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Information Management System among the Vegetable Growers in Western Uttar Pradesh

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ABSTRACT

Most of the vegetable growers had a high level of information management. The sources like friends, television, progressive farmers, input suppliers, newspapers, mitra krishak/sampark krishak and University Scientists were found to the most credible sources of information. More than 50 per cent package of practices completely utilized by the vegetable growers. The higher satisfaction index percentage was found in harvesting and lowest in use of micro-nutrient /plant growth regulator.

Keywords: Information management system and vegetable growers

INTRODUCTION

India is the second largest producer of vegetable in the world next to china. The total cultivated area of vegetable in India was 9396 thousand hectares and production 162897 thousand metric tons, with productivity of 17.3 metric tons/ha. In Uttar Pradesh area of vegetable 859.4 thousand hectare and production was 18563.04 thousand metric tons, with productivity of 21.6 thousand metric tons/ha. (Source: N.H.B.Data Book, 2013-14). In Meerut and Saharanpur Mandals area of vegetable 3,22,291 ha. and production was 63,58,374 metric tons, with productivity of 19.73 t/ha. India has progressed significantly during the past 6 decades in developing high yielding varieties / hybrids of different vegetable crop with their improved qualities and standardized agro-techniques, suitable for agro-climatic condition. Vegetable consumption has increased from 85 to 190g. per day/capita. However, the present per capita consumption of vegetable per day is only 190 grams which is far below than the recommended requirement 280 grams. The Meerut and Saharanpur Mandals are nearest to Delhi, so the vegetable growers obtain maximum profit from vegetables and uplift their living standard. There is need to increase the production and productivity of vegetables through high yielding varieties / hybrids of different vegetable cultivation. Therefore, it is necessary to utilization of information sources for awareness and develop confidence among the farmers about vegetable cultivation.

METHODOLOGY

The descriptive type survey based research design was used for the investigation. Western Uttar Pradesh comprises of eighteen districts. Out of which two district were selected for operation of this project on the basis of maximum and minimum as per hectare productivity of vegetable crops. From each district two blocks was selected randomly and from each block four villages selected purposely. Thus, total 16 villages were selected for the study and 10 farmers purposely selected from each village. The total sample size was of 160 respondents for the investigation.

Information Input

The information output /outcome was operational zed in terms of the degree of utilization of information obtained by the respondents for vegetable cultivation. It was measured on three point continuum i.e. complete utilization, partial utilization and non utilization and accordingly, a score of 3,2 and 1 was given respectively. All these three types of scores become the base for determining the information management system among the vegetable of growers.

Client satisfaction index

It was computed by multiplying total obtaining score

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of the respondents by hundred and divided by the maximum obtained score under each practice.

$$\text{Client satisfaction index percentage} : \frac{\text{Total score obtained X 100}}{\text{Maximum obtainable score}}$$

Information Source credibility:

It was operationally defined as the degree to which the vegetable growers trusted a particular source of information to be accurate and useful for taking information on vegetable, information on vegetable cultivation. It was measured with the help of most least credibility index method.(Sandhu, 1973) as a first step, the source of information prevailing in the study area were traced out by contacting the vegetable growers as well as field extension accordingly divided into three categories namely, institutional group & mass media and non institutional source of information then the respondents were asked to indicate the most and least credibility source used by them in obtaining information about vegetable cultivation technology. The relative credibility index for each source of information was worked out by using the following formula:

$$\text{Relative credibility index (RCI)} = \frac{x}{y} \times \frac{100}{N}$$

X= No. of respondents who believed the source most credible.

Y= No. of respondents who believed the source least credible.

N= Total no. of respondents in the sample.

The relative credibility index of each source of information was worked out and rank were assigned as per their order of preference.

Credibility of identified information sources

The source of information used by the vegetable growers in the study area were identified and divided into three categories i.e. institutional media, group approach, mass media and non institutional. The relative credibility index of the sources of information was worked out and the ranks were assigned

Table 1: Credibility index of different information source (Categories wise)

Source	Most trust worthy	Least trust worthy	Relative credibility index	Ranks
Institutional information sources				
District Horticulture Officer's	55	105	0.33	V
Horticulture Extension Officer's/SMS Horticulture	63	97	0.41	III
Agriculture Development Officer's/Sub Divisional Extn. Officer	58	102	0.36	IV
Krishi Vigyan Kendra Scientist/ University Scientist	89	71	0.78	I
Village Development Officer's /Kisan Sahayak	78	82	0.59	II
Group approach				
Meeting's	88	72	0.76	III
Training's	92	68	0.85	II
Demonstration's	122	38	2.01	I
Field days	92	68	0.85	II
Farmers Interest Group/Self Help Group	88	72	0.76	III
Mass media				
Radio	114	46	1.55	IV
T.V.	136	24	3.54	I
News papers	129	31	2.60	II
Literature (Leaflet / Folders / Pumplets / Bulletins / Magazines)	115	45	1.60	III
Farmers fairs/exhibitions	89	71	0.78	VI
Posters, Feature film	95	65	0.91	V
Non Institutional/Informal sources				
Neghbours	113	47	1.64	VI
Relatives	119	41	1.81	V
Friends	137	23	3.72	I
Progressive farmers	133	27	3.08	II
Mitra krashak/Sampark Krashak	128	32	2.50	IV
Input supply dealers	132	28	2.95	III

The data presented in table-1 reveals that KVK/University scientists had the highest credibility (0.78), ranked in the first among the vegetable growers followed by VDOs /Kisan Shayak credibility (0.59), ranked in second, horticulture extension officers/SMS horticulture credibility (0.41), ranked in IIIrd, agriculture development officer/Sub divisional extension officers credibility (0.36), ranked in IVth and District Horticulture Officer credibility(0.33), ranked in Vth respectability.The findings seem to be natural as the vegetable grower generally maintained more contacts with the KVK/University scientists, VDOs/Kisan Sahayak provided to the vegetable growers more accurate information on vegetable cultivation.

In group approach, demonstrations were found to be the most credibility (2.01), ranked in Ist source among all other sources, followed by trainings & filed days credibility (0.85), ranked in IInd , meeting and farmers interested group/self help group credibility (0.76), ranked in IIIrd respectively. Since demonstration is one most effective group approach for dissemination of agricultural innovations to be the farmers field with its motto of "Seeing is believing". Hence H.D.O/H.E.O./ University & Scientists should arrange more and more field demonstrations at farmer's field.

In mass media, television was found to have most credibility (3.54), ranked in Ist among all the other sources of mass media like Newspaper credibility (2.60),

ranked in IInd literature *i.e.*, leaflet/Folder/Pamphlet/ Bulletin/Magazine credibility (1.60) , ranked in third, radio credibility (1.53), ranked in IVth, Poster/feature film credibility (0.91), raked in Vth and farmers fair/exhibitions credibility (0.78), ranked in VIth, since television. is the most effective mass media for dissemination of agriculture innovation to the farmers filed because television provide authentic information and respondent receive information from television by seeing & hearing. Among the non-institutional sources of information, friends were found to be the most credibility (3.72), ranked in first, followed by progressive farmers credibility (3.08), ranked IInd, input supply dealers credibility (2.95), ranked IIIrd, Mitra Krishak/Smpark krishak credibility (2.50), ranked IVth, relative credibility source (1.81), ranked Vth and Neighbors credibility source (1.64) ranked VIth respectively. These findings were more or less similar to those of waghdare *et. al.* (1998).

Who reported that agricultural assistant/ village extension workers, followed by neighbors/friend/relatives, progressive farmers/ local leaders and radio/T.V./Cinema were the most credibility sources of information by the vegetable growers. Sharma *et.al.* (2000) also found that Rural Agriculture Extension Officer, followed by friends, neighbors/progressive farmers, Radio/T.V. and Agricultural Scientists were the most important sources used by majority of the vegetable growers.

Extent of utilization of information sources

The response of the respondents on the extent of utilization of various identified information sources were obtained on the three point continue *i.e.* "always, often and sometimes" and are presented in table -2,3,4,5 respectively.

Institutional media

The data presented in table – 2, among the institutional source, IFFCO/KRIBHKO was found to be the most popular source of information use by 32.50 per cent of the vegetable grower always. The next preferred sources of information were Krishi Vigyan Kendra Scientists / University Scientists 28.12 per cent, government input sale center 26.25 per cent, Horticulture Extension Officers/ SMS Horticulture 21.87 per cent, District Horticulture Officer & District Agriculture Officers 19.37 per cent and District Plant Protection Officer 18.75 per cent were used always by the vegetable growers as source of information. Sharma, D.D. and Thakur Sameer (2005) reported that 25 per cent respondents were used agro-input agencies/dealers for the source of information "always".

Table 2: Extent of utilization of institutional media

Particulars	Always	Often	Sometime
District Horticulture Officers	31 (19.37%)	25 (15.62%)	104 (65.00%)
Horticulture Extension Officers/SMS Horticulture	35 (21.87%)	19 (11.87%)	106 (66.25%)
District Agriculture Officers	31 (19.37%)	25 (15.62%)	104 (65.00%)
District Plant Protection Officer	34 (18.75%)	27 (16.87%)	99 (61.87%)
Krishi Vigyan Kendra Scientist / University Scientists	45 (28.12%)	30 (18.75%)	85 (53.12%)
IFFCO/KRIBHKO	52 (32.50%)	44 (27.50%)	64 (40.00)
Government Input Sale Centers	42 (26.25%)	29 (18.12%)	89 (55.62%)

Group Media

It is obvious from the Table -3, reveals that " Meetings and trainings" were the most preferred sources of information used by 53.75 per cent and 45.62 per cent vegetable growers always, followed by demonstration, farmers interested group/self help group and filed days 40.62 per cent, 36.87 per cent and 31.87 per cent respectively.

Table 3: Extent of utilization of group media

Particulars	Always	Often	Sometime
Meeting's	86 (53.75%)	52 (32.50%)	22 (13.75%)
Training's	73 (45.62%)	54 (33.75%)	33 (20.62%)
Demonstration	65 (40.62%)	65 (40.62%)	30 (18.75%)
Field days	51 (31.87%)	62 (38.75%)	47 (29.37%)
FIG/SHG	59 (36.87%)	52 (32.50%)	49 (30.62%)

Mass media

It is evident from the Table 4, that television and newspaper were the most preferred sources of information used by 68.12 per cent and 60 per cent, followed by radio 57.87 per cent, literature/ leaflets/folder/ pamphlets/ bulletins/magazines,poster and farmers fair/ exhibitions 50 per cent and 46.25 per cent respectively. Sharma, D.D. and Thakur Sameer (2005) reported that radio was the most popular source of information used by 25 per cent respondents often.

Table 4: Extent of utilization of mass media

Particulars	Always	Often	Sometime
Radio	83 (57.87%)	55 (34.37%)	22 (13.75%)
Telivision	109 (68.12%)	35 (21.87%)	16 10.00%)
News papers	96 (60.00%)	41 (25.62%)	23 (14.37%)
Literature(leaflet/ Folder / Pamphlets / Bulletins / Magazines	80 (50.00%)	41 (25.62%)	39 (24.37%)
Farmers Fair/Exhibitions	74 46.25%)	46 (23.75%)	40 (25.00%)
Posters	80 (50.00%)	43 (26.87%)	37 (23.13%)

Non institutional Media

The data presented in Table 5, that "neighbours were the most preferred source of information used by 71.25 per cent vegetable growers always, followed by input supply dealers 70 per cent, progressive farmers & relative 68.75 per cent, Mitra Krishak/Contact farmers 66.88 per cent and friends 66.88 per cent, respectively.

This findings were in conformity with those of Sonawane *et.al*. (2001) reported who that among the personal locality sources , majority of the respondents had used friends, neighbours and progressive farmers to seek information on agriculture technology. With regards to personal cosmopolite sources, agricultural assistant and University Scientists and among the 'mass media' radio and television were used to get information about agricultural technology.

Table 5: Extent of utilization non institutional media

Particulars	Always	Often	Sometime
Neighbours	114 (71.25%)	37 (23.12%)	9 (5.62%)
Relatives	110 (68.75%)	37 (23.12%)	13 (8.12%)
Friends	108 (67.50%)	38 (23.75%)	14 (8.75%)
Progressive farmers	110 (68.75%)	39 (24.37%)	11 (6.87%)
Mitra Krishak/Contract Farmers	107 (66.88%)	43 (26.87%)	10 (6.25%)
Input supply dealears	112 (70%)	36 (22.50%)	12 (7.50%)

Utilization/adoption of obtained information,

There is no use of taking any information or innovation unless and until it is adopted/utilized by the farmer at his farm/orchard/kitchen garden. A perusal of the data depicted in table-6, had revealed that a majority of the vegetable growers had completely utilized the obtained information pertaining to filed preparation (55%), selection of verities and seed rate (46.87%), nursery management/ seed & soil treatment (38.12%), planting (53.12%), fertilizer management (54.37%), use of micronutrient/ plant growth regulator(39.37%), timely irrigation (56.25%), plant protection management (48.75%), Harvesting(76.25%), grading and packing (65.62%) and marketing (64.37%) .

Table 6: Utilization of information and satisfaction index percentage of the vegetable growers

Particular/Practices	Extent utilization of information				
	Complete utilization	Partial utilization	Non utilization	Satisfaction index %	Rank
Field Preparation	88 (55.00%)	64 (40.00%)	8 (5.00%)	83.33	iv
Selection of varieties & Seed rate	75 (46.87%)	64 (40.00%)	21(13.12%)	77.92	vii
Nursery Management/ Seed and soil treatment	61(38.12%)	55 (34.55%)	44 (27.50%)	70.21	viii
Planting	85 (53.12%)	46 (28.75%)	29 (18.13%)	78.33	vi
Fertilizer management	80 (54.37%)	50 (31.25%)	30 (18.75%)	70.08	ix
Use of micro-nutrient/plant growth regulator	63(39.37%)	44 (27.50%)	53 (33.12%)	68.75	x
Timely irrigation	90 (56.25%)	50 (31.25%)	20 (12.50%)	81.25	v
Plant protection management	78 (48.75%)	60 (37.50%)	22 (13.75%)	78.33	vi
Harvesting	105 (65.62%)	43 (26.87%)	12 (7.50%)	86.04	i
Grading and packing	103 (64.37%)	37 (23.12%)	20 (12.50%)	83.96	iii
Marketing	122 (76.25%)	11(6.87%)	27(16.87%)	84.17	ii

The maximum 40 Per cent, of the respondents had partially utilized the obtained information pertaining to field preparation & selection of varieties and seed rate. In case not utilized the obtained information pertaining to use of micro-nutrient/plant growth regulator 33.12 Per cent respondents. The highest satisfaction index was found in harvesting (86.04 %), it was ranked in Ist , marketing (84.17 %), ranked in IInd and use of micro-nutrients / plant growth regulator (68.75), it was ranked in xth.

CONCLUSION

It has been concluded from the study that the source like Krishi Vigyan Kendra/university scientists, village development officer, training, demonstration, news-papers, literature, television friends and progressive farmers were found to be most credible, hence the efforts should be made to equip these sources with the up to date knowledge about vegetable cultivation so that they may discharge their services more efficiently in the process of modernization of Horticulture in the state. Krishi Vigyan Kendra/University scientist and newspapers provide first hand information on vegetable cultivation (Horticulture) innovations to the farmers. Therefore, it is essential to enhance the contacts of vegetable growers with these sources & concerted efforts should also be made to arrange more trainings and demonstrations on vegetable cultivation in order to increase the credibility among the vegetable growers/farmers towards Horticulture technologies/ innovation.

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