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ORIGINAL ARTICLE



Awareness Level of ICT-Based Agro-Advisory Services by Farmers in Dindigul District of Tamil Nadu

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ABSTRACT

In the current scenario, Information and Communication Technology (ICTs) tools like mobile phones, computers, and laptops are the key source and vital component of the information revolution for farmers in India. There is a distinguished chance to develop the spread of agricultural advisories through ICTs. Utilization of ICT is merely possible when awareness is initiated among farmers. The main purpose is to study about the awareness level of farmers on ICT-based agro advisory services rendered in the study area. The present study was conducted in Dindigul district of Tamil Nadu. Data were obtained from a sample of 300 farmers in six selected blocks namely Dindigul, Natham, Sanarpatti, Vadamadurai, Nilakottai and Ottanchatram with the support of an online training list obtained from KVK and SDA (State Department of Agriculture). The collected data was subjected to statistical analysis like percentage analysis. The results showed that the majority of the respondents have medium (56.00 per cent) level of awareness followed by low (26.00 per cent) and high (18.00 per cent) levels of awareness of ICT advisory services. Regarding category-wise awareness, most of the respondents reported telephony (94.50 per cent) followed by social media applications (69.87 per cent), agriculture mobile applications (49.92 per cent) and agriculture websites and web portals (29.75 per cent). It shows medium to low (82.00 per cent) levels of awareness. So, based on the present study, it is recommended to create more awareness of ICT tools and their usage by farmers. A distinct training should be arranged regarding ICT.

Keywords: Awareness, ICT, Advisories, Training, Application, Websites

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INTRODUCTION

ICT (Information and Communication Technologies) play a key role in the modern agriculture sector. In recent today mobile phones are the pro ICT tool operated by farmers. Mobile-based agro-advisory services play a crucial role in facilitating information and knowledge sharing on weather reports, online marketing, crop advisory services, pest and disease management, seed availability and livestock services in addition to the extension services for farmers. Though ICT is witnessed as the latest technological tool for farmers in receiving advisories, its importance and awareness on agriculture sites/apps should become focused and informed by extension personnel. Keeping this in view, a study was planned to assess the awareness of ICT-based agro-advisory services by the farmers. The study will provide great assistance to farmers and will promote the usage of ICT technologies for acquiring agro-advisory services to improve their standard of living.

MATERIAL AND METHODS

The study was conducted in the Dindigul district of Tamil Nadu during the year 2021. An ex-post facto research design was used for the study. The sample was selected based on the online training list obtained from KVK and SDA conducted from April 2020 to August 2021. Thus, a total of 300 farmers were purposively selected as respondents. The sample was selected from six blocks viz., Dindigul, Natham, Sanarpatti, Vadamadurai, Nilakottai, and Ottanchatram which belong to five taluks of Dindigul, Natham, Vedasendur, Nilakottai, and Ottanchatram. Primary data were collected from the respondents with the help of a pre-tested structured interview schedule by the personal interview method. Data were analysed with help of suitable statistical tools.

For assessing awareness, a list of 35 ICT-based advisory services of websites/web portals, agriculture mobile applications, telephony, and social media application were selected. A score of 1 was given for

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'aware' and 0 for 'not aware'. The overall score was categorized into three viz., low, medium and high levels of awareness with help of the cumulative frequency method.

RESULTS AND DISCUSSION

Awareness level of farmers on various ICT advisory services Table 1. Distribution of respondents according to their overall awareness level of farmers on ICT advisory services (n=300)

S. No.	Category	Number of respondents	Per cent			
1	Low	78	26.00			
2	Medium	168	56.00			
3	High	54	18.00			
Total		300	100.00			

The result in table 1 shows that majority of the respondents had medium (56.00 per cent) level of awareness followed by low (26.00 per cent) and high (18.00 per cent) levels of awareness of ICT advisory service. The probable reason might be during the COVID-19 lockdown onwards KVK and the State Department of Agriculture (SDA) started to render online training programs to farmers for disseminating agro-advisory services. However mobile phones are possessed by the respondents there is an absence of awareness on agro-advisories and their advantages available on the internet. This might be the reason for medium to less levels of awareness about agriculture mobile applications, websites/web portals and social media applications. This could be alleviated by spreading knowledge about how to use ICT tools and by providing training regarding ICT advisory services which are offered online by the extension staff and experts.

Category-wise awareness level of farmers on ICT advisory services

Table 2. Distribution of respondents according to their category-wise awareness level offarmers on ICT advisory services (n=300)

S. No.	Category	Frequency	Per cent			
I. Websites / Web Portals						
1	https://www.tn.gov.in/department/2 (Agriculture and Farmers Welfare Department)	110	36.67			
2	https://www.tnagrisnet.tn.gov.in (Agrisnet)	290	96.67			
3	https://aed.tn.gov.in/ (Department of Agricultural Engineering)	28	9.33			
4	https://www.agrimark.tn.gov.in/ (Department of Agricultural Marketing & Agri Business)	50	16.67			
5	https://agmarknet.gov.in/ (AGMARKNET)	95	31.67			
6	TNAU agritech portal	280	93.33			
7	https://agricoop.nic.in/ (Department of Agriculture and Farmers Welfare)	54	18.00			
8	(https://farmer.gov.in/) Farmer portal	30	10.00			
9	(https://www.iffcobazar.in/ta) IFFCO BAZAR	15	5.00			
10	APEDA	18	6.00			
11	m-Kisan	12	4.00			
Mean per cent			29.75			
II. Agriculture Mobile Apps						
1	Uzhavan app	298	99.33			
2	KVK app	225	75.00			
3	Agri App	33	11.00			
4	Plantix App	220	73.33			
5	e-NAM	154	51.33			
6	IFFCO Kisan App	52	17.33			
7	BigHaat Smart Farming App	05	1.67			
8	Krishi-e Farm Management App	11	3.67			
9	PM-KISAN GOI	295	98.33			
10	Kisan Rath	78	26.00			
11	Crop Insurance app	287	95.67			
12	(Nithra) Vivasayam	145	48.33			
13	(TNAU) Coconut expert system	193	64.33			
14	(TNAU) Cattle expert system	101	33.67			
Mean per cent						
III. Telephony						

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1	Village Knowledge Centre (VKC) - MSSRF	275	91.67			
2	Farmers Call Centre (Kisan Call Centre)	292	97.33			
Mean per cent						
IV. Social media apps						
1	Facebook	154	51.33			
2	WhatsApp	296	98.67			
3	Instagram	80	26.67			
4	Telegram	158	52.67			
5	YouTube	251	83.67			
6	Google Meet	293	97.67			
7	Zoom app	293	97.67			
8	e-Mail	188	62.67			
Mean per cent						

It could be observed from the table 2 that 94.50 per cent of the respondents were aware of telephony followed by social media apps (69.87 per cent), agriculture mobile apps (49.92 per cent) and agriculture websites and web portals (29.75 per cent) respectively.

Websites/Web portals

The result from table 2 shows that around ninety-seven per cent (96.67 per cent) of the respondents were aware about the agrisnet website as it is a Bi-lingual site which is both Tamil and English whereas, the State Department of Agriculture (SDA) transmits agro advisories like a weather report, crop information, training details, seed availability etc., via SMS and voice message over the website by AO and AAO's to farmers at village and block level. This might be the reason for more awareness about the website and followed by the TNAU agritech portal (93.33 per cent). Most of the respondents reported that they are aware of regional apps, and websites which are comparatively easy than other applications. KVK and SDA recommend the TNAU agritech portal for the farmers in which the information is local and relevant to individuals. Furthermore, the Department of Agriculture and Farmers Welfare (36.67 per cent), AGMARKNET (31.67 per cent), Department of Agriculture and Farmers Welfare (18.00 per cent). The Department of Agricultural Marketing & Agri-Business Department were reported by (16.67 per cent) of the respondents followed by farmer portal (10.00 per cent), Department of Agricultural Engineering (9.33 per cent), APEDA (6.00 per cent), IFFCO Bazar (5.00 per cent) and m-kissan (4.00 per cent) were reported by the respondents.

Agriculture mobile application

From the result, it is clearly stated that most of the respondents (99.33 per cent) were aware of the uzhavan app. It is a precedence regional app, and it might be the reason for being quite known by farmers as nearly 20 agriculture and horticulture advisory services were available in the internet with specific area-based information uploaded in accordance to the district, block and village level of Tamil Nadu.

Regarding the PM Kisan GOI, 98.33 per cent of the respondents knew them, although the farmers were registered in this app/portal for getting an incentive amount. Crop insurance apps were reported by (95.67 per cent) of the respondents.

Furthermore, nearly seventy-five per cent of the respondents have awareness about the plantix app (73.33 per cent). While three-fourths (75.00 per cent) of the respondent knew about the KVK app, the probable reason might be the farmers were trained by KVK. Two-thirds (64.33 per cent) of the respondents were aware about the (TNAU) Coconut expert system app.

Half the proportion (51.33 per cent) of the respondents knew about the e-NAM services, As the respondents are involved in marketing activities and being members of the FPO group they got awareness, less than half the proportion of the respondent (48.33 per cent) reported nithra vivasayam, (TNAU) Cattle expert system (33.67 per cent), Kisan rath (26.00 per cent), IFFCO Kisan App (17.33 per cent), agri app (11.00 per cent), bigHaat smart farming app (1.67 per cent) and krishi-e farm management app (3.67 per cent) respectively. **Telephony**

It could be seen from table 2 that most of the farmers have greater awareness about Village Knowledge Centre (VKC) – MSSRF (91.67 per cent). The probable reason might be considerable attention is being paid to the nearby farmers in the creation of awareness.

Farmers Call Centre (Kisan Call Centre) 97.33 per cent. The respondents were using this advisory service for a very long time, and it is an old medium to interact with experts.

Social media application

The data presented in table 2 indicates that most of the respondents reported that more awareness about WhatsApp (98.67 per cent). WhatsApp is a pro media, any advisories can be uploaded, shared, and perceived. Hence, it is easily known by farmers. Google meet and Zoom apps are stated to have equal per

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cent (97.67 per cent). The online training is exclusively conducted on this platform thus they might be aware of this mobile application.

Furthermore, e-mail (62.67 per cent) facebook (51.33 per cent), telegram (52.67 per cent), youtube (83.67 per cent) and instagram (26.67 per cent) were also known by the farmers respectively.

It could be concluded that social media apps are the latest mobile applications used by farmers to connect one to another end to share, receive information and discuss with experts and extension personnel. Extension personnel/Scientists/ send agro advisories through audio, video, and content to read where any queries can be raised and cleared. This might be the probable reason for the higher level of awareness on social media apps.

CONCLUSION

The study concluded that the respondents had medium level of awareness about ICT advisory services rendered through telephony, social media application, agriculture mobile application and websites. From the result, it is clearly understood that respondents preferred regional language websites/apps for receiving advisories. The study suggests that at the time of training the extension staff and scientists should check the farmer's knowledge about the modern ICT tools and the services available on the internet further, awareness and its advances should be initiated by proper teaching methods. As technologies are developing in this new global era farmers can get modernized in the field of agriculture. These new tools can have an impact on agriculture only if farmers knew what are their availability, how to access them and the reliability of the information. The agriculture extension system is more dependent on ICT to provide appropriate and location-specific technologies to farmers in increasing production and also to improve the extension system in the field of education.

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