

## Training needs of Chickpea growers in Tikamgarh District of Madhya Pradesh

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### Abstract

*Chickpea (Cicer arietinum L.) is most important pulse crop in Bundelkhand region of India. Madhya Pradesh is the largest producing state of the chickpea crop. India is a major producer of chickpea which contributes 46.2 per cent of national agriculture production. Training is an important educational tool, which may effectively be used to improve skills and update knowledge. Training only can bridge the enormous gap between remarkable yield achieved by the scientists and obtained by the farmers. The first and the most important step in training are to find out the training needs. Training need will explain the gap between job requirement and job performance. The present study was conducted in Tikamgarh district of Madhya Pradesh. Tikamgarh block was selected purposively because larger area and low productivity of chickpea as compared to other blocks. The statistical sample of the research was 120 chick pea growers. Study revealed that about fifty per cent (51.66) of chickpea growers had low knowledge level on chickpea production technology followed by 31.66 per cent and 16.66 per cent had medium and high level of knowledge about the same. Majority of respondents (82.49%) had medium to high training need on chickpea production technology.*

*Training need of chickpea growers required training 'most needed' and ranked 1<sup>st</sup> were disease control (95.83%), IPM and its method of application ranked 2<sup>nd</sup> (90.83%), Seed treatment ranked 3<sup>rd</sup> (89.17%), Insect control ranked 4<sup>th</sup> (88.33%), Sowing method and Time of sowing ranked 5<sup>th</sup> (85.83%), Improved variety ranked 6<sup>th</sup> (84.17%), Plant to plant and Row to row distance ranked 7<sup>th</sup> (83.33%), Seed rate ranked 8<sup>th</sup> (82.50%), Weed control ranked 9<sup>th</sup> (80%), Organic manure and Fertilizer ranked 10<sup>th</sup> (79.16%). While the least important areas on which chickpea growers required training were preparation and selection of land ranked 11<sup>th</sup> (59.67%), proper time and method of irrigation 12<sup>th</sup> (55.83%), harvesting ranked 13<sup>th</sup> (65%) and storage ranked 14<sup>th</sup> (29.16%).*

**(Key Words:-** Training Needs, socio personal attributes, chickpea growers.)

### Introduction

Chickpea is one of the major crops of India grown in semi-arid region. The area of chickpea crop is 9.21 million hectares with production 8.25 million tones and productivity 896 kg/ha. In India, chickpea is mainly grown in Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh and Andhra Pradesh. Agriculture development is intimately related with the application of science and technology in farming. The technology transfer through training, demonstration and extension activities has been viewed as one of the critical factors for increasing agriculture production<sup>[1]</sup>. Training is an important educational tool, which may effectively be

used to improve skills and update knowledge. The first and the most important step in training are to find out the training needs. Training need will explain the gap between job requirement and job performance<sup>[2]</sup>. It is imperative that the farmers trained in cultivation of crop to keep them abreast of the latest innovation available so as to maintain its quality and stability in production. Training plays a vital role in making the farmers more perceptive and equipping them with new chickpea production technology. Thus, proper assessment of training needs, especially in agriculture,

while planning for the training of chickpea growers is essential for effectiveness.

The main objective of the study were to assess the training needs of chickpea grower and to establish the influence of socio economic characteristics of chickpea grower on their training needs in respect of chickpea production technology.

**Materials and Methods**

Tikamgarh block was selected purposively because of having maximum area under chickpea crop and low productivity than potential yield as compared to other blocks. Also the block has more transfer of technology centers and marketing facilities. Tikamgarh block comprises of 154 villages out of which 06 villages were selected randomly on the basis of maximum area covered under chickpea crop. For the study purpose, 20 chickpea growers from each selected village were selected on the basis of random sampling method. Thus, total 120

chickpea growers constitute the sample size. The data was collected with the help of well structured interview schedule, which was prepared on the basis of the study. On the basis of information collected from primary and secondary sources, the main 14 areas of training in relation to chick pea cultivation were selected for present study. These are Preparation and selection of land, Improved varieties, Seed rate, Sowing method & Time of sowing Seed treatment, Plant to plant & Row to row distance, Irrigation , Organic manure & Fertilizer, Weed control, Disease control, Insect control, IPM and its method of application , Harvesting, Storage. Before the actual collection of data , the interview schedule was subjected to pretesting. The collected data were scored, classified, analyzed and presented in the tables. In order to ascertain the association between two variables, chi-square test was applied.

**Results and Discussion**

**Table 1 Socio-economic profile of chickpea grower**

S.No.	Variables	Categories	No. of respondents	Percentage
1.	<b>Age</b>	Young	32	26.66
		Middle	65	54.16
		Old	23	19.16
2.	<b>Land Holding</b>	Marginal	16	13.33
		Small	25	20.83
		Medium	57	47.50
		Large	22	18.33
3.	<b>Education</b>	Illiterate	11	9.16
		Can read and write	15	12.50
		Up to Primary	23	19.16
		Up to Middle	26	21.66
		Up to High School	37	30.83
		Up to College level	08	6.66
4.	<b>Occupation</b>	Agriculture	52	43.33
		Agriculture+ daily wage worker	20	16.66
		Agriculture + caste occupation + dairy + service	16	13.33

4.		Agriculture +shop keeping	17	14.16
		Agriculture +self employment	15	12.50
5.	<b>Caste</b>	General	24	20.00
		Other backward caste	40	33.33
		Scheduled caste /Scheduled tribe	56	46.66
6.	<b>Farm Power</b>	No bullock pair	54	45.00
		One bullock pair	21	17.50
		Two or more bullock pairs	23	19.16
		Tractor	22	18.33
7.	<b>Material Possession</b>	Low level	18	15.00
		Medium level	73	60.83
		High level	29	24.16
8.	<b>Type of Family</b>	Nuclear Family	35	29.16
		Joint Family	85	70.83
9.	<b>Social Participation</b>	Low	52	43.33
		Medium	50	41.66
		High	18	15.00
10.	<b>Annual income</b>	Below poverty line	12	10.00
		Very low	22	18.33
		Low	48	40.00
		Medium	21	17.50
		High	17	14.16
11.	<b>Extension Participation</b>	Low	63	52.50
		Medium	31	25.83
		High	26	21.66
12.	<b>Mass media exposure</b>	Low	45	37.50
		Medium	54	45.00
		High	21	17.50
13.	<b>Contact with development agencies</b>	Low	65	54.16
		Medium	38	31.66
		High	17	14.16
14.	<b>Training on chickpea Production Technology</b>	Low	65	54.16
		Medium	32	26.66
		High	23	19.16
15.	<b>Adoption behaviour</b>	Low	59	49.16
		Medium	40	33.33
		High	21	17.50
16.	<b>Knowledge level</b>	Low	62	51.66
		Medium	38	31.66
		High	20	16.66

The data given in table 1, reveal that 54.16 % growers were of middle age group, followed by young age 26.66 % and old age 19.16 % group. Out of total

respondents, majority of respondent 47.50% had medium land holding, followed by 20.83 %, 18.33 % and 13.33 % were having small, large and marginal

land holding, respectively. Distribution of chick pea growers according to their educational level was 9.16 % were illiterate, 12.50 % can read and write, 19.16 % had education up to primary level, 21.66 % had middle level and 30.83 % had higher secondary education. However, only 6.66 % respondents had college level education. Data regarding occupation 43.33 % were dependent solely on agriculture, followed by 12.50 % in agriculture + self employment, 16.66 % in agriculture +daily wages, 14.16 % were involved in agriculture + shop keeping and 13.33 % were engaged in agriculture along with caste occupation + dairy + services. The data depicts that out of total chickpea growers, 33.33 % belonged to other backward caste, 46.66 % to scheduled caste, and 20.00 % to general category. Regarding farm power, data reveal that 45.00 % had no bullock pair, followed by 17.50 % had one bullock pair, 19.16 % had two or more bullock pairs and 18.33 % had tractor. It is clearly imperative from the table that 15.00 % of the respondents had low level of material possession, followed by 60.83 % with medium and 24.16 % with high level material possession. The data reveal that out of the total chickpea growers, 29.16 % were having nuclear family followed by 70.83 % were having joint family. social participation of chickpea growers. The data clearly depict that higher percentage 43.33% of the respondents had low social participation, followed by medium 41.66 % and high 15.00 % social participation. For annual income higher percentage 40.00% of were having low annual

income, followed by 10.00 % fell under the category of below poverty line income group, 18.33 and 17.50 % each under very low and medium annul income, respectively. However, only 14.16 % respondents were having annual income between Rs. 1,50,001 to Rs. 3,50,000/- as they were under high annual income group. Data show that extension participation of chickpea growers were 52.50 % respondents had low extension participation, followed by 25.83 % had medium and 21.66 % had high extension participation. Mass media exposure of chickpea growers. The data reveals that higher percentage of respondents 45.00% had medium mass media exposure, followed by 37.50% and 17.50% respondents had low and high mass media exposure. The data reveal that out of total growers, 54.16 % had low contact, followed by 31.66 % had medium and 14.16 % had high contact with development agencies. As regard to training exposure is concerned, more than fifty per cent 54.16% of respondents belonged to low category of training exposure, while 26.66% and 19.16 % respondents had medium and high training exposure. The data reveals that 49.16 % had low adoption, followed by 33.33 % had medium adoption and 17.50 % had high adoption of chickpea production technology. The data clearly reveals that less than fifty per cent growers 31.66 % had medium knowledge of chickpea technology, followed by 51.66 % had low knowledge and only 16.66 % had high knowledge<sup>[3,4]</sup>.

**Table 2 Training need of chickpea growers on various dimensions of chickpea production practices**

S. No.	Package of practices	Training need			Rank
		Most needed	Needed	Not needed	
1.	Preparation and selection of land	68 (56.67)	40 ( 33.33)	12 (10.00)	XI
2	Improved varieties	101 (84.17)	10 (8.33)	09 (7.50)	VI
3	Seed rate	99 (82.50)	21 (17.50)	0 (0.00)	VIII
4	Sowing method & Time of sowing	103 (85.83)	17 (14.17)	0 (0.00)	V
5	Seed treatment	107 (89.17)	13 (10.83)	0 (0.00)	III
6	Plant to plant & Row to row distance	100 (83.33)	15 (12.50)	5 (4.17)	VII
7	Irrigation	67 (55.83)	40 (33.33)	13 (10.83)	XII
8	Organic manure & Fertilizer	95 (79.16)	25 (20.83)	0 (0.00)	X
9	Weed control	96 (80.00)	24 (20.00)	0 (0.00)	IX
10	Diseases control	115 (95.83)	05 (4.17)	0 (0.00)	I
11	Insect control	106 (88.33)	14 (11.67)	0 (0.00)	IV
12	I.P.M. and its method of application	109 (90.83)	11 (9.17)	0 (0.00)	II
13	Harvesting	65 (54.17)	30 (25.00)	25 (20.83)	XIII
14	Storage	35(29.16)	40 (33.34)	45 (37.50)	XIV

Table 2 reveals that the first ten important areas on which the chickpea growers required training most essentially were Disease control, IPM and its method of application, Seed treatment, Insect control, Sowing method and Time of

sowing, Improved variety, Plant to plant and Row to row distance, Seed rate, Weed control, Organic manure and fertilizer, However, the least important areas on which chickpea growers required training were proper time and method of irrigation,

harvesting, preparation and selection of land.

**Table 3 Association between Independent variables and training needs of chickpea growers**

S.No.	Characteristics	$\chi^2$ value	Coefficient of Association (C)
1.	Age	4.899NS	0.198
2.	Land holding	18.985 *	0.369
3.	Education	13.961*	0.322
4.	Occupation	8.577NS	0.258
5.	Caste	3.233NS	0.161
6.	Farm power	13.831*	0.3078
7.	Material possession	9.772 *	0.2744
8.	Family type	7.913*	0.248
9.	Social participation	10.036*	0.2778
10.	Annual income	1.124 NS	0.0963
11.	Extension participation	11.418*	0.2947
12.	Mass media exposure	10.667*	0.2857
13.	Contact with development agencies	11.535*	0.2961
14.	Training on Chickpea Production Technology	17.022*	0.3524
15.	Adoption behaviour	9.892*	0.2759
16.	Knowledge Level	12.878*	0.3113

\* Significant at 5% level of probability

NS = non significant

The result of chi square analysis in above table revealed that characteristics namely Land Holding 18.985\* Education (13.961\*), Farm Power (13.831\*) Material possession (9.772\*), Family Type (9.772\*), Social Participation (10.036\*), Extension Participation (11.418\*), Mass media exposure, (10.667\*) Contact with development agencies (11.535\*) Training on Chickpea Production Technology (17.022\*), Adoption behaviour (9.892\*), Knowledge Level (12.878\*) were positively and significantly associated with training need of chick pea growers at 0.05 level of probability. The remaining characteristics namely Age (4.89NS) Occupation (8.577NS), Caste (3.233 NS), Annual Income (1.124) NS influenced the

training need of chick pea grower but non significantly.

Coefficient of association measures the degree of association or dependence between the two characters. Data show that characteristics namely Age(0.198), Land Holding (0.369), Education (0.322), Occupation (0.258), Caste (0.161), Annual Income (0.0963), Farm Power (0.3078), Material possession (0.2744), Family Type (0.248), Social Participation (0.2778), Extension Participation (0.2947), Mass media exposure, (0.2857) Contact with development agencies (0.2961) Training on Chickpea Production Technology (0.3524), Adoption behaviour (0.2759), Knowledge Level (0.2759)

## Conclusion

The study concluded that the first ten important areas on which the chickpea growers required training most essentially were disease control, IPM and its method of application, Seed treatment, Insect control, Sowing method and Time of sowing, Improved variety, Plant to plant and Row to row distance, Seed rate, Weed control, Organic manure and fertilizer, However, the least important areas on which chickpea growers required training were proper time and method of irrigation, harvesting, preparation and selection of

land. Land holding, education, farm power, material possession, family type, social participation, extension participation, mass media exposure, contact with development agencies, training on chickpea production technology, adoption behaviour, knowledge level, of chickpea growers had significant association with training needs, while age, annual income, occupation, and caste of chickpea growers were found to have non-significant association with training needs.

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