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Research Article

Characteristics of Farmers Using the Information and Communication Technology for Seeking Agricultural Information

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ABSTRACT

The present study explored characteristics of farmers using the information and communication technology (ICT) for seeking agricultural information. The study was conducted in Marathwada region of Maharashtra state during the year 2020-21. Two districts namely, Parbhani and Hingoli were selected randomly from Marathwada region. Two talukas from each selected district and four villages from each talukas were selected randomly for the study. From each selected village, ten farmers those having mobile phones with internet facilities and engaged in agricultural operations were selected randomly, in this way total 160 respondents were considered for the study. An Ex-post-facto research design was followed for the study. Data was gathered using a well-structured interview schedule created with the study's objectives in mind. The collected data was analyzed, classified and tabulated. Statistical tools such as frequency, percentage, mean, standard deviation, and coefficient of correlation were used to interpret findings and draw conclusions. The detailed analysis of profile characteristics of farmers indicated that majority of the farmers were medium aged (55.63%), educated up to middle school level (44.38%), small land holder (41.87%), medium size family (60%), medium level of annual income i.e. Rs. 41,233 to Rs. 3,19,268 (87.5%), medium farming experience (60.63%), medium level of innovativeness (36.25%), medium level of social participation (51.25%), medium level of mass media exposure (50.63%), medium level of scientific orientation (55.62%), medium level extension contact (54.38%).

Keywords: *Characteristics of farmers, ICT, Agricultural information.*

INTRODUCTION

Milestones in Indian agriculture development includes: Green revolution, White revolution, Blue revolution, yellow revolution, Bio technology revolution and The most recent one is the revolution in information and communication technologies.

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The significance of ICT is that it is a type of technology that enables functions such as access to knowledge, intelligence, and connectivity, both of which are essential in today's economic and social interactions. ICT, particularly the Internet, has a significant impact on all human activities that rely on knowledge, including rural development and other fields. Cost-effective, strong, autonomous, and in the hands of civil society, capable of producing and exchanging knowledge. Farmers have the least expertise and access to information, making it difficult for them to function effectively in a diverse global world. Besides that, agricultural transformation would necessitate making a developed method more competitive and successful by incorporating cutting-edge technologies. Consequently, consumer force trends affecting agriculture are projected to become more important in the future. As a result, focus your efforts on overcoming concerns about the digital divide.

ICTs have the ability to not only improve existing channels of information sharing, but also to establish new ones that allow for the location of content-rich items and information resources, as well as their distribution in real time across multiple channels. In agriculture and its allied sectors, where ICT is widely used, it has contributed significantly to growth and socioeconomic development. Some modern ICT tools or applications which are used by the farmers for accessing agril information according to their farm needs, Like Smartphone, internet, agricultural apps, mobile advisory services and kiosk etc. With this background in mind the current study was conducted to study the characteristics of farmers using the information and communication technology (ICT) for seeking agricultural information.

MATERIALS AND METHODS

The present study was conducted in Marathwada region of Maharashtra state during the year 2020-21. Two districts namely, Parbhani and Hingoli were selected randomly from Marathwada region. Two talukas from each selected district and four villages from each talukas were selected randomly for the study. From each selected village, ten farmers those having mobile phones with internet facilities and engaged in agricultural operations were selected randomly, in this way total 160 respondents were considered for the study. An Ex-post-facto research design was followed for the study. Data was gathered using a well-structured interview schedule created with the study's objectives in mind. The collected data was analyzed, classified and tabulated. Statistical tools such as frequency, percentage, mean, standard deviation, and coefficient of correlation were used to interpret findings and draw conclusions.

RESULTS AND DISCUSSION

Characteristics of farmers

Table1: characteristics of farmers

Sr. No.	Characteristics	Farmers (n = 160)	
		Frequency	Percentage
1	**Age**		
	Young (Up to 28 years)	35	21.87
	Middle (29 to 49 years)	89	55.63
	Old (50 years & above)	36	22.50
2	**Education**		
	Illiterate	2	1.25
	can read & write only	4	2.50
	Primary school level	30	18.75
	Middle school level	71	44.38
	High school level	30	18.75
	Graduate	23	14.37
3	**Land holding**		
	Marginal (up to 1.00 ha)	44	27.50
	Small (01 to 2.00 ha)	67	41.87
	Semi medium (2.01 to 4.00 ha)	41	25.63
	Medium (4.01 to 10.00 ha)	6	3.75
	Large (above 10.00 ha)	2	1.25
4	**Family size**		
	Small (up to 4 members)	49	30.63

	Medium (5 to 8 members)	96	60
	Large (above 8 members)	15	9.37
5	**Annual income**		
	Low (Up to Rs. 41232)	3	1.87
	Medium (Rs. 41233 to Rs. 319268)	140	87.50
	High (above Rs. 319268)	17	10.63
6	**Farming Experience**		
	Low (up to 7 years)	29	18.12
	Medium (8 to 29 years)	97	60.63
	High (above 29 years)	34	21.25
7	**Innovativeness**		
	Low (up to 8)	49	30.62
	Medium (9 to 10)	58	36.25
	High (above 11)	53	33.13
8	**Social participation**		
	Low (up to 4)	28	17.50
	Medium (5 to 6)	82	51.25
	High (7 & above)	50	31.25
9	**Mass media exposure**		
	Low (up to 3)	31	19.37
	Medium (4 to 5)	81	50.63
	High (6 & above)	48	30
10	**Scientific orientation**		
	Low (up to 17)	34	21.25
	Medium (18 to 23)	89	55.62
	High (24 & above)	37	23.13
11	**Extension contact**		
	Low (up to 34)	35	21.87
	Medium (35 to 40)	87	54.38
	High (41 & above)	38	23.75

Age

The above table 1 showed that more than half (55.63%) of the respondents were belonged to middle age group, followed by old age group 22.5 per cent and remaining 21.87 per cent belonged to young age group. The most likely reason is that young people are migrating to surrounding towns and cities for education and work, leaving behind the elderly and middle-aged individuals in villages who rely on agriculture. The above result was in line with Kharmudai et al. (2018).

Education

The table 1 concluded that majority (44.38%) of the respondent educated up to middle school level, followed by primary school level and high school level 18.75 per cent respectively, graduate 14.37 per cent, functionally literate 2.5 per cent and only 1.25 per cent were illiterate. One possible reason for this finding is that most villages in India only have basic and middle school educational facilities. If you want to continue your education, you need go to adjacent cities and towns. The above result was in accordance with Devaraja (2011).

Land holding

The table 1 indicate that the maximum number (41.87%) of the respondents were small land holder, followed by 27.5 per cent were marginalized, 25.63 per cent were semi medium land holder, while 3.75 per cent medium and only 1.25 per cent of the respondents were large land holder.Land degradation in rural regions is a likely cause of the current finding. Each family's land gets fragmented from generation to generation, and this fragmented process would eventually lead to a lack of acreage for the upcoming generation, that is generally a major issue in Indian society. As a result, the majority of respondents possessed small and marginal size of land holding. The above result was in accordance with the earlier findings of Kabir (2015).

Family size

Data depicted in table1 concluded that majority more than half (60%) of the respondents belonged to medium size family, followed by 30.63 per cent from small family and only 9.37 per cent of the respondents were from large family. The most likely reason for above finding is currently people in rural areas are well aware about family planning but it will take some more time for them to move from medium family size to small family category. The result was in line with the earlier findings of Sinha et al. (2018).

Annual income

Table1 concluded that majority (87.5%) of the respondents having medium level of annual income i.e. (Rs. 41,233 to Rs. 3,19,268),

followed by 10.63 per cent had high (above Rs. 3,19,268) and only 1.87 per cent had low annual income (up to Rs. 41,232). This finding might be caused by the fact that the majority of farmers are marginalised and have smaller land holdings as well as farming was their primary source of income, and they have no side businesses. The above result was in accordance with earlier findings of Jamdhade (2015).

Farming experience

The above table 1 indicated that the majority more than half (60.63%) of the respondents having medium farming experience, followed by 21.25 per cent had high and remaining 18.12 per cent of the respondents having low experience in farming. The above result might be due to most of the selected respondents belonged to middle age and old age group. The today's young generation are not chose the farming as a profession. The above findings were in accordance with Choudhari et al. (2019).

Innovativeness

The table 1 shows that the majority (36.25%) of the respondents had medium level of innovativeness, followed by 33.13 per cent had high and remaining 30.62 per cent had low level of innovativeness. This tendency might be caused by the fact that the majority of farmers were literate, had extensive interaction with agricultural departments and other extension workers in order to obtain knowledge about emerging technologies. The result was in line with the earlier findings of Patidar (2010).

Social participation

It was observed that from table 1 more than half (51.25%) of the respondents had medium level of social participation, followed by 31.25 per cent had high and only 17.50 per cent of the respondents had low level of social participation. The above findings are likely due to the fact that the majority of farmers are engaged in various daily farming activities, which leaves them with little time to participate, as well as a lack of farmer interest, non-appealing programs, and a lack of perceived benefits to the participants. The findings were in concordance with earlier study of Naik (2018).

Mass media exposure

The above table 1 concluded that the majority (50.63%) of the respondents had medium level of mass media exposure, followed by 30 per cent had high and only 19.37 per cent of the respondents having low level of mass media exposure. This result might be due to most of the farmers belonging to the middle age category as they have sufficient literacy level. People belonging to the above category like to adopt new things. The above findings were in accordance with Dhaka & Chayal (2010).

Scientific orientation

The table1 indicated that majority more than half (55.62%) of the respondents having medium level of scientific orientation, followed by 23.13 per cent had high and remaining 21.25 per cent of the respondents having low level of scientific orientation. This result might be due to their methodical use of new farm techniques with strong extension contact and farmers' enthusiasm in adopting innovative farm technology to increase production. The above result was in line with findings of Kumar (2018).

Extension contact

The data presented in table1 concluded that majority more than half (54.38%) of the respondents had medium level extension contact, followed by 23.75 per cent had high and remaining 21.87 per cent of the respondents had low level of extension contact. This could be due to most farmers contacting extension workers to solve their field problems and they are also willing to participate in extension programmes to learn about latest agricultural technologies. The above result was in line with findings of Naik (2018).

CONCLUSION

The study conclusively proven that characteristics of farmers using the information and communication technology (ICT) for seeking agricultural information, majority of the farmers belonged to middle age group, majority of the farmer's educated up to

middle school level, majority of the farmers had small land holding, majority of the farmers were belonged to medium size family, majority of the farmers had medium level of annual income, more than half of the farmers had medium level of farming experience, majority of the farmers had medium level of innovativeness, more than half of the farmers had medium level of social participation, majority of the farmers had medium level of mass media exposure, more than half of the farmers had medium level of scientific orientation and extension contact.

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