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RESEARCH NOTE

Access and utilization of information and communication technology (ICT) tools by farmers in Dharwad and Haveri districts of Karnataka

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Abstract: Information and Communication Technology (ICT) helps in growing demand for new approaches. It also helps in empowering the rural people by providing better access to natural resources, improved agricultural technologies, effective production strategies, markets, banking and financial services etc. The application of Information and Communication Technology (ICT) in agriculture is increasingly important. E-Agriculture is an emerging field focusing on the enhancement of agricultural and rural development through improved information and communication processes. More specifically, e-agriculture involves the conceptualization, design, development, evaluation and application of innovative ways to use information and communication technologies (ICT) in the rural domain, with a primary focus on agriculture. All stakeholders of agriculture production system need information and knowledge about these phases to manage them efficiently. The present study was conducted during 2019-20 in Dharwad and Haveri districts. The prime objective of this research is to analyse the ICT tools availability and usage by the farmers. This study was conducted by following *ex-post facto* research design and the total sample size was 150. *viz.,* 75 farmers from each district were selected for the present study. Availability of mobile among the farmers was high followed by Television, You Tube, internet, what's app, FM/Radio. Other ICT tools like Video conferencing, Facebook, e-book/e-magazine, agriculture related apps, Personal computer/laptop, e-mail, Web portals (Internet) and CD/DVD available/access by the farmers was very low.

Key words: Access, Facebook, Stakeholders, Usage

In India, agriculture is an important sector with the majority of the rural population depending on it. The sector faces major challenges of enhancing production in a situation of dwindling natural resources necessary for production. The growing demand for agricultural products, however, also offers opportunities for producers to sustain and improve their livelihoods. Information and Communication Technologies play an important role in addressing these challenges and uplifting the livelihoods of the rural poor.

According to the Food and Agriculture Organization, FAO (1993) ICTs was defined as those technologies that are used to collect, process, store, retrieve, disseminate, and implement various data and information using microelectronics, optics, telecommunication and computers. ICT (Information and Communication Technologies) refers to technologies that provide access to information through telecommunications medium such as the radio, television, cell phone, computers, satellite technology; internet including email, instant messaging, video conferencing and social networking websites which have made it possible for users across the world to communicate with each other to give users quick access to ideas and experiences from a wide range of people, communities and cultures.

Advantage of ICT in Agriculture

The benefits of ICTs for increased agricultural productivity and strengthening the Agricultural sector include timely and updated information on agriculture related issues such as release of new varieties, emergence of new threats such as diseases, weather forecast, pricing control, warning alerts etc.

ICT in enhancing agricultural productivity

- Understanding and addressing global agriculture developments in terms of both advantages and disadvantages are critical to improving smallholder livelihoods, in which ICT can play a major role.
- The continued increase in globalization and integration of food markets has intensified competition and efficacy in the agriculture sector, and has brought unique opportunities to include more smallholders into supply chains.
- Agriculture faces a range of modern and serious challenges, particularly in developing countries exposed to price shocks, climate change, and continued deficiencies in infrastructure in rural areas.

Uses or role of ICTs in Agriculture

- Increasing efficiency, productivity and sustainability of small scale farms.
- Information about pest and disease control, especially early warning systems, new varieties, new ways to optimize production and regulations for quality control.
- Better of markets resulting from informed decisions about future crops and commodities and best time and place to sell and buy goods.
- Up-to-date market information on prices for commodities, inputs and consumer trends.
- Strengthen capacities and better representation of their constituencies when negotiating input and output prices, land claims, resource rights and infrastructure projects.
- Reduce social isolation, widen the perspective of local communities in terms of national or global developments, open up new business opportunities and allow easier contact with friends and relatives.

Government vision of doubling farmers' income by 2022, could be achieved not only by increasing production but also reducing production cost by preventing over usage of resources with the help of ICT. This will result in increasing the savings and decreasing the wastage of resources. While ICT is

importance tool or an engine for economic growth as it also promises to have far reaching potential for the delivery of social services and enhancing the effectiveness of government organisations.

Keeping the above facts in view the present study was designed to know the access and usage of ICT tools by the farmers. The following specific objectives formulated for the study were

1. To study the profile of the farmers
2. To analyse the access and usage of ICT tools by the farmers

Methodology

The present study was conducted in Dharwad and Haveri districts of Karnataka state. From each district, 75 farmers were selected randomly. The total sample size constituted for the study was 150. Standardized interview schedule was used for data collection through personal interview technique. The appropriate statistical tools such as frequency, percentage were employed to analyse the data.

Results and discussion

Table 1. shows the profile of farmers. The results of the study revealed that 53.33 per cent of farmers were belonging to young age in the study region followed by middle (40.00%) and old age (6.67 %) category.

About 33.33 per cent of respondents had studied up to high school followed by 20.00 per cent of the respondents had middle school education. Only 6.67 per cent of the respondents were graduates and above. The possible reason might be due to lack of interest, lack of encouragement from the elders or low economic status.

Regarding the type of family, majority of farmers lived in nuclear family (80.00%) while 20.00 per cent lived in joint family. Nearly half of the respondents (48.00%) belonged to medium family size(33.33%).

More than half of the respondents (58.67%) belonged to forward caste, 34.67 per cent of the respondents belonged to backward caste; 5.33 and 1.33 per cent of the respondents belonged to SC and ST category respectively. The reasons for this finding could be dominance of forward caste in study area.

Nearly half (44.67%) of the respondents possessed lesser farming experience and only about 30.00 per cent of the respondents had higher farming experience. The reason might be majority of the farmers were young and they did not have much experience in farming.

In the table.2 the result highlights that all respondents had access to mobile phones (100.00%), it may be because the farmers in their opinion had appreciated mobile phone as easy, fast, and convenient way to communicate and get relevant information of respective problems. Now-a-days, the mobile phone has generated an opportunity for the farmers especially to get the information about marketing and weather. The results are in line with Shrey *et al*. (2020), Further followed by TV (96.00%), YouTube (78.67%) and 74.67 per cent respondents were using internet. Nearly two thirds of the respondents

Table 1. Profile of sample farmers n=150

Particulars	Frequency	Percentage
1 Age		
Young (up to 35 years)	80	53.33
Middle (36 to 50 years)	60	40.00
Old (>50 years)	10	6.67
2 Education		
Illiterate	15	10.00
Primary (1st to 4thstd)	25	16.67
Middle (5th to 7thstd)	30	20.00
High School (8th to 10thstd)	50	33.33
PUC (11th to 12th)	20	13.33
Graduate and above (>12thstd)	10	6.67
3 Family type		
Nuclear	120	80.00
Joint	30	20.00
4 Family size		
Small (up to 4 members)	50	33.33
Medium (5 to 8 members)	72	48.00
Large (> 8 members)	28	18.67
5 Caste		
Scheduled Caste	8	5.33
Scheduled Tribe	2	1.33
Backward	52	34.67
Forward caste	88	58.67
6 Experience in farming (Years)		
Low (up to 10)	67	44.67
Medium (11-20)	38	25.33
High (>20)	45	30.00

Table.2 Percentage Distribution of respondents according to access and availability of ICT tools n=150

ICT tools	f	%
Mobile	150	100.00
Television	144	96.00
You Tube	118	78.67
Internet	112	74.67
Whats app	98	65.33
FM/Radio	77	51.33
Facebook	56	37.33
Video Conferencing	48	32.00
Web portals	22	14.67
CD/DVD available/access	14	9.33
Personal computer/laptop	6	4.00
e-book/e-magazine	3	2.00
e-mail	1	0.67
Agri related mobile apps	0	0.00

Table 3. Purpose of usage of ICT tools by farmers n=150

	Purpose	f	%
1	Social media	128	85.33
2	Entertainment	114	76.00
3	Communication	150	100.00
4	To get information	56	37.33
5	Other purpose (using theirs mobile or WhatsApp for their communication and study purpose as many of the farmers' children were studying in schools and colleges)	47	31.33

(65.33%) were using WhatsApp, but majority of them were using WhatsApp as social media rather than for other purpose. But some farmers were using this to get required information related to agriculture, livestock, horticulture, sericulture etc. More than half the farmers (51.33%) were have FM/ Radio in their homes; 37.33 per cent of the farmers having their Facebook account and using it as social media and some of them were getting information from agri pages followed by 32.00 per cent of the respondent using video conferencing tool. Only few of the respondents were using some of the ICT tools i.e web portals (14.67%), CD/DVD (9.33%), personal computer or laptop (4.00%), e-book or e-magazine (2.00%) and email (0.67%). None of them were using any agriculture apps.

Table.3 shows the purpose of usage of ICT tools by farmer. Cent per cent (100.00 %) of the farmers were using mobiles for communication purpose, followed by majority of them (85.33%) using as social media i.e.WhatsApp, Facebook, etc. More than three fourth (76.00%) of the farmers were using TV for entertainment purpose *i.e.*.Only 37.33 per cent of the farmers were using to get required information. 31.33 per cent of the farmers were using for other purpose. i.e. using theirs mobile or WhatsApp for their communication and study purpose as many of the farmers' children were studying in schools and colleges.

Conclusion

There are so many ICT tools in agriculture as well as in other fields which are really helpful and working very efficiently. But still in villages, farmers are having lack of awareness about using ICT tools in agriculture. Now a day everything is at the tip of our finger through mobile phones and internet, that much technology is developed. It's very necessary to create awareness among the farmers about using ICT tools. So they can also get good yield and income, it will helps to country's development. Here all of the farmers having mobile phones majority of them using for communication purpose. Through mobile phone only we can get SMS, many of the agri apps (irrigation decease and pest management, market price, input information etc.), so the only thing is that first we should create awareness among formers to use this all in effective manner.

References

Anonymous, 2017, ICT in Agriculture, Indian Council of Food and Agriculture (ICFR), National Round Table Conference.

FAO, 1993, *http://aims.fao.org/information-and-communication-technologies.*

Shreya, Anand, Satya Prakash, Singh A K and Sudhamini Yedida, 2020, Access and Availability of ICT Tools Used by Farmers for Crop Practice in Bihar, *India. International Journal of Current Microbiology and Applied Sciences,* 9(05): xx-xx.