Original Research Article

Utilization pattern of different agricultural information sources and channels by paddy farmers in Telangana

Abstract:

Paddy is the major crop in India. It is the second most important crop in the world in terms of cultivation. India's public agricultural information generation, testing, and transmission system are one of the world's largest and most complicated. Information sources and channels play a major role in communicating various farm information to farmers, who are the end-users of information containing various farm technologies, which motivates them to adopt newer technologies. In the Telangana state Khammam district was selected purposefully and two blocks and in each block two villages were selected based on the more cultivation area of paddy. From each village, thirty respondents were selected proportionately and randomly, comprising a total of 120 respondents as a sample. The study revealed that progressive farmers and extension officials of the agricultural department were the most preferred agricultural information sources, whereas result demonstration and television were important channels preferred in the study area.

Keywords: Utilization, Sources, Channels, Personal, Cosmopolite and Information.

Introduction

The principal staple food of South East Asia's people is paddy (Oryza Sativa L.) In India, paddy is one of the most important crops grown. The second-most-widely-cultivated crop in the world, accounting for 22.3% of all cultivable land global output of rice (Khatkar, 2016). Paddy producers' use of information channels is directly or indirectly related to

increased productivity, economic well-being, and farmer empowerment. India has one of the largest and most complicated public agricultural information generation, testing, and transmission systems in the world. Despite, the fact that a wide range of agricultural information sources and channels are available for spreading agricultural messages, it is critical to understand the choices and preferences of farmers concerning various sources and channels in their socio-economic setting (Khan *et al*., 2011). Information sources and channels possess an important role in communicating various farm information to farmers, who are end-users of information containing various farm technologies, which motivates them to the adoption of newer technologies (Gupta and De, 2011). Information is a key component in the decision-making process and the utilization of information has relied upon its content, relevancy and timeliness (Rahman *et al*., 2016). Farmers have different choices for information sources. However, most extension organizations have limited resources and time to investigate how diverse information sources influence the spread of new and improved technologies (Patil *et al*., 2020). Through information technology, information from any region of the world might be made available, transforming the world into a global village. As a result, farmers should be given the same opportunity to get timely farm-related information (Dhayal *et al*., 2012). According to Patel *et al*. (1993), in a developing country like India, agricultural information and improved technology disseminated through the use of modern communication technologies can play a significant role in agricultural development. Considering these facts, the present study entitled "Extent of utilization of different agricultural information sources and channels by paddy farmers in Telangana" was conducted with the objective "To assess the utilization pattern of information sources and channels as preferred by the farmers" in the research area.

Research methodology

The present study was conducted in the Khammam district of Telangana state. There were 46 blocks in the Khammam district, in which two blocks were selected namely, the

Kusumanchi and Nelakondapally considering the maximum cultivated area of paddy crop.. In each block, two villages were selected based on the maximum area under cultivation of paddy crop. Accordingly, in the Kusumanchi block, Kusumanchi and Jujulraopeta villages were selected and in the Nelakondapalli block, Nachepalli and Cherumadaram villages were selected. In each village, thirty respondents were selected using proportionate random sampling, comprising a total of 120 paddy farmers as the sample.

Utilization is defined as the act of putting something to practical and productive use. In this context, utilization is defined as the act of productive use of sources and channels of agricultural information by the paddy farmers. The utilization was measured on a five-point continuum scale, namely, very frequent, frequent, rare, very rare and no bearing scores of 4,3,2,1 and 0, respectively. The extent of utilization of each respondent was carried out by summing all scores obtained in all categories namely personal localite sources, personal cosmopolite sources, personal cosmopolite channels and impersonal cosmopolite channels. Data were collected through a pre-structured interview schedule. Mean percent score (MPS) was calculated by multiplying each respondent's score by a hundred and divided by the maximum score obtained under each category of utilization.

Results & Discussion

Distribution of respondents according to the extent of utilization of different sources and channels.

The utilization pattern is the frequency of use of different sources and channels by the paddy farmers for seeking information about farm information (Gudana,2018). The extent of utilization of paddy farmers was calculated by adding the scores obtained by each farmer in all the four categories of utilization. The categories of utilization were personal localite sources, personal cosmopolite sources, personal cosmopolite channels and impersonal

cosmopolite channels. Then, paddy farmers were categorized into five levels of utilization namely, very low (41- 57), low (58 -73), medium (74- 90), high (91-106) and very high (107-122).

Table.1 Distribution of respondents according to extent of utilization of different sources and channels. (n=120)

S. No.	Levels of Utilization	Respondents	
		Frequency(n=120)	**Percentage**
1.	Very low (41- 57)	3	2.50
2.	Low (58 -73)	7	5.80
3.	Medium (74- 90)	18	15.00
4.	High (91-106)	48	40.00
5.	Very high (107- 122)	44	36.70
	Total	**120**	**100.00**

The results regarding the distribution of respondents according to the extent of utilization of different sources and channels are depicted in the table.1. It indicates that a majority of the respondents belong to high and very high levels of utilization. Nearly, 77.00 per cent of the paddy farmers belonged to the high and very high level of utilization, whereas 15.00 per cent of paddy farmers belong to the medium level of utilization. Only, 9.00 per cent of the paddy farmers belonged to both low and very low levels of utilization.

The utilization pattern of personal localite sources by paddy farmers

Personal localite sources are the local leaders and residents who are a part of the community's unique social structure. In the old social system, individual local sources are significant for communication purposes. Hence the data regarding the utilization pattern of personal localite sources by the respondents were gathered, analyzed using MPS and the results are presented in Table 2.

Table.2 The utilization pattern of personal localite sources by paddy farmers (n= 120)

S. No.	Utilization pattern of Personal Localite Sources	MPS	Rank
1.	Progressive farmers	84.37	1
2.	Neighbours & fellow farmers	83.54	2
3.	Opinion leaders	82.29	3
4.	Friends & relatives	78.75	4
5.	Farmer clubs & associations	63.95	5
6.	Family members	59.58	6
7.	FPO & FPC members	57.08	7
8.	Local Agri graduates	39.37	8
9.	Panchayath members	39.16	9
10.	Religious heads	38.54	10
11.	Private money lenders	33.33	11

Table.2 depicts the findings of the utilization pattern of personal localite sources for getting knowledge on paddy farming. Progressive farmers (84.37), neighbours and fellow farmers (83.54), and opinion leaders (82.29) were the most important personal localite sources of information for

paddy growers seeking knowledge about paddy farming by paddy growers. They were ranked first, second, and third in the paddy farmers' preference list, accordingly. The reason for attraction towards these top-ranked sources was for more productivity and higher returns compared to others. Particularly respondents would be able to observe what are the package of practices followed by them and seeing by believing would apply more in the case of personal cosmopolite sources because of their close association among them in the same locality.

The neighbours & fellow farmers were found to be second place in personal cosmopolite sources, this is due to the fact that these sources may be easily available to every respondent for attaining knowledge about paddy. Paddy farmers would believe in their neighbours & fellow farmers for some additional information that was unknown to them and also provide situation-based knowledge regarding paddy cultivation.

The opinion leaders were given the third rank in personal localite sources used by the respondents for seeking knowledge about paddy cultivation. This may be, due to the reason that they were the sources to whom respondents could gather information regarding agricultural practices easily after progressive and neighbours & fellow farmers for clear information. Meena *et al*., (2009 & 2010) also revealed that neighbours and progressive farmers were highly utilized personal cosmopolite sources to seek information about paddy cultivation.

The other important personal localite sources utilized by paddy farmers for seeking information about paddy cultivation were friends & relatives (78.75), farmer clubs & associations (63.95), family members (59.58) and FPO & FPC members (57.08). They were ranked 4,5,6 and 7th respectively by paddy growers in terms of preference order for attaining information about paddy.

On the other hand, personal localite sources *viz*., local Agri graduates (39.37), panchayat members (39.16), religious heads (38.54) and private money lenders (33.33) were the least preferred personal localite sources to seek information on paddy cultivation. They were given

8,9,10 and 11th rank respectively in terms of preference order for seeking information about paddy. This might be due to less availability of the local Agri graduates in the research area for obtaining information about paddy. Lack of group meetings and programs conducted by panchayat members. Paddy growers are not interested in attending those meetings by organized panchayat members were the main reasons for being less utilized in attaining information about cultivation practices. In the current situation, due to changes in farming techniques because of the green revolution, religious heads were less preferred in obtaining information about paddy farming. Private money lenders were only available at initial periods of crop and respondents were not able to believe them due to that some of the inputs provided to them were only for business purposes resulting in less preferencing of paddy farmers for obtaining farm information.

The utilization pattern of personal cosmopolite sources by paddy farmers

Personal cosmopolite sources are the sources of communication those come from outside the respondent's social structure. They are the extension staff of many various organizations and play a significant role in converting farmers from old practices to modern ones. Hence the data regarding the utilization pattern of personal cosmopolite sources used by the respondents were gathered, analyzed using MPS and the results are presented in Table 3.

Table.3 The utilization pattern of personal cosmopolite sources used by paddy farmers (n=120)

S. No.	Utilization pattern of Personal Cosmopolite Sources	MPS	Rank
1.	Agriculture department	76.25	1
2.	Agriculture supervisors	66.25	2
3.	Sales Men & dealers	65.20	3

4.	Agriculture scientists	62.91	4
5.	NGO officials	61.66	5
6.	Co-operatives	57.91	6
7.	Commission agents	52.91	7
8.	Panchayat officers	48.54	8
9.	Bank officials	42.08	9
10.	Kisan call centre	35.62	10
11.	Plant clinic	31.87	11

The results regarding the utilization pattern of the personal cosmopolite sources are depicted in the table.3. It conveys that the officials of the agricultural department (ADA, JDA, MAO, AEO) (76.25) and agricultural supervisors (66.25) were the most important personal cosmopolite sources of information for seeking knowledge about paddy farming by paddy growers. They were ranked first and second in the paddy farmers' preference list, accordingly. However, most of the times only ground level extension agents like Agricultural Extension officers (A.E.O.'s) were available to the respondents for communicating various paddy-related information. Higher officials of the agricultural department like M.A.O., J.D.A. and J.D.A. were rarely available for respondents for seeking information. This might be due to farmers can easily access the ground-level extension agents for obtaining information about paddy cultivation. The regular visiting of agricultural department officials like Agricultural extension officers (A.E.O.'s) who were given instructions by M.A.O.'s, J.D.A.'s and A.D.A.'s for disseminating new technologies in paddy cultivation. The other reason was the agricultural department had high and sound technical knowledge which creates interest among farmers to seek information from them.

Agricultural supervisors were the second most personal cosmopolite source preferred by the respondents in seeking information about paddy cultivation. This is due to the reason that

agricultural supervisors who were appointed by the government also highly technical and had sound knowledge of farming practices. They were less in ratio to available farmers. So, farmers were more interested in meeting agricultural supervisors for obtaining paddy information and related issues. Gunawardana and Sharma (2004) also revealed that agricultural supervisors were highly utilized among personal cosmopolite sources for seeking information.

Salesmen & dealers (65.20) were found to be the third rank among personal cosmopolite sources for seeking paddy information. The major possible reason was, that the salesmen & dealers during promotional activities try to interact more with paddy farmers. They try to provide some extra beneficial aspects than other company products. So, there is a possibility of exhibiting previous year's results of their product which compare between their own company and others, resulted in farmers are interested to follow their bits of advice.

The other important personal cosmopolite sources preferred by paddy farmers were the agricultural scientists (ARS, RARS, KVK) (62.91), NGO officials (61.66), co-operatives (57.91), commission agents (52.91) and panchayat officers (48.54) to seek information about paddy cultivation. They were given 4,5,6,7 and 8th, rank respectively in obtaining paddy-related information by paddy farmers. In the agricultural scientist's category, KVK staff were found to be more preferred by the respondents than ARS and RARS scientists.

In contrast to this, personal cosmopolite sources *viz*., bank officials (42.08), Kisan call center (35.62) and plant clinic (31.87) were the least preferred personal cosmopolite sources to seek information on paddy cultivation. They were given 9, 10 and 11th, rank respectively in preference order for seeking information by paddy farmers.

Bank officials were the least preferred personal cosmopolite source in obtaining paddy information by the farmers. Because they were busy with credit and debt issues. Some of the respondents quoted that they were not interested to share any farm-related queries. It also states

that the Kisan call center and plant clinic were also the least preferred personal cosmopolite sources by paddy farmers in seeking farm information. This might be due to low awareness of both the plant clinic and the Kisan call center. Even though they can provide enough information to paddy farmers, some of the respondents stated that very rare services are provided by a plant clinic nearby the research area.

The utilization pattern of personal cosmopolite channels by paddy farmers

Personal cosmopolite channels were the channels from outside the receivers' social system like extension personnel. They were from different organizations and transfer the information through different programmes conducted by them. They play a significant role in the adoption of newer technologies. Hence the data regarding the utilization pattern of personal cosmopolite channels by the respondents were gathered, analyzed using MPS and the results are presented in Table 4.

Table.4 The utilization pattern of personal cosmopolite channels by paddy farmers

n=120

S. No.	Utilization pattern of Personal Cosmopolite Channels	MPS	Rank
1.	Result Demonstration	83.12	1
2.	Method Demonstration	82.08	2
3.	Farmers Fair (Kisan Mela)	71.45	3
4.	Training	67.50	4
5.	Group Meeting	60.20	5
6.	Filed visit / Field Day	59.16	6

7.	Educational tour	57.91	7
8.	Agricultural Exhibition	51.66	8
9.	Agricultural Campaign	44.58	9
10.	Workshop	43.33	10

The results regarding the utilization pattern of the personal cosmopolite channels are depicted in table.4. It indicates that, the result demonstration (83.12), method demonstration (82.08) and farmer's fair (71.45) were the most important personal cosmopolite channel to seek information about paddy cultivation by the respondents. Paddy growers placed them 1,2 and 3rd ranks in terms of their choice order for obtaining paddy knowledge. This might be due to in the result demonstration, respondents were able to observe any new skill/ new technology usage in paddy fields directly from their colleagues/ fellow farmers under the supervision of agricultural extensionists. So, trustworthiness would be very high. Automatically, farmers interest grows towards the result demonstration and leading to the most important personal cosmopolite channel for seeking information about paddy cultivation.

The data in the table.4 also revealed that the method demonstration is the second most highly utilized channel in this category for seeking information about paddy cultivation. Because, in the method demonstration, any new set of skills or any process is performed clearly by extension officials within two to three hours. Again, this is participatory, which enhances the farmers learning by seeing and doing. So, considering these factors, paddy farmers sought relatively more information from the method demonstration.

The farmer fair (Kisan mela) was the third most preferred channel in this category for obtaining information about paddy cultivation. Because there is the provision of selling of seeds of new varieties and new planting materials of paddy in the farmer's fair. They were more

credible and efficient in terms of returns and productivity than old varieties and planting materials. During the Kisan Melas, agricultural extensionists are delivering special lectures on various new practices about paddy cultivation using audio-visual aids. It would improve awareness of newer technologies in paddy and other agricultural-related issues. Godara and Bhimawat (2012) also reported that demonstrations, training and farmers' fair were the highly utilized personal cosmopolite channels for seeking information about paddy cultivation.

The other important personal cosmopolite channels were training (67.5), group meetings (60.2), field visit/field days (59.16) and educational tours (57.91) with 4,5,6 and 7th, ranks respectively in obtaining paddy information by paddy farmers in various practices.

In contrast to this, the agricultural exhibition (51.66), agricultural campaign (44.58) and workshop (43.33) were less used personal cosmopolite channels by the respondents for obtaining information on paddy cultivation. They were given 8,9 and 10th, positions respectively by the paddy growers in preference order of acquiring knowledge. The main reasons could be, that these three channels were conducted by the department of agriculture in this research area were comparatively low. Most of the farmers were unaware of these three channels when conducted for disseminating farm-related information on paddy cultivation.

The utilization pattern of impersonal cosmopolite channels by paddy farmers.

Impersonal cosmopolite channels were the channels, where there was no direct face-to-face interaction and the communication channels come from outside the recipient's social network. These include the mass media, which are significant in places with a significant urban influence and modern or modernizing farmers. Hence the data regarding the utilization pattern of impersonal cosmopolite channels by the respondents were gathered, analyzed using MPS and the results are presented in table 5.

Table.5 The utilization pattern of impersonal cosmopolite channels by paddy farmers

(n=120)

S. No.	Utilization pattern of Impersonal Cosmopolite Channels	MPS	Rank
1.	Television	88.33	1
2.	You tube	76.45	2
3.	ICTs	72.50	3
4.	Film shows	70.62	4
5.	NEWS paper/ Articles	62.70	5
6.	Farm journals/Magazines	53.54	6
7.	PJTSAU website	52.70	7
8.	Posters / Folders	50.41	8
9.	Radio	33.95	9
10.	Traditional media	32.50	10

The results regarding the utilization pattern of the impersonal cosmopolite channels are depicted in the table.5. It indicates that television (88.33), you tube (76.45) and ICTs (72.50) were the most important impersonal channels to seek information about paddy cultivation by the respondents. In terms of their preference order for acquiring paddy expertise, paddy growers ranked them 1, 2, and 3rd, ranks accordingly. Television was being utilized by most of the paddy farmers because of the accessibility of television for most of the respondents irrespective of their profile characteristics. The information broadcasted in the television about different practices of paddy through programs like Annadatha on ETV and the Nelathalli programme on HMTV. It was most useful for various practices in paddy cultivation. Broadcasting information about newer paddy technologies was made easy for illiterates. So, most of the farmers were used to

following paddy and other agricultural-related programs on television regularly. Sharma *et al.*, (2008) also reported that television was a highly utilized channel for obtaining various farm information.

Table.5 also revealed that you tube was the second-highest impersonal cosmopolite channel utilized by the paddy farmers for seeking information about paddy-related information. The possible reason for this was, that 78.00 per cent of respondents belonged to the young and middle age categories. They might be knowing how to use smartphones and the internet. Paddy farmers feel comfortable using youtube when they require farm information without hesitation.

The furnished data in table.5 states that ICTs were the third most utilized impersonal cosmopolite channel for seeking information about paddy cultivation. Even though there were many ICTs used by different respondents according to their requirements, they might have some quality information obtained through these channels.

The other impersonal cosmopolite channels were film shows (70.62), newspapers/ articles (62.70), farm journals/ magazines (53.54) and the PJTSAU (52.7) website preferred by paddy farmers to gain farm information. They were given 4,5,6 and 7th, rank respectively in preference order of utilization by farmers in impersonal cosmopolite channels.

In contrast to this, impersonal cosmopolite channels *viz*., posters/folders (50.41), radio (33.95) and traditional media (32.50) were least preferred by paddy farmers to seek information about paddy cultivation. They were given 8,9 and 10th, ranks respectively in preference order of utilization by farmers in impersonal cosmopolite channels. The possible reason for not utilizing posters/folders as an informative channel in paddy cultivation was less information embedded and some paddy farmers found irrelevant information. The possible reason for radio being least preferred by paddy farmers was, that the selected respondents were not within range of broadcasting, and are located far from the radio stations. Traditional media was the least

preferred channel by the respondents, this is due to more usage of social media and easy accessibility of modern media resulting in the very less preference given by the respondents for seeking information.

Conclusion

Progressive farmers, neighbours & fellow farmers were highly utilized personal localite sources of agricultural information. So, it is suggested that these sources should be utilized in the research area to enhance communication effectiveness & efficiency. Agricultural department and agricultural supervisors were the most utilized personal cosmopolite sources. So, the government should take the initiative of increasing the extensionists to farmer ratio for the benefit of farmer communities in the present area of research. The result and method demonstrations were highly utilized personal cosmopolite channel. So, the recommendation for the authorities is to prioritize and technology transfer should be made through using these two demonstrations. Television and you tube were the most preferred impersonal cosmopolite channels. So, it is advised to state agricultural universities and government officials to give importance to these channels during the dissemination and diffusion of newer technologies in agriculture for paddy growers in order to enhance and outreach efforts to farmers.

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