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Research Article

Analysis of the profile on participating and non-participating farmers in chickpea production technology

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SUMMARY : The agricultural technologies with respect to production, protection and utilization of various products and by-products are developing very fast and innovations are being evolved day-by-day. These efforts would be wasted if not reached to the real users in a proper time and way. It has also been observed that training is a real way to disseminate the technology and made the targeted beneficiaries aware with the skill and knowledge simultaneously. This will bridge the gap between the need and the research for practical applicability. Though there are many ways and means to learn and know the things, but the vocational training is an appropriate method to make aware and enrich the knowledge of a particular group of having the homogeneity in their knowledge, grasping power and need as well as purpose of the training. Moreover, the impact of training and its adoption in relation to changes brought in practices as well as how long the training made the change in the lifestyle in economic and social status of the targeted trainees may assess and help to find out the lapses in the training programme and limitation of the programme, so that it can be improved properly.

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KEY WORDS :
KVK, Training programme, Chickpea, Profile of farmers

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BACKGROUND AND OBJECTIVES

Agriculture is the backbone of our country and has a prime role in Indian economy. This sector provides livelihood to about 65 per cent to 70 per cent of the labour force. Agriculture not only provides food for growing population but also contributes around 14.60 percentages of country's GDP with tremendous domestic and export potential. The on-campus trainees have more favourable attitude than the off-campus trainees. This is indicating that the exposure of KVK training programme significantly changed the attitude of farmers in desired direction (Dubey *et al.*, 2008). The existing extension approaches are capable to disseminate the ideas and technologies from scientist's lab to farmer's field. Scientists have evolved new varieties and technologies as well as made the farmers aware about the improved package of practices for the major crops but the success is very less in realizing the full potential of the technologies. Training is a planned communication process caused development to bringing desirable changes in behavior *i.e.* knowledge, skill, attitude, motivation etc. in accordance only in professional interest. All the training programmes should, therefore, be planned and implement to teach relevant and specific skill, which suitably meet the requirement of farmers. Training of farmers has been considered as a critical input for accelerating agriculture production and transfer of technical know-how from the core of the process of agricultural development. One study in Rajasthan showed that low adoption in ICAR institute KVKs compared to respondents of NGO KVK (Meena and Singh, 2010). The

ICAR has launched several front line transfers of technology projects in the country. The Krishi Vigyan Kendra is one of such schemes being acted as a development centre to serve as the 'light house" for rapid agricultural development and providing vocational training to the participating farmers, farm women, rural youth and other field functionaries in the field of agriculture and allied sectors. After getting the training, the attitude of the farmers not only gets sharpened but also molded the ever-changing needs of society and farming community. The KVKs are going to play a decisive role in the rural development. The result of training conducted by KVKs and other training programmes revealed that trained farmers produced higher yield of crops than the untrained farmers. In India, chickpea is mainly grown in Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh and Andhra Pradesh. Chickpea is one of the major crop of India grown in semi-arid region. The area of chickpea crop is 8.21 million hectares and production 7.35 million tones with productivity 895 kg/ha (Agricultural statistics at a glance 2010-11). Madhya Pradesh is the largest producing state of chickpea with area of 3112 thousand ha. and production of 2687 thousand tones with productivity 864 kg/ha. In Madhya Pradesh Jabalpur is one of the important chickpea growing district with area of 69400 ha, production 76302 tones and productivity 1130 kg/ha. Thus, the present investigation was undertaken to know about the profile of participating and non-participating farmers under KVK training programmes on knowledge and adoption of chickpea production technology among participating and non- participating farmers of Sihora block of Jabalpur district in Madhya Pradesh.

RESOURCES AND METHODS

The Jabalpur district comprises of seven blocks namely Sihora, Kundam, Jabalpur, Panagar, Majholi, Shahpura and Patan out of which one *i.e.* Sihora block was selected purposively because KVK conducted more number of training programmes on chickpea production technology in Sihora block as compared to other blocks. In Sihora block 56 training programmes were conducted during last five years on chickpea production technology and the number of beneficiaries were 1160. Six villages adopted by KVK were selected. Out of six villages 60 trained farmers and 60 untrained farmers were selected randomly. The sample of the respondents for the study comprised of two types.

Sample I- This sample consisted of farmers who had undergone trainings conducted by Krishi Vigyan Kendra in selected crop. Their selection was made from the list of participating farmers prepared for each village through simple random method. There were 10 farmers selected from each village. Thus, a total of 60 participating farmers were selected from six selected villages under this sample.

Sample II- This sample consisted of non-participating farmers who had not attended any trainings conducted by Krishi Vigyan Kendra. This selection was done on simple random basis from the list of non-participating farmers prepared from the selected villages. Total 10 non-participating farmers were chosen from each village. Thus, 60 non-participating farmers have been selected under this sample. Altogether 60 participating farmers in sample – I and 60 non-participating farmers in Sample – II were selected as shown in Table A.

Table A: Sample respondents selected for the study

Sr. No.	Name of selected block	Name of selected villages	Number of selected respondents		
			Sample -I	Sample -II	Total
1.	Sihora	Muskara	10	10	20
2.		Mohatra	10	10	20
3.		Gidhura	10	10	20
4.		Khithola	10	10	20
5.		Bheekakhada	10	10	20
6.		Nungi	10	10	20
Total			60	60	120

The data were collected through personal interview methods with the help of structured pre-tested schedule for this study. The researcher himself interviewed all the selected participating and non-participating farmers. The purpose of the data collection was fully explained to every respondent before they were asked to answer. The collected data were scored, tabulated and subjected to suitable statistical analysis.

OBSERVATIONS AND ANALYSIS

The profile of the participating and non-participating farmers was studied, this includes socio-psycho-economical and communicational characteristics of the respondents.

It is observed from Table 1 that highest per cent of participating farmers (46.67%) were in middle age group (35 to 50 years), followed by young age group (40.00%). In the older age group, the percentage of participating farmers was only 13.33. Similar age pattern was also observed in the non-participating farmers.

Table 1 : Distribution of participating and non-participating farmers according to their age

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Young (Up to 35 years)	24	40.00	21	35.00
2.	Middle (36 to 55 years)	28	46.67	27	45.00
3.	Old (Above 55years)	08	13.33	12	20.00
	Total	60	100	60	100

Education:

As regards to education status of participating farmers, the data in Table 2 reveal that of the total, 40.00 per cent were middle passed, followed by 26.67 per cent primary passed, 21.67 per cent high school/higher secondary and above and only 11.66 per cent were illiterate. Whereas in case of educational status of non-participating farmers, as many as 33.33 per cent were primary passed, followed by 26.67 per cent were middle passed, 21.66 per cent were illiterate and only 18.34 per cent were educated upto high school/higher secondary and above.

Table 2 : Distribution of participating and non-participating farmers according to their education

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Illiterate	07	11.66	13	21.66
2.	Primary	16	26.67	20	33.33
3.	Middle	24	40.00	16	26.67
4.	High School / Higher Secondary and above	13	21.67	11	18.34
Total		60	100	60	100

Caste:

Distribution of participating and non-participating farmers according to their caste (Table 3) showed that higher per cent of both the participating and non-participating farmers 45 per cent each belonged to the OBC category, followed by SC/ST category and a few of them belonged to general category.

Table 3 : Distribution of participating and non-participating farmers according to their caste

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	General	13	21.67	16	26.67
2.	Other backward classes	27	45.00	27	45.00
3.	Scheduled castes/ scheduled tribes	20	33.33	17	28.33
	Total	60	100	60	100

Land holding:

Data regarding land holding indicated that of the total participating farmers, 40.00 per cent had medium land holding (between 2.01 to 4.0 ha), followed by 26.67 per cent had small land holding (between 1.01 to 2.0 ha) and 21.67 per cent had marginal land holding (Up to 1.0 ha). More or less similar trend was also observed in case of non-participating farmers.

Table 4 : Distribution of participating and non-participating farmers according to their land holding

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Marginal (Up to 1.0 ha)	13	21.67	16	26.67
2.	Small (1.01 to 2.0 ha)	16	26.67	13	21.67
3.	Medium (2.01 to 4.0 ha)	24	40.00	23	38.33
4.	Large (Above 4 ha)	07	11.66	08	13.33
	Total	60	100	60	100

Annual income:

The data in Table 5 show the percentage distribution of respondents according to their annual income. In case of participating farmers 10.00 per cent had income up to Rs. 24,000/- (below poverty line), 25.00 per cent had income between Rs. 24,001 to 50,000/- (very low), 36.66 per cent had income between Rs.50,001 to 1,00,000/- (low), 16.67 per cent had annual income Rs. 1,00,000 to Rs.1,50,000/- (medium) and 11.67 per cent had annual income above Rs. 1,50,000/- (high). Similarly, in case of non-participating farmers 18.33 per cent had income up to Rs. 24,000/- (below poverty line) , 38.33 per cent had income between Rs. 24,001 to 50,000/- (very low), 23.33 per cent had income between Rs.50,001 to 1,00,000/- (low), 11.66 per cent had annual income Rs. 1,00,000 to Rs.1,50,000/- (medium) and 8.35 per cent had annual income above Rs. 1,50,000/-(high).

Social participation:

Data (Table 6) regarding social participation indicated that of the total participating farmers, higher percentage

Table 5 : Distribution of participating and non-participating farmers according to their annual income

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Below poverty line (Up to Rs. 24,000/-)	06	10.00	11	18.33
2.	Very low (Rs.24,001 to Rs. 50,000)	15	25.00	23	38.33
3.	Low (Rs.50,001 to Rs.1,00,000)	22	36.66	14	23.33
4.	Medium (Rs. 1,00,001 to Rs. 1,50,000/-)	10	16.67	07	11.66
5.	High (Rs. Above Rs. 1,50,000/-)	07	11.67	05	8.35
	Total	60	100	60	100

(46.67%) of farmers had medium social participation, followed by 28.33 per cent had low and 25.00 per cent had high social participation. Whereas in case of social precipitation of non-participating farmers, that higher percentage (45.00%) of farmers had medium social participation, followed by 38.33 per cent had low and 16.67 per cent had high social participation.

Table 6 : Distribution of participating and non-participating farmers according to their social participation

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Low (Up to 8)	17	28.33	23	38.33
2.	Medium (9 to 16)	28	46.67	27	45.00
3.	High (Above 16)	15	25.00	10	16.67
	Total	60	100.00	60	100.00

Number of trainings received:

Distribution of participating farmers according to training received (Table 7) indicates that out of 60 participating farmers, majority (51.67%) of the respondents attended above 5 trainings, followed by 33.33 per cent attended 3 to 5 trainings and only 15.00 per cent attended up to 2 training organized by Krishi Vigyan Kendra on improved chickpea production technology.

Table 7 : Distribution of participating and non-participating farmers according to number of training received

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Low (Up to 2 scores)	09	15.00	0	0
2.	Medium (3to5 scores)	20	33.33	0	0
3.	High (above 5 scores)	31	51.67	0	0
	Total	60	100	0	0

Scientific orientation:

Data presented in Table 8 show the distribution of participating and non-participating farmers according to their scientific orientation. Higher per cent (45.00%) of participating farmers indicated medium scientific orientation, 33.33 per cent high while 21.67 per cent showed low scientific orientation. Whereas in case of non-participating farmers, 41.67 per cent indicated low scientific orientation, closely followed by 31.66 per cent medium and 26.67 per cent were of high scientific orientation.

Table 8 : Distribution of participating and non-participating farmers according to their scientific orientation

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Low (6 to 18 scores)	13	21.67	25	41.67
2.	Medium (19 to30 scores)	27	45.00	19	31.66
3.	High (31to 42 scores)	20	33.33	16	26.67
	Total	60	100.00	60	100.00

Economic motivation:

Distribution of participating and non-participating farmers according their economic motivation (Table 9) showed that out of 60 participating farmers, 48.33 per cent indicated medium economic motivation, 33.33 per cent had high and 18.34 per cent showed low economic motivation, whereas in case of non-participating farmers, 45.00 per cent indicated medium economic motivation, 28.33 per cent high and 26.67 per cent showed low economic motivation.

Table 9 : Distribution of participating and non-participating farmers according to their economic motivation

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Low (6 to 18 scores)	11	18.34	16	26.67
2.	Medium (19 to 30 scores)	29	48.33	27	45.00
3.	High (31 to 42 scores)	20	33.33	17	28.33
	Total	60	100.00	60	100.00

Utilization of different sources of information:

Data with respect to use of information sources (Table 10) shows that 51.67 per cent of participating respondents indicate medium , followed by 33.33 per cent high and 15.00 per cent low. In case of non-participating respondents, higher per cent (48.34%) of respondents were utilizing medium sources of information, 30.00 per cent high only 21.66 per cent of them had low utilization of different sources of information.

Table 10 : Distribution of participating and non-participating farmers according to their utilization of different sources of information

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Low (Up to 7)	09	15.00	13	21.66
2.	Medium (8 to 14)	31	51.67	29	48.34
3.	High (Above 14)	20	33.33	18	30.00
	Total	60	100.00	60	100.00

Contact with development agencies:

Among participating respondents the majority (55.00%) of farmers were observed in high level of contact while 25.00 per cent had medium and 20.00 per cent under low level of contact with development agencies. In case of non-participating farmers, 43.34 per cent had medium level of contact, 35 per cent and 21.66 per cent were high and low

Table 11 : Distribution of participating and non-participating farmers according to their contact with development agencies

Sr. No.	Categories	Participating farmers		Non-participating farmers	
		No.	Percentage	No.	Percentage
1.	Low (Up to 7)	12	20.00	13	21.66
2.	Medium (8 to 14)	15	25.00	26	43.34
3.	High (Above 14)	33	55.00	21	35.00
	Total	60	100.00	60	100.00

contact with development agencies, respectively.

The result of the present study shows that higher percentage of chickpea growers (4.67%) belonged to middle age group (36 to 55 years). The work of Singh (2001) and Mishra (2008), Ahirwar (2011) are in line of present finding. With regard to education; higher percentage of the trainees (40.00%) was found to be educated up to middle school level. This finding finds support from the work of Jatav (2011). Maximum training programmes were organized as off-campus followed by on-campus (Singh *et al.,* 2007). The findings regarding caste indicated that higher percentage (45.00%) of trainees belonged to other backward classes. This finding is found similar to the work of Sharma (1992) and Jatav (2011). Regarding size of land holding is concerned, it was observed that higher percentage (40.00%) of the chickpea trainees had medium size of land holding. Due to medium size of land holding, the trainees might be attracted for receiving training to raise their production level. The work of Patel (2000) and Mishra (2008) support the present finding.The majority respondents (36.66%) were of low income (Rs. 50, 001 to Rs. 1,00,001/-), followed by 10.00 per cent growers were below poverty line (up to Rs. 24,000/ -) and only 11.67 per cent growers were of high income (above 1, 50, 00). As regard to medium and low income groups are concerned, only 16.67 per cent of the respondents had medium annual income (Rs. 1,00,001 to Rs. 1,50,000/-) and 25.00 per cent were of very low income (Rs. 24,001 to Rs. 50,000/-). The finding finds support with the work of Mishra (2008) and Ahirwar (2011).The higher percentage of respondents (46.67%) belonged to medium level of social participation group. The finding finds support with the work of Ram (2005) and Ahirwar (2011).The study revealed that majority of the chickpea trainees (51.67%) received multiple of trainings. This finding is supported by Jatav (2011).The study further revealed that higher percentage (45.00%) of the trainees indicated medium level of scientific orientation. The work of Ram (2005) and Jatav (2011) supported the present finding.The study inferred that higher percentages (48.33%) of the trainees were having medium economic motivation. Such finding might be due to the reason that trainees were not fully depended on agriculture occupation. They have other occupation besides agriculture. This finding finds support from the work of Patel (2000) and Jatav (2011).The investigation indicated that majority (51.67%) of the trainees were having medium sources of information. The reason being lack of creating interest to know the various information about chickpea production technology. This finding finds support from the work of Jatav (2011). The studies revealed that majority (55.00%) of the trainees were having high contact with development agencies. This finding is found similar to that of Jatav (2011).

Conclusion:

Profile of both types of respondents was more or less similar in respect of age, caste, while profile of both category of respondents varied in respect of their land holding, education status, annual income, social participation, scientific orientation, economic motivation, utilization of different sources of information and level of contact with development agencies. Most of the participating and non-participating respondents were in the young and middle age group, OBC caste category and having low to medium farm size, respectively. Majority of participating respondents having education from middle to High School / Higher Secondary or above level, having medium to high use of information sources, medium to high contact with development agencies and attended above four trainings. Most of non-participating respondents were illiterate or primary passed, having low to medium scientific orientation, medium use of information sources and medium level of contact with development agencies. Majority of non-participating farmers were having low to medium economic motivation. Majority of participating respondents had low level of annual income and indicate a low to high social participation.The trained farmers scored higher in term of knowledge as well adoption of chickpea production technology.

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