

Research Article

Knowledge extent of farmers about vegetable production technologies

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SUMMARY : This study was undertaken on 600 respondents (vegetable producers) selected from 20 villages of Kullu and Manali block of Kullu district of Himachal Pradesh. The maximum percentages of the respondents were found having medium level of knowledge, to which the respondents were distributed accordingly to the knowledge categories viz., low, medium and high. Out of 12 agricultural practices of vegetable production, sowing time of the crops was ranked at first (95.00%) followed by distance of row to row and plant to plant (87.33%) and grading of crops (84.67%) ranked at second and third, respectively. The poor extent of knowledge was reported for the practices viz., insects-pests control (13.33%), disease control (9.67%) and storage of crops (6.83%). The overall extent of knowledge was found to be 62.47 per cent. The variables like caste, education, housing pattern, annual income, house hold materials, transportation materials, communication media possession, overall materials possession, extension contact with information sources, economic motivation, risk orientation, adoption, occupation, social participation and scientific orientation had significant and positive correlation with extent of knowledge, means that the value of these variables increases, the knowledge extent was also increased.

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KEY WORDS :

Vegetable producers,
Vegetable production,
Extent of knowledge

BACKGROUND AND OBJECTIVES

The vegetables are the most important to the human diet for better health, because they possess high nutritive value and are rich source of carbohydrates, proteins, vitamins and minerals. The selection of research area in Kullu Valley of Himachal Pradesh was due to the very good conditions for temperate vegetable production and seed production of the same. Hence, the area was suitable for both that of the vegetable production and their breeding for most of the temperate types of vegetables. The summer being mild is suitable for many sub-tropical important vegetables. Still in this area the vegetable production is low, because improved vegetable and seed production technologies are not fully adopted by the farmers at their own field (Suman, 2008). Even if they produce, the marketing problems are faced by them. Therefore, this research programme is

aimed to find out the knowledge extent of farmers about the vegetable production, technological gap between the farmers and institute, constraints faced by the farmers in adoption, a study was conducted to see the level of knowledge and to suggest the solution regarding the awareness and their attitude in order to identify the areas of training needs with the objectives, to find out the socio economic status of the farmers and to find out the level of knowledge of farmers about recommend practices in vegetable production.

RESOURCES AND METHODS

The present study was conducted in Kullu district of H.P. Out of 12 districts, Kullu district was selected purposely. It covers five community development blocks, two blocks were selected and out of these two blocks, 10 villages were selected randomly in each block with the help of random number table. From the comprehensive list

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of farmers of 20 villages, 30 farmers (Small, Medium and Large) from each village were selected randomly. Thus, 600 farmers were included in this study. All the questions in the knowledge test were dichotomized having yes/no or correct / incorrect questions, if the answer was 'yes or 'correct' it was assigned a score of (1) and if the answer was (no) or incorrect it was assigned a score of (0). The mean of scores for each item in the knowledge test was calculated and a total score for all the items was computed with the help of following formula:

$$\text{Knowledge extent} = \frac{\text{Total scores obtained by the respondents}}{\text{Maximum attainable scores in the aspect}} \times 100$$

The range of scores obtained by the respondents might vary from 0 to 70 in the knowledge test which indicated the knowledge level of the respondents.

OBSERVATIONS AND ANALYSIS

The experimental findings obtained from the present study have been discussed in following heads:

Socio-economic profile of the vegetable producers:

The study depicted that the respondents (50.50%) were found in middle age group belonging to general caste (81.50%) and literate (84.33 %). Joint families were observed maximum having below 4 members (45.00%) in their families. The holding size below one hectare was

observed with majority of the farmers (65%). Kuchcha houses were 73.67 per cent. Agriculture was observed as main occupation (99.00 %) and 39.17 per cent respondents earned the annual income in the range of Rs. 5,000 to 10,000. More than half of respondents did not associate to any organization. Among formal (2.25 %), family members (2.23 %) and neighbours (1.34 %) and in case of mass media, radio (0.54) and TV (0.26) were main sources of information. The scientific orientation (34%), economic motivation (28%) and risk orientation (56%) were observed of medium levels.

Extent of knowledge of vegetable production technology :

Table 1 shows that majority of the respondents (55.00%) were found possessing medium level of knowledge followed by 27.00 per cent and 18.00 per cent respondents who had low and high levels of knowledge, respectively. The mean of scores was found to be 54.50 with a range of minimum 27.53 and maximum 81.47. Almost similar findings were obtained by Mishra (2005).

Table 2 revealed that among all the 12 agricultural practices of vegetable production technology, sowing time of the crops was ranked at 1st (95.00 %) as far as knowledge of respondents concerned. The practices distance of row to row and plant to plant was put at rank 2nd (87.33 %), grading of crops ranked at 3rd (84.67 %), preparation of soil at 4th (82.33 %), application of FYM in the field at 5th (81.33 %),

Table 1: Extent of knowledge of vegetable production technology

(n=600)

Sr. No.	Categories	Respondents	
		N	%
1.	Low (up to 40)	162	27.00
2.	Medium (40 to 60)	303	55.00
3.	High (60 and above)	135	18.00
	Total	600	100.00

Mean = 54.50, S.D. = 7.89, Min = 27.53, Max. = 81.47

Table 2 : Practice wise knowledge extent of vegetable production technology

(n=600)

Sr. No.	Practices	Extent of knowledge (%)	Ranks
1.	Preparation of soil	82.33	IV
2.	Application of FYM in the field	81.33	V
3.	Application of fertilizers	77.67	VII
4.	Distance of row to row and plant to plant	87.33	II
5.	Sowing time of the crops	95.00	I
6.	Irrigation	75.67	VIII
7.	Application of inter-culture operations	56.67	IX
8.	Insects and pests control	13.33	X
9.	Disease control	9.67	XI
10.	Harvesting	79.17	VI
11.	Grading the crops	84.67	III
12.	Storage of the crops	6.83	XII
	Average	62.47	

Table 3 : Correlation co-efficient (r) between different variables and extent of knowledge about vegetable production technology

Sr. No.	Variables	Correlation co-efficient (r)
1.	Age	0.0105
2.	Caste	0.2938**
3.	Education	0.3865**
4.	Family type	-0.0765
5.	Family size	-0.0111
6.	Holding size	0.0915
7.	Housing pattern	0.3354**
8.	Occupation	0.2045*
9.	Annual Income	0.2768**
10.	Farm Power	0.1498
11.	Agricultural implements	-0.0134
12.	House hold materials	0.3125**
13.	Transportation	0.2698**
14.	Communication media possession	0.4259**
15.	Over all materials possession	0.3356**
16.	Social participation	0.3020*
17.	Extension contact with information sources	0.2795**
18.	Scientific orientation	0.2451*
19.	Economic motivation	0.2584**
20.	Risk orientation	0.2856**
21.	Adoption	0.3057**

* and ** Indicate significance of value at P=0.05 and 0.01 is 0.195 and 0.254, respectively

harvesting at 6th (79.17 %), application of fertilizers at 7th (77.67 %), irrigation at 8th (75.67 %) and application of inter-culture operations at 9th (56.67 %). The other practices viz., insect-pests control, disease control and storage of crops were ranked at 10th (13.33 %), 11th (9.67 %) and 12th (6.83%), respectively. The overall knowledge index was calculated to be 62.47 per cent.

Relationship between different variables and extent of knowledge about vegetable production technology:

It is revealed from Table 3 that the variables like caste, education, housing pattern, annual income, house hold materials, transportation, communication media exposure, overall materials possession, extension contact with information sources, economic motivation, risk orientation and adoption were found highly significant and positively correlated with the extent of knowledge of the respondents, where as the relationship with the occupation, social participation and scientific orientation had moderately significant and had positive correlation ship. Family type, family size and agricultural implements were found insignificant and negatively correlated with respect to knowledge level of respondents. Age, holding size and farm power were found

insignificant but positively correlated.

Conclusion :

It may be concluded that the overall extent of knowledge, which was 62.47 per cent, seems to be medium level about vegetable production technology. Hence, there is need of special attention by providing training about vegetable production to the farmers so that their knowledge could be increased and the adoption of technology would ultimately be enhanced. There are many characteristics influencing the extent of knowledge about vegetable production technology, which also need manipulation towards higher production of vegetables.

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