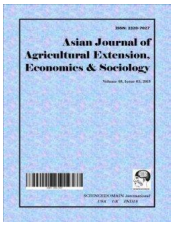

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A Study on Knowledge Level of KVK Trained Vegetable Growers

Aditya Kumar Malla[1*]

[1]Department of Extension Education, College of Agriculture, OUAT, Bhubaneswar, India.

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

India is the second largest producer of vegetables next to China in the world accounting for about 12 per cent of world production. Vegetables play a vital role in the maintenance of human health and make the diet nutritive and balanced. The study was conducted in Begunia, Bolagarh and Khordha blocks of Khordha district, Odisha. Both purposive and random sampling procedure was followed for selection of the district, blocks, gram panchayats, villages and the respondents. The total sample size of the study was 120. The response was obtained from each individual respondent in a structured interview schedule which was pretested with 10 per cent samples other than the respondents of the study. The information from the respondents was collected by the researcher during the period of 3rd March to 15th May 2017. Thus the data collected were tabulated and subjected to empirical measurement and analysis. Krishi Vigyan Kendra (KVK) is a noble concept developed by Indian Council of Agriculture Research (ICAR) which rests upon a solid base of transfer of technology (ToT) from the laboratory to farmer's field. With regards to the knowledge level of vegetable growers, 77.50 per cent belonged to medium knowledge level category. They had more knowledge in soil and land preparation with the highest mean score of 2.93. All of 13 socioeconomic variables were a positive and significant relationship with the level of knowledge obtained from correlation study.

**Corresponding author: E-mail: adityamalla32@gmail.com;*

Keywords: Risk orientation; innovation proneness; cosmopoliteness; scientific orientation.

ABBREVIATIONS

KVK : Krishi Vigyan Kendra
TOT : Transfer of Technology
ICAR : Indian Council of Agricultural Research

1. INTRODUCTION

Odisha produces about 10.30 m.MT of horticultural produce from an area of 1.21 m.ha. and accounts for 4.28% of the total horticultural production in the country [1]. Orissa is the second largest producer of brinjal and cabbage accounting for about 20% and 14% respectively of the total production in the country [2]. The state produces 2.20 m. MT of brinjal from an area of 0.13 m ha. with the productivity of 16.6 t/ha and about 1.15 m. MT of cabbage from an area of 0.04 m. ha. with the productivity of 28 t/ha which is the highest among cabbage producing states [3]. The production and productivity have to be stepped up by the available knowledge, skill, advanced technology and its adoption by the vegetable growers. The need-based training may improve the knowledge and skill of growers to increase production and create a source of income and food. The ICAR launched several frontline transfers of technology project in the country. The Krishi Vigyan Kendra is one such scheme which was introduced by ICAR in the year 1974 [4]. The objectives of present study are: 1) assess level of knowledge of KVK trained vegetables growers, 2) investigate the relationships between the level of knowledge and socioeconomic characteristics of growers.

2. MATERIALS AND METHODS

The study was conducted in Begunia, Bolagard and Khordha blocks of Khordha district. Both purposive and multistage random sampling methods were adopted for selection of the district, block, gram panchayat, village and respondents. A list of vegetable growing farmers of these selected villages was obtained from the scientists of KVK, from this list structure proportionate stratified random sampling method was followed to select respondents of the study. A total of 120 (one hundred twenty) number of respondents were selected for the purpose of the investigation. The response was obtained from each individual respondent in a structured interview schedule which was pretested with 10 per cent samples other than the respondents of the study. Statistical interpretation was performed by using different statistical software. The correlation coefficient was done at significance level of 0.05.

2.1 Formulation of Hypotheses

The relationship between the socio-economic profile and knowledge level of the respondents on vegetable production technology:

H_0: There is no significant relationship between the socio-economic profile and knowledge level of the respondents on vegetable production technology.

H_1: There is the existence of a significant relationship between socio-economic profile and knowledge level of the respondents on vegetable production technology.

3. RESULTS AND DISCUSSION

The data compiled in the Table 1 depicted that out of total respondents 20% were illiterate; whereas 13.33% received primary and middle school, 21.66% high school and 31.66 % graduate.

Table 1. Distribution of respondents according to education (N=120)

Sl. no.	Category	Frequency	Percent
1	Illiterate	24	20
2	Primary school	16	13.33
3	Middle school	16	13.33
4	High school	26	21.66
5	College & above	38	31.66
Total		120	100

Table 2. Knowledge level of respondents on vegetable production technologies (N=120)

Knowledge level	Fully known (3)		Partially known (2)		Not known (1)		Mean score	Rank
	f	%	f	%	f	%		
Soil and land preparation	112	93.33	8	6.66	0	0	2.93	I
Varieties	102	85	18	15	0	0	2.85	III
Planting	97	80.83	23	19.16	0	0	2.80	IV
Intercultural practices	106	88.33	14	11.67	0	0	2.88	II
Nutrient management	92	76.66	28	23.34	0	0	2.76	V
Plant protection measures	98	81.66	22	18.34	0	0	2.81	III
Harvesting	86	71.66	34	28.34	0	0	2.71	VI

**Significant at the 0.05 level of probability*

A perusal of Table 2 depicted that the respondents had sound knowledge in soil & land preparation with highest mean score 2.93, followed by plant intercultural practices (2.88), variety (2.85) and planting (2.80); whereas they had satisfactory knowledge on nutrient management (2.76). But they had somewhat poor knowledge on planting (2.71) of vegetable production.

Further, an effort was undertaken to categorize the respondents basing on their knowledge level on the major areas of vegetable production, into 3 categories i.e. low, medium and high.

The Table 3 indicated that among the respondent's majority (77.50%) belonged to medium knowledge level category followed by high (12.50%) and low (10%) [5].

Table 3. Categorization of respondents according to their knowledge level (N=120)

Category	Frequency	Percentage
Low	12	10
Medium	93	77.50
High	15	12.50

The data in Table 4 indicates the correlation coefficient between Age (X_1), Education (X_2), Occupation (X_3), Annual family income (X_4), Housing pattern (X_5), Land holding size (X_6), Extent of participation (X_7), Cosmopolites (X_8), Media exposure (X_9), Farm power (X_{10}), Risk orientation (X_{11}), Innovation proneness (X_{12}) and Scientific orientation (X_{13}) with knowledge level (Y_1) of vegetable production technologies.

Table 4. Relationship between socio-economic profiles with the knowledge level of respondents (N=120)

Sl. no.	Variables	Value of correlation coefficient (r)
1.	Age	0.487*
2.	Education	0.358**
3.	Occupation	0.118
4.	Annual family income	0.142*
5.	Housing pattern	0.126
6.	Land holding size	0.157*
7.	Extent of participation	0.034
8.	Cosmopoliteness	0.028
9.	Media exposure	0.045
10.	Farm power	0.263**
11.	Risk orientation	0.152*
12.	Innovation proneness	0.282**
13.	Scientific orientation	0.186**

** *Significant at the 0.01 level of probability*

The correlation coefficient "r" between age (X_1) and knowledge level (Y) was found to be 0.487, significant at 0.05 probability level. This indicates that age of respondents has a positive significant relationship with the level of knowledge of vegetable production technologies i.e. an increase in age of respondents leads to increase in the level of knowledge of vegetable production technologies. Hence the null hypothesis was rejected in this case [6].

The "r" value was found to be 0.358 between education (X_2) and knowledge level, (p= 0.01). showing a positive significant relationship of education with the level of knowledge of vegetable production technologies i.e. an increase in education of respondents leads to an increase in the level of knowledge of vegetable production technologies. Hence the null hypothesis was rejected.

The "r" value between occupation (X_3) and knowledge level was found to be 0.118, which was found to be non-significant at both 0.05 and 0.01 level of probability [7]. Thus, it was concluded that occupation doesn't have any positive significant relationship with the level of knowledge of vegetable production technologies i.e. occupation of the respondents did not have any effect on the level of knowledge acquired. Hence the null hypothesis was accepted.

The correlation coefficient "r" between annual family income (X_4) and knowledge level was found to be 0.142 (p= 0.05) [8], indicating that annual family income has a positive significant relationship with the level of knowledge of vegetable production technologies i.e. the annual family income of respondents varied with the level of knowledge of vegetable production technologies acquired. Hence the null hypothesis was rejected.

The "r" value was found to be 0.126 between housing pattern (X_5) and knowledge level, which was not significant at 0.05 and 0.01 level of probability. Thus, it was concluded that housing pattern has no positive significant relationship with the level of knowledge of vegetable production technologies which means the level of knowledge of vegetable production technologies was unaffected by the housing pattern of respondents. Hence the null hypothesis was accepted [9].

Land holding size has a positive significant relationship (r= 0.157, p= 0.05) with the level of knowledge of vegetable production technologies i.e. the landholding size of respondents varied with the level of knowledge of vegetable production technologies acquired by the respondents. Hence the null hypothesis was rejected.

The "r" value between the extent of participation (X_7) and knowledge level was found to be 0.034 and was non-significant at both 0.05 and 0.01 level of probability. Thus, it was concluded that extent of participation has no positive significant relationship with the level of knowledge of vegetable production technologies which means the level of knowledge of vegetable production technologies was unaffected by the extent of participation of respondents. Hence the null hypothesis was accepted [10].

The correlation coefficient "r" between cosmopoliteness (X_8) and knowledge level was found to be 0.028, which was non-significant at both 0.05 as well as 0.01level of probability [11]. Thus, it was concluded that cosmopoliteness has no positive significant relationship with the level of knowledge of vegetable production technologies i.e. cosmopoliteness of the respondents did not have any effect on the level of knowledge acquired by the vegetable growers. Hence the null hypothesis was accepted.

Media exposure has a positive significant relationship (r= 0.045, p=0.05 and 0.01) with the level of knowledge of vegetable production technologies i.e. the media exposure of respondents varied with the level of knowledge of vegetable production technologies acquired by the respondents. Hence the null hypothesis was rejected [12].

Farm power has a positive significant relationship (r= 0.263, p= 0.01) with the level of knowledge of vegetable production technologies [13] i.e. an increase in farm power of respondents leads to increase in the level of knowledge of vegetable production technologies. Hence the null hypothesis was rejected.

Risk orientation has a positive significant relationship with the level of knowledge (r= 0.152, p=0.05) of vegetable production technologies i.e. an increase in risk orientation of respondents leads to increase in the level of knowledge of vegetable production technologies. Hence the null hypothesis was rejected. A positive significant relationship (r=0.282, p= 0.01) was seen between innovation proneness

and level of knowledge of vegetable production technologies i.e. the innovation proneness of respondents varied with the level of knowledge of vegetable production technologies acquired by the respondents. Hence the null hypothesis was rejected [14].

The correlation coefficient "r" between scientific orientation (X_{13}) and knowledge level was found to be 0.186, which was significant at 0.01 level of probability. Thus, it was concluded that scientific orientation has a positive significant relationship with the level of knowledge of vegetable production technologies i.e. an increase in the scientific orientation of respondents leads to increase in the level of knowledge of vegetable production technologies. Hence the null hypothesis was rejected. The study indicated that a large proportion of the respondents had received college and graduate education. Medium level of knowledge had a positive significant relationship with their socio-economic profile. The respondent farmers had sound knowledge in soil & land preparation with highest mean score 2.93, followed by plant intercultural practices (2.88), variety (2.85) and planting (2.80); whereas they had satisfactory knowledge on nutrient management (2.76). But they had somewhat poor knowledge on harvesting (2.71) of vegetable production. Further, an effort was undertaken to categorize the respondents basing on their knowledge level on the major areas of vegetable production, into 3 categories i.e. low, medium and high. Among the respondent's majority (77.50%) belonged to medium knowledge level category followed by high (12.50%) and low (10%).

4. CONCLUSION

From the present study, it is concluded that there is a positive knowledge level of KVK trained vegetable growers. So it implies that KVK should organize such type of need-based and skill oriented more training programmes and extension activities to increase the income which will ultimately uplift the socio-economic status of the farming communities in the area.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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