm, had poor drought power and naturally low level risk taking willingness, because of poor economic conditions, some how they were also substantially low in personal achievement motivation and these conditions caused to very low level of adoption.
Tyagi and Sohal (1984) revealed that the correlation and regression coefficient of media exposure and farm size were found to be non-significant.

Yadav and Jain (1984) reported that age, education and farm size of farmers were positively and significantly associated with their adoption level.

Upadhyaya and Gupta (1987) revealed that age, social participation, caste. Sources of information utilized had no significant relation with adoption.

Boarikar and Kulkarni (1991) Reported that only socio-economic status and scientific orientation were positively and significantly associated with the adoption, whereas education, social participation, land holding, economic motivation and risk preference were positive but not significantly associated with the adoption of recommended practices.

Veernaiah (1991) revealed that age had a negative and significant relationship, whereas other variables viz. education, socio-economic status. Farm size, cosmopolitaness, mass media participation, extension contact. Scientific orientation, risk preference and level of aspiration had a positive and significant relationship with the knowledge and adoption of recommended critical skill in rain fed groundnut cultivation.

Kansana et.al. (1996) found that the education, participation in training, credit facilities, spicas, number of information sources, all rive factors were found to have a significant association with level of knowledge and adoption.

Padmaiah and Rao (1997) observed that the determinants such as extension contact, mass media exposure and income were positively correlated with adoption behaviour of farmers. While age and farming experience were independent and had no influence on
awareness, knowledge, attitude and adoption behavior of farmers in the integrated watershed Development Programme.

_Bordoloi and Bhattacharya (2000)_ observed that neither of the nine characters, age, education, income, size of operational land holding, cropping intensity, tenure as contact farmer, scientific orientation, social participation and attitude towards mass media failed to show significant correlation with exposure to mass media.

2.7 CONSTRAINTS EXPERIENCED BY THE TRAINEES FOR ADOPTION OF FARM TECHNOLOGIES:

_Sharma (1980)_ indicated that low level of educational programme on dairy innovation as the constraint in adoption of improved dairy practices by the trainees.

_Sohal (1985)_ indicated low level of educational programmes on dairy innovation as the constraint on the part of trainees.

_Fulzele (1986)_ found that the problems faced by the trainees' farmers were varied. It was reported that more emphasis was given on lectures rather that on practical’s by as many as 92 per cent and ranked as first method. However, the problem of 'no co-ordination with other agency for inputs availability and supply was perceived by 58 per cent.

_Kher (1991)_ revealed that the major constraints in adoption of rain fed maize by the growers were timely unavailability of improved seeds, fertiliser, insecticide, and fungicide and spray pumps.
Singh (1994) reported that a major constraint perceived in adoption of modern practices of paddy cultivation was due to lack of knowledge, poor availability of resources and economic unaffordability.

Gautam et. al. (1998) found that major constraints of kharif and rabi crops experienced by marginal farmers were: small land holding, poor knowledge of improved techniques of production, inadequate rural education, unsuitable farm techniques, lack of credit availability, inadequate market price, poor input supply and lack of proper drainage in kharif.

Gautam and Tomar (1999) observed that major constraints related to kharif and Rabi crop production were identified as soil salinity. Poor drainage in the kharif season whereas, inadequate and untimely supply of canal irrigation related with rabi crops and the constraints such as , lack of technical knowledge of crop production, lack of input cost management at the farm level, poor management of weeds, lack of training and inadequate market price were identified in both the season.

Latoria et.al. (2001) observed that the problems as perceived by the trained farmers are: unfavorable seasonal conditions, uneconomic land holdings. Poor irrigation facilities, untimely and inadequate supply of critical inputs, lack of plant protection chemicals and uncertainty in remunerative returns from crops.

Masur and Ashalata (2001) found that finance was the major reason identified for non-adoptions of almost all the activities covered under the training.

Rahman et. al.(2004) reported that cent percent of respondents expressed lack of time as the main constraints while 78y., 64y., and 55 percent of the respondents in a view that inadequate compensation for the spent, place of training centre for away from their home and
lack of awareness about the training as major constraints which come into their way in attending training programme, respectively.

2.8 CONSTRAINTS EXPERIENCED BY THE TRAINERS FOR ORGANISING TRAINING PROGRAMMES:

Mishra and Sinha (1980) while emphasizing on the training programme suggested that the extension agency should try to improve the farm educational exposure of the farmers by producing and distributing suitable literature.

Sangha and Sandhu (1980) reported that reasonable emphasis should be laid on the training in extension methods like exhibitions, campaigns and tours of the farmers.

Sharma (1980) and Nayak et.al. (1986) observed the less promotion opportunities and poor pay scale as. A major occupational constraint among the dairy development workers.

Singh (1983) observed that a large number of project staff 82 per cent felt that lack of co-operation from village panchayat was one of the bottlenecks in successful implementation of project.

Rao and Shastri (1984), Sohal (1985), and Nayak et.al. (1986) reported the inadequate staff at field level and lack of clear cut policy as the main constraint in bringing effectiveness in the dairy development.

Sohal (1985) pointed out inadequate or lack of facilities for updating the subject matter knowledge and communication skill for dairy development workers, lack of mobility for extension workers, absence of incentives and wards for fields workers as a serious constraint in motivating the field staff to work more effectively and efficiently.
Fulzele (1986) reported that as many as 90 per cent of the trainees experienced problem regarding farmers co-operation in organizing training programme as compared to those trainees who indicated the problem of lack of faith on some of new technology on the part of farmers and they constituted 25 per cent. ‘Village panchayats do not co-operate in organizing training programme’ was the problem to 80 per cent trainees.

Rao (1987) reported that inadequate staff, lack of co-ordination with others agencies, low priority for discussing field problems in staff meeting and restrictions on touring days as some of the major administrative and organizational constraints perceived by veterinarians.

Mathur, P.N. and Choudhary, B.N. (1994) Quinquennial Review committee highlighted some of the problems being faced by most of the KVKs. The committee found that the KVKs run by NGOs were better equipped than the KVKs of ICAR institute and state agricultural universities.

Srivastava et. al. (1996) revealed that the majority of female trainees opined that there should be co-operation from other development department during training and the transportation was very serious problem for the female trainees.

Latoria et.al. (2001) reported that the problems as perceived by the trained farmers are unfavorable seasonal condition, uneconomic level holding, poor irrigation facilities, untimely and inadequate supply of crucial input, lack of plant protection chemical and uncertainty in remunerative returns from crops.

Rudra and Mukhopadhyay (2004) identified the major constraints to be responsible for low wheat productivity are use of local variety. Late showing no weeding irrigation schedule, minimum and imbalanced use of fertilizer (NPK) minimum or no top dressing of nitrogen and minimum use of boron. Poor level of adoption of improved cultivation practices
has been prominently observed in backward classes as compared to other classes. Skill oriented training have helped the farmers to shift from lower to higher yield groups and also to reach an average yield of 10.65 q/ha which is much higher than the average yield at district level.

The observations of quinquennial Review Committee are given as under:-

1. Few needs of participation are not assessed.
2. Lesson plans are not good.
3. The technical programmes are heavily tilted in favors of arables crops.
4. There is no proper planning in the conduct of training programmes. The KVKs however, by and large, have created good awareness about improved farming.
5. The existing linkages between KVKs and development departments are not found satisfactory.
6. The progress of building in KVKs of NGOs has been found faster as compared to the KVKs of ICAR and SAUs.
7. Recruitment of unqualified training staff in the KVKs of NGOs.
8. Need for proper orientation of scientists of KVKs in the objectives and methodology of KVKs.

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