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Information seeking behavior for the adoption of IGKV released rice varieties

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Abstract

The study was conducted at 2015-18 in Chhattisgarh plains zone, whereas 320 respondents randomly selected for the getting information for adoption of rice varieties which was released by Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.), there are a lot of rice varieties notified but only a small no. of rice varieties reached amongst field of farmers. Hundred per cent respondents gathered information from their friends about IGKV rice varieties. 98.13 per cent respondents collected information from RAEOs whereas only 13.13 per cent information collected from agriculture scientist. In plains Chhattisgarh, respondents started to use mass media also, they used farm magazine, television, radio, Kisan call center and internet also. Highest credibility 82.08 per cent scored for progressive farmers from personal localite and 92.86 per cent credibility noted for agriculture scientist and 92.04 per cent credibility observed for RAEOs amongst respondents from cosmopolitans. Hundred per cent credibility noted for Kisan call center amongst respondents from mass media group and less credibility observed for internet, because of all farmers didn't well-educated and they had lack of knowledge about technology.

Keywords: adoption, adoption rate, information, information source, credibility, cosmopolitans personal localite, mass media

Introduction

Rice (*Oryza sativa* L.) is the most important staple food in Asia. More than 90 per cent of the world's rice is grown and consumed in Asia, where 60 per cent of the world's population lives (Guyer *et al.*, 2013)^[3]. It accounts for 73 per cent of the calorie intake in Bangladesh, 40 per cent in Nepal, and 30 per cent in India. South Asia has about 37 per cent of the world's total rice area and approximately 50 per cent of the rice-growing area in South Asia is rainfed. India released rice varieties from before 1978, and current status of a total number of released rice varieties are 1481, in which only a few varieties are popular amongst farmers due to its characteristic. All released rice varieties are not well diffused amongst farmers. (<http://seednet.gov.in>, 2017), Indira Gandhi Krishi Vishwavidyalaya is an autonomous non-profit, research and educational organization working for the uplifting of farmers livelihood of Chhattisgarh and it's headquarter is situated in Raipur. Many rice varieties evolved from IGKV, Raipur. First rice variety was Mahamaya which was evolved in 1996 from Asha x Kranti parentage, long bold grain with 45-55q ha⁻¹ average yield. Further year by year research in rice increased and its resulted till 2015 about sixteen rice varieties evolved i.e. Mahamaya, Poornima, Shyamla, Danteshwari, Indira Sugandhit Dhan-1, Bamleshwari, Samleshwari, Jaldubi, Chandrahasini, Indira sona, Indira barani dhan-1, Karma mahsuri, Maheshwari, Durgeshwari, Rajeshwari, Indira aerobic-1 (Sarawagi *et al.*, 2016)^[6].

There are a lot of rice varieties released by India, but a few varieties diffused amongst farmers. More than 16 rice varieties released by IGKV but only a small number of varieties reached amongst farmers field. Information is power; it is a vital source for a human being for living a prosperous life on the earth. Information as "all knowledge, ideas, facts, data and imaginative works of the mind, which are communicated formally or informally in any format", After analysis of data, found that information seeking behavior play a great role for the adoption of IGKV released rice varieties credible sources can increase the rate of adoption. Information is a first stage of the adoption process, *i.e.* awareness-interest-decision-trial-adoption (Singh, 2011)^[7].

Materials and Methods

The study was conducted during the year 2015-18 in the Chhattisgarh plains zone, there are total fifteen districts where four districts *i.e.* Raipur, Rajnandgaon, Dhamtari, Mahasamund were purposively selected because of here maximum newly released rice varieties distributed. Two blocks where maximum rice seed of newly released varieties was distributed will be

selected purposively from each selected district to make total eight blocks in the sample. Four villages where the maximum seed of newly released varieties was distributed were selected purposively from each selected block, thus total villages were thirty-two. Ten respondents were selected randomly from each selected village, thus total respondents were three hundred twenty. The data were collected through well structured and pre-tested interview schedule; an interview schedule consisting of various types questions related to the objectives of the study was, therefore developed. Initially, the schedule was developed in English and was then translated to the local language *i.e.* Hindi. The schedule was pre-tested and as per the experience gained during pre-testing the language of some of the questions was suitably worded and was made more understandable and clear and the schedule was then finalized. The data were collected by personal interview method by contacting the respondents (farmers) at their home. The respondents did hesitate to give required information in the beginning. To get the authentic information the help of local leaders, sarpanch, member of gram panchayat, Kisan Mitra, and Rural Agricultural Extension Officers (RAEOs) were sought and the rapport was developed with the respondents.

Results and Discussion

Source of information for IGKV released rice varieties

Source of information, mainly categorized into three categories *i.e.* personal localite, cosmopolitans and mass media

Personal localite source

Regarding this head, table 1 depicted that under the personal localite information sources, hundred per cent of the respondents used a friend for the information in which majority (74.69%) respondents occasionally got information followed by 25.31 per cent of the respondents often collect information from this sources. Further observed that 99.69 per cent of the respondents seek relatives as an information source, in which maximum (90%), 98.75 per cent of the respondents seeking information from their neighbor, in which majority (80%) respondents occasionally seeking information whereas 18.75 per cent of the respondents often seeking information from this source. Only 82.81 per cent of the respondents gathered information from progressive farmers in which 67.81 per cent of the respondents got information occasionally whereas only 15 per cent of the respondents often got information from this source.

Cosmopolitans' source

Under this head same table elaborated that majority (98.13%) of the respondents collected information from Rural Agriculture Extension Officers in which 78.13 per cent respondents occasionally gathered information regarding IGKV released rice varieties whereas 20 per cent of the respondents often got information from this source. Further elaborated that 31.88 per cent of the respondents used Senior Agriculture Development Officers in which only 16.56 per cent respondents often got information and 15.31 per cent respondents occasionally got information from this sources. Only 13.13 per cent of the respondents got information from Agriculture Scientist in which only 13.13 per cent respondents occasionally collected information from this source and remaining 86.88 per cent of the respondents not seeking information from this source. Whereas maximum respondents not used cooperative society as an information source, only 11.88 per cent of the respondents got information from this source in which respondents only occasionally used.

Mass media source

Regarding this head same table noted that only 23.75 per cent of the respondents used farm magazine for the information of IGKV released rice varieties in which all respondents only occasionally used and remaining 76.25 per cent of the respondents not used this source. 23.44 per cent of the respondents used television for the information in which 15 per cent of the respondents occasionally seeking information from television and 8.44 per cent of the respondents often seeking information and remaining 76.56 per cent of the respondents not used this source. 21.88 per cent of the respondents got information from radio in which 13.44 per cent of the respondents occasionally gathered information from radio and 8.44 per cent of the respondents often gathered information from the radio. Only 7.81 per cent of the respondents got information from the internet in which all respondents occasionally used this source and 92.19 per cent of the respondents not got information from this source. Whereas only 1.56 per cent of the respondents seeking information from Kisan Call Centre and they were only occasionally used.

Whereas Pathak *et al.* (2009) reported that all the respondents followed by pesticide dealers and traders (76%), personal experiences (70%), neighboring farmers (68%) and village level agricultural workers (64%), respectively. A percentage of the respondents (40%) got the information from mass media and only 36 % respondents from Agricultural Extension Officer.

Table 1: Distribution of respondents according to their information seeking behavior (n=320)

Sl. No.	Sources	Types of information seeking behavior						Overall information seeking		Overall rank
		Often		Occasional		Never		F	%	
		F	%	F	%	F	%			
A Personal localite										
1	Friend	81	25.31	239	74.69	0	0.00	320	100.00	I
2	Neighbor	60	18.75	256	80.00	4	1.25	316	98.75	III
3	Relatives	31	9.69	288	90.00	1	0.31	319	99.69	II
4	Progressive farmer	48	15.00	217	67.81	55	17.19	265	82.81	V
B Cosmopolitans										
1	RAEOs	64	20.00	250	78.13	6	1.88	314	98.13	IV
2	SADOs	53	16.56	49	15.31	218	68.13	102	31.88	VI
3	Cooperative society	0	0.00	38	11.88	282	88.13	38	11.88	XI
4	Agriculture scientist	0	0.00	42	13.13	278	86.88	42	13.13	X
C Mass media										
1	Farm magazine	0	0.00	76	23.75	244	76.25	76	23.75	VII
2	Radio	27	8.44	43	13.44	250	78.13	70	21.88	IX

3	Television	27	8.44	48	15.00	245	76.56	75	23.44	VIII
4	Kisan call centre	0	0.00	5	1.56	315	98.44	5	1.56	XIII
5	Internet	0	0.00	25	7.81	295	92.19	25	7.81	XII

Note: Data are based on multiple responses, F= frequency

The credibility of information sources of the respondents

▪ Credibility on personal localite

Under this head table 2 incorporated that highest credibility percentage (82.08%) obtained for a progressive farmer in this group in which 64.15 per cent full credibility recorded and 17.19 per cent credibility were partial for this source. 55.16 per cent credibility observed for a friend in which 89.69 per cent credibility was partial and 10.31 per cent credibility was full. 54.59 per cent credibility noted for a neighbor in which 90.82 per cent credibility was partial whereas only 9.18 per cent full credibility observed amongst respondents. 52.19 per cent credibility recorded for relatives whereas 95.61 per cent credibility observed partial and only 4.39 per cent credibility noted as fully credible.

▪ Credibility on cosmopolitans

Regarding this heads, the same table illustrated that highest credibility observed for agriculture scientist in whom 86.88 per cent obtained as partial credibility and 85.71 per cent credibility noted as full credibility. 92.04 per cent of the respondents obtained for Rural Agricultural Extension Officers in which 84.04 per cent credibility occurred as full credibility and 15.92 per cent credibility recorded as partial credibility. 81.86 per cent credibility observed for Senior

Agriculture Development Officers amongst respondents in which 68.13 per cent obtained as partial credibility and 63.73 per cent recorded as full credibility. Only 55.26 per cent credibility recorded for cooperative society in which 89.47 per cent recorded as partial credibility and only 10.53 per cent recorded as full credibility. Whereas Painkra *et al.* (2014) incorporated that SADOs and RAEOs were having more than 95 per cent credibility among the respondents.

▪ The credibility of mass media

In this category, highest (100%) credibility recorded for Kisan Call Centre in which hundred per cent recorded as full credibility. Further illustrated by the table, 73.33 per cent credibility recorded for television amongst respondents in which 53.33 per cent recorded as partial credibility and 46.67 per cent recorded as full credibility. 67.76 per cent credibility recorded for farm magazine in which 64.47 per cent observed as partial credibility and 36.53 per cent recorded as full credibility. 61.43 per cent credibility recorded for radio in which 77.14 per cent noted as partial credibility and 22.86 per cent observed as full credibility, whereas only 50 per cent credibility observed for internet amongst respondents, in which hundred per cent partial credibility recorded amongst respondents.

Table 2: Distribution of respondents according to their credibility on information sources (n=320)

Sl. No	Information sources	Level of credibility						Obtained score	Obtainable score	%	Overall rank
		Full		Partial		Nil					
		F	%	F	%	F	%				
A Personal localite											
1	Friend	33	10.31	287	89.69	0	0.00	353	640	55.16	X
2	Neighbor	29	9.18	287	90.82	4	1.25	345	632	54.59	XI
3	Relatives	14	4.39	305	95.61	1	0.31	333	638	52.19	XII
4	Progressive farmer	170	64.15	95	35.85	55	17.19	435	530	82.08	IV
B Cosmopolitans											
1	RAEOs	264	84.08	50	15.92	6	1.88	578	628	92.04	III
2	SADOs	65	63.73	37	36.27	218	68.13	167	204	81.86	V
3	Cooperative society	4	10.53	34	89.47	282	88.13	42	76	55.26	IX
4	Agriculture scientist	36	85.71	6	14.29	278	86.88	78	84	92.86	II
C Mass media											
1	Farm magazine	27	35.53	49	64.47	244	76.25	103	152	67.76	VII
2	Radio	16	22.86	54	77.14	250	78.13	86	140	61.43	VIII
3	Television	35	46.67	40	53.33	245	76.56	110	150	73.33	VI
4	Kisan call centre	5	100	0	0	315	98.44	10	10	100.00	I
5	Internet	0	0	25	100	295	92.19	25	50	50.00	XIII

Note: Data are based on multiple responses, F= frequency

Moreover illustrated by Fig 1, that respondents highly got information about IGKV rice varieties from a friend, neighbor, relatives and RAEOs but their credibility not equal for all information sources, most credible sources noted after

data analysis, in the credible source list, most credible sources were RAEOs, Agriculture scientist and Kisan Call Centre. Respondents believed most that information which was released by these credible sources.

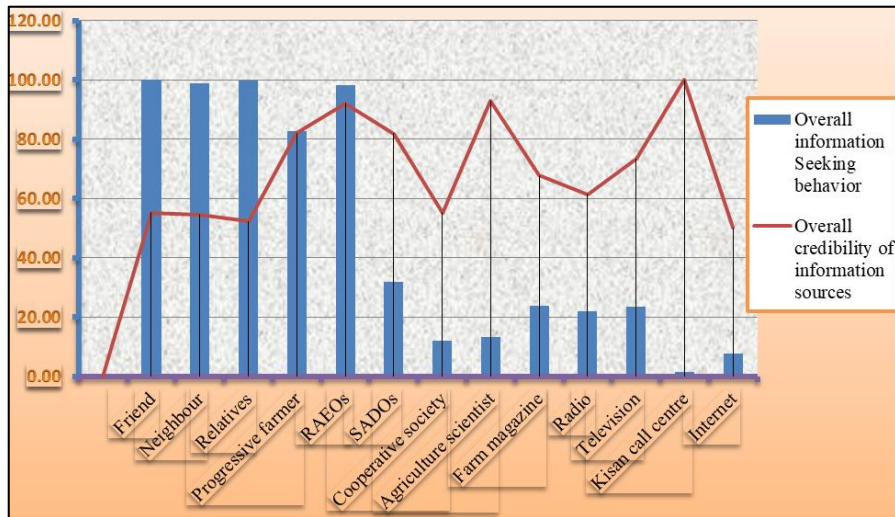


Fig 1: Information seeking behavior along with their credibility

Overall information seeking behavior along with the overall credibility of information sources

Regarding this head, table 3 illustrated that respondents had highest (95.31%) information seeking behavior for IGKV released rice varieties from personal localite followed by 38.75 per cent information seeking behavior recorded for cosmopolitans whereas only 15.69 per cent information seeking behavior observed from mass media. Further about overall credibility, highest credibility (87.2%) noted for cosmopolitans followed by mass media (66.53%) and 60.08 per cent credibility observed for personal localite.

For increasing adoption area of IGKV released rice varieties need to spreading information through cosmopolitans group, because of it may increase the adoption rate. Singh *et al.* (2012)^[8] revealed that source of information utilized by moth bean growers was found to be significantly associated with the level of knowledge and extent of adoption. Borthakur *et al.* (2014)^[11] depicted that farmers residing in districts that do not have a RARS will probably get even less information and opportunities regarding new varieties released by AAU. So, AAU should try to improve the quality of extension work going on in districts that do not have a rice centric RARS to ensure a better bridge between the laboratory and the fields.

Table 3: Overall information seeking behavior along with the overall credibility of information sources

Group of information source	Overall information seeking behavior				Overall credibility of information sources		
	n	Obtainable score	Obtained score	%	Obtainable score	Obtained score	%
Personal localite	320	1280	1220	95.31	2440	1466	60.08
Cosmopolitans	320	1280	496	38.75	992	865	87.2
Mass media	320	1600	251	15.69	502	334	66.53

Note: Data based on multiple responses

Conclusion

Results concluded that need to focus on cosmopolitans for the speedy adoption of IGKV released varieties, some information gap occurred amongst respondents, no anyone respondents fully used the information sources. Partially used information sources for IGKV released rice varieties, because of most of the respondents interested in non-IGKV rice varieties due to its seed availability and good productivity also. Adoption area of IGKV cannot increases without a focus on the diffusion of knowledge.

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