



Consumption Pattern of Information and Communication Technology in Agriculture: A Study of Jaipur District

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ABSTRACT

The study was conducted in Girdharipura and Mehla villages of Jaipur district of Rajasthan. The study analyzes how ICT is used for agricultural information in rural regions and evaluates the information and relationship between various ICT tools and farmers. In this research, we used a sample size of 100 farmers with a random selection of 50 farmers from Mehla village and 50 farmers from Girdharipura village, all between the age group of 20 and 55 from June 2021 to December 2021. ICT holds huge potential in the dissemination of agriculture-related information to rural masses for their capacity building. Thus, ICT is rightly hailed as a potentially useful tool for agricultural reforms. Farmers often engage in numerous forms of media consumption and do not limit themselves to a single one. This study suggests that farmers engage in various media consumption such as electronic media, folk media & print media, and ICT tools for agriculture purposes, and weather information. Mehla village was using more electronic media than Girdharipura.

INTRODUCTION

ICT refers to “the broad range of hardware, software, network infrastructure and media that enable the processing, storage and sharing speed of information and communication among humans and computers at local and global level (Aina, 2004). ICT facilitates the delivery of knowledge to farmer’s door (Ghosh, 2006). In developing countries, information and communication technology (ICT) has been identified as a tool for promoting development goals” (Hanson, 2012). Technology and disparity may alter agricultural information and farming methods in affluent and poor nations (Steves, 2001). Farmers may use ICT to get the exact information they need to increase agricultural output (Koshore, 2017). The access usage index of ICT tools indicates that “it is utilized mostly for social media and video calling but less for computer, global positioning system, web camera and radio (Panda et al., 2019). Television, radio, agriculture officer and progressive

farmers were categorized into strong group of information sources usefulness” (Ravikumar et al., 2015). Information and communication technology plays a crucial role in changing the socio-economic circumstances of impoverished and developing countries (Bansal, 2019). Farmers considered the information offered or obtained via social media platforms to be beneficial and valuable in helping them practice and adopt best agricultural practices (Sandeep, 2022).

A 2015 official assessment shows India’s rural tele density has more than quadrupled and is rapidly increasing (Kurukshetra, 2016). The Department of Information technology and Communication has used information and communication technology (ICT) to enhance the state’s governance, job prospects, and quality of life for its residents and reduce socioeconomic disparities (Kauffman, 2008). The usage of such technologies allows people to learn more and improve their skills. Telephones, televisions, video recorders, voice information systems, and

facsimiles are all examples of ICTs that are classified as “information and communication technologies” (Warren, 2002). The use of ICT in agriculture is critical for rural development (Rao, 2004). (Taragola, 2010) have emphasized the enormous influence that greater access to and use of information and communication technologies has had on agricultural progress and farmer community decision-making globally. It’s no secret that the growth of ICTs has had a significant impact on agricultural progress and farmer knowledge distribution (Birkhaeuser, 1991).

Mobile phones, television, the Internet, and radio are all capable of transmitting relevant and timely information that aids in the decision-making process regarding the most productive and profitable use of resources (Ekbia, 2009). ICT has become increasingly significant in rural development over the last two decades, impacting all aspects of rural life (Fawole, 2012). ICTs have the ability to increase the appeal and competitiveness of the agricultural sector by improving the value and information available to all parties involved (Rao, 2007). Farmers who used ICTs for agricultural purposes were found to have an advantage in terms of production skills and data. Individuals that used e-services and e-commerce apps saw similar earnings increases (Chapman, 2002). The use of ICT (GADVASU apps) by livestock farmers boosted cow productivity. Socioeconomic and institutional factors heavily influenced cattle farmers’ use and acceptance of ICTs (Singh, 2023). Education and extension contact have a substantial impact on farmers’ usage of ICT technologies for agricultural uses in Uttar Pradesh (Chandra, 2023). Although ICT technologies were being employed to an appropriate extent, awareness-raising and instructional measures in the research domain still needed to be implemented (Rohit, 2023).

METHODOLOGY

To evaluate the consumption pattern of ICT in locations such as the villages of Mehla and Girdharipura, a sample was designed to enable research to be conducted within the allocated time frame.

The 100 participants under study are agricultural farmers and labourers. Simple random sampling methods were used to select the sample. 50 farmers were chosen from each Mehla and Girdharipura village in the Jaipur district using stratified random sampling methods. A survey using a questionnaire was carried out to obtain information on one hundred farmers from both rural areas who were in the age range of 20 to 55. The data for the research was collected using google form during June 2021 to December 2021. Understanding the trends and patterns in farmers’ involvement with different kinds of media and information and communication technology (ICT) methods for agricultural information. The Frequency analysis was done using SPSS.

RESULTS

The access of ICT tools by the farmer of the Mehla and Girdharipura on various parameters such as media consumption, content access, weather information, government policies, and officers’ contribution to the agriculture are shown.

Farmers often engage in numerous forms of media consumption and do not limit themselves to a single one. 40 per cent of people exclusively consume electronic media (television and radio), 15 per cent only consume folk media, 20 per cent only consume print media, and 25 per cent consume all sorts of media accordingly in the Mehla Village while 30 per cent of people exclusively consume electronic media (television and radio), 25 per cent only consume folk media, 30 per cent only consume print media, and 15 per cent consume all sorts of media in Girdharipura Village. Therefore, Mehla Village farmers use more electronic media in agricultural sector for Information purpose. The amount of content access through ICT tools consumed is different in both villages. In Mehla village 45 per cent of farmers are using ICT tools for communication, 15 per cent for entertainment, 20 per cent for agriculture information, and 20 per cent for all above while for Girdharipura communication accounts for 35 per cent, on Entertainment 10 per cent, agriculture information 15 per cent, and all above for 40 per cent. Although

Table 1. ICT Consumption Pattern in Mehla and Girdharipura Villages

Parameter		Mehla (%)	Girdharipura (%)
Media Consumption	Electronic	40	30
	Folk	15	25
	Print	20	30
	All Above	25	15
Content Access through ICT Tools	Communication	45	35
	Entertainment	15	10
	Agro Info	20	15
	All Above	20	40
Sources of Weather/Climate Information	ICT Tools	50	50
	Friends	15	25
	News	25	15
	Others	10	10
Information about Government Policy and Program	ICT Tools	25	30
	Friends	15	10
	News	43	50
	Others	17	10
Extension officer Contribution	Yes	64	56
	No	36	44

they have an interest in the information, they will pay close attention to the agriculturally focused news and information channel. As a direct consequence, 40 per cent of farmers are turning to various forms of media to satisfy their informational curiosities. Mehla village access content for communication and agriculture information through ICT tools is higher than Girdharipura village.

The data shown in the preceding table source of weather/climate information indicate 25 per cent of farmers have gained knowledge from the news, 50 per cent of them are able to access it via the aid of ICT applications, 15 per cent of them are able to access it through different sources such as friends, relatives, and family members and that 10 per cent of farmers get climate and weather-related information from other sources such as via observation and by inquiring of educated friends or users of ICTs in Mehla village while 15 per cent of farmers have gained knowledge from the news, a weather prediction from radio, television, or newspapers, 50 per cent of them are able to access it via the aid of ICT applications, 25 per cent of them are able to access it through different sources such as friends, relatives, and family members and that 10 per cent of farmers get climate and weather-related information from other sources such as via observation and by inquiring of educated friends or users of ICTs in Girdharipura village. So, both villages Mehla and Girdharipura assess content through ICT tools for weather and climate information is same.

From Table 1 indicates that 25 per cent from ICT applications, 15 per cent from their friends an average and 43 from news include the agriculture officials (Krisak Sathi, Village Level Workers, and other government officials) and 17 per cent distributions, among other things in Mehla Village get information. While 30 percent from ICT applications, 10 per cent from their friends and 50 per cent from news include the agriculture officials (Krisak Sathi, Village Level Workers, and other government officials) and 10 per cent from other source gets the information about the government policies, programs, announcements in Girdharipura Village. So, it can be concluded that Girdharipura is more ICT friendly in getting Information about Government Policy and Program. Agriculture Extension officers deliver information to farmers on new methods and ways of cultivating crops. Agriculture extension officials provide this information. After the information has been disseminated to the whole agricultural community, the first step in the process involves extension officers gaining expertise in using ICT applications. As a direct consequence of this, 64 per cent of farmers in Mehla and 56 per cent farmers in Girdharipura were able to enhance their revenue with the assistance of extension workers and ICTs applications. From this it is concluded that ICT is play a crucial role in organizing and modernizing communication and information.

DISCUSSION

The media consumption in the agriculture is high this is supported by the study (Singh, 2019). The ICT tools are mostly used for communication purpose and result is in line with the study (Lekwani, 2016). For the weather information farmers are using ICT tools and results are significantly matched with (Masinde, 2012). The government policies are accessed through new papers

by the farmers. The officers' contribution to the agriculture is higher in Mehla village compared to Girdharipura. The table demonstrates that ICT tools are the most common source of information, followed by friends, the news, and other sources. ICT technologies gather from a range of resources, including social media, apps, and weather websites (Aziiza & Susanto, 2020). As people frequently exchange weather forecasts and cautions with one another, friends and relatives are another well-liked source of information. Another typical source of weather-related data is news sources like newspapers and television broadcasters.

CONCLUSION

The study helps farmers' ability to implement agricultural changes positively correlates with their use of ICT tools. This strategy is warranted because it paves the pathway for the informed use of farming strategies and actions by enabling a thorough knowledge of the complex connection between farmers and information and communications technologies (ICT). In conclusion, the goal of this study is to understand the consumption pattern of ICT in agriculture within rural Jaipur Rajasthan in the future. Researchers discovered that various challenges, such as a lack of infrastructure in developing-country rural areas, exist in the field of information and communication technologies. To disseminate agricultural information to farmers in rural areas, media centers and new technology hubs must be established.

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