

## A CASE STUDY

# Knowledge and use of information communication technology (ICT) tools by orange growers

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Received : 04.07.2016; Accepted : 30.09.2016

### ABSTRACT

The present study entitled “Information and communication technology (ICT) tools used by orange growers” was undertaken in Katol taluka in Nagpur district of Vidharbha with sample size of the 100 respondents. The data were collected on personal, socio-economic, communicational and psychological characteristics of respondents, knowledge about of ICT tools, extent of use of ICT tools and problems faced by them studied with the help of pre structured interview schedule. Findings revealed that majority (65%) of the respondents were belonged to middle age group *i.e.* between 36 to 50 years, high proportion of respondents (36%) were educates upto junior college level, large proportion of respondents (40%) had medium land holding, high proportion of the respondents (31%) had medium annual income between Rs. 2,00,001 to 3,00,000-/, majority of respondents (62%) had undertaken orange on an area of (2.01 to 4.00 ha.) majority of respondents (63%) had medium experience between 10.34 to 24.14 years in orange cultivation, more than two fifth of the respondents (45%) had belonged to medium category of social participation, Majority of the respondents (66%) were in medium level of extension contact and majority of the respondents (74%) had medium market orientation. In case of knowledge about ICT tools majority of respondents (69%) were having medium knowledge about ICT tools. In case of ICT tool wise knowledge, great majority of the respondents had knowledge about ICT tools *viz.*, mobile phones (95%), followed by television (94%) and telephone (80%), respectively. The majority of respondents were also aware about ICT tools video compact disk (60%), smart phone (60%), radio (56%) and bluetooth (56%), respectively. In case of use of ICT tools majority of respondents (72%) had medium level of use of ICT tools. In case of ICT tool wise use, great majority of the respondents were regularly using mobile phone (90.00%), followed by television (85.00%) and telephone (70.00%), respectively. The 40.00 per cent of respondents were regularly using SMS service and smart phone followed by radio (23.00%), computer (20.00%). Findings of relational analysis revealed that education, social participation, extension contact and market orientation were positive and highly significant with the knowledge. The variables namely land holding and annual income were found to be positive and significant with knowledge of whereas, the independent variable like area under orange was non-significantly correlated with knowledge. Age and experience in orange cultivation was found negative and highly significant with the knowledge of ICT tools. The variables namely education, annual income, social participation, extension contact and market orientation were found to be positive and highly significant relationship with use whereas, the independent variables like land holding and area under were non-significantly correlated with use. Age and experience in orange cultivation were negative and highly correlated with use of ICT tools. The important problems faced by the orange growers in use of ICT tools were, lack of proper knowledge about information technology (83.00%), complexity of message and difficulty in interpretation (80.00%), inadequate computer facility (78.00%), lack of understanding standard English language (77.00%). Whereas, lack of awareness about latest ICTs (71%), followed by lack of training about using ICT tools (70.00%), free and paid online services of internet (68.00%), uneven electricity supply (63%), lack of proper utility of the messages and poor/ low connectivity of internet, respectively.

**KEY WORDS :** Knowledge, Information communication technology, Orange growers

**How to cite this paper :** Tekale, V.S., Bhalekar, D.N., Tayde, Vidya V. and Jamdhade, S.S. (2016). Knowledge and use of information communication technology (ICT) tools by orange growers. *Internat. J. Com. & Bus. Manage*, 9(2) : 267-271. DOI: 10.15740/HAS/IJCBM/9.2/267-271.

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Information and communication technology (ICT) comprises a diverse set of technological tools and resources to create, disseminate, store and manage data and information. ICT has become one of the basic building blocks of modern society. Knowledge of ICT and skills to use ICT in farming, has gained immense importance for today's farmers. A farmer is expected to know successful integration of ICT into his/her work area to make efforts successful. ICTs in education are not transformative on their own transformation requires farmers who can use technology to improve his learning. It is felt necessary to test the influence of information and communication technology tools used by orange growers. Agricultural productivity depends largely on the extent to which farmers adopt new technologies. It is felt that a large part of gains from new technologies still remain to be realized. Access to information improved technology and credit facilities and participation in extension related activities appear to be poor among the orange growers. Therefore, there is a pressing need for studies relating to the use of information and communication technology tools by orange growers. Hence, the present study was undertaken with the main two objectives to study the knowledge of orange growers about information communication technology (ICT) tools and to study the extent of use of information communication technology (ICT) tools by the orange growers.

## METHODOLOGY

The present study was carried out in Katol taluka of Nagpur district in Vidarbha region of Maharashtra state. This taluka was purposively selected because of more area (425 ha) under orange cultivation as compared to another taluka in Nagpur district. The 100 respondent were selected through simple random sampling from 10 villages of Katol taluka for the present study. An exploratory research design of social research was used

in the present study. The data were collected by personally interviewing the respondents with the help of pretested, structured, interview schedule. The collected data were then tabulated, analyzed and interpreted.

## ANALYSIS AND DISCUSSION

The results obtained from the present investigation have been discussed under following :

### sub-heads :

*Knowledge about information and communication technology tools by the orange growers :*

It was observed from Table 1 that great majority of respondent orange growers had knowledge about ICT tools viz., mobile phones (95.00 %), followed by television (94.00 %) and telephone (80.00 %), respectively. The majority of respondents were also aware about ICT tools video compact disc (60.00 %), smart phone (60.00 %), radio (56.00 %) and bluetooth (50.00 %), respectively.

The respondents were also aware about internet (45.00%), laptop (40.00 %), computer (35.00 %), email (25.00 %), video conferencing (20.00 %) and you tube (20.00 %), respectively. The meagre per cent of respondents were aware about google earth (10.00%), google drive (10.00 %), e-newspaper (06.00 %), e-magazine (05.00 %), information kiosk (05.00 %), sky pe (05.00 %) and e-book (04.00 %), respectively.

It was also depicted that great majority of respondent orange growers had no knowledge about ICT tools viz., e-book (96.00 %) followed by equal per cent of respondents (95.00%) had no knowledge about e-magazine, information kiosk, sky pe, respectively. The great majority of respondents were also not aware about e-newspaper (94.00%), google earth (90.00%), google drive (90.00%), video conferencing (80.00%), you tube (80.00%) and e-mail (75.00%), respectively. The majority of respondents were unaware about computer (65.00%), Laptop/LCD (60.00%) whereas, half of respondents were unaware about bluetooth about (50.00%), respectively. Whereas 40.00 per cent of respondents had no knowledge about VCD and smartphone, followed by SMS service (30.00%), telephone (20.00%), television (06.00%) and mobile phone (05.00%).

By and large majority of respondents were very well aware about ICT tools, mobile phone, television,

telephone, VCD's, smart phone, radio and bluetooth, respectively. These findings were supported by Adamides and Stylianou (2013); Haruna (2012); Yadav and Ansari (2009); Oliver *et al.* (2012) and Chakarborty (2000).

The data in Table 2 depicts that the knowledge of ICT tools to the respondent orange growers shows that, majority of the respondents (69.00%) were having overall medium knowledge about ICT tools followed by 26.00 per cent respondents had high knowledge and only 25.00 per cent respondents had low overall knowledge about ICT tools, respectively. Knowledge is possible only through education. It can be acquired and develop through lifelong learning process. Knowledge can be overwhelmed with more experience and training. It is obvious

that they have medium knowledge level. Thus, they should be made aware about ICT tools.

**Extent of use of information and communication technology tools by orange growers :**

The extent of use of ICT tools by the respondents was ascertained and the findings are given in the Table 3.

In case of use of ICT tools by the respondent orange growers it was observed from Table 3 that, great majority of respondents were regularly using mobile phone (90.00%), followed by television (85.00%) and telephone (70.00%), respectively. The 40.00 per cent of respondents were regularly using SMS (short message

**Table 1: Distribution of respondents according to their knowledge about ICT tools**

Sr. No.	ICT tools	Respondents (n=100)	
		Yes Freq. (%)	No Freq. (%)
1.	Telephone	80 (80.00)	20(20.00)
2.	Radio	56(56.00)	44(44.00)
3.	Television	94 (94.00)	08 (08.00)
4.	Computer	35 (35.00)	65(65.00)
5.	Laptop/ LCD	40(40.00)	60(60.00)
6.	Video conferencing	20(20.00)	80(80.00)
7.	Bluetooth	50(50.00)	50(50.00)
8.	VCD (Video compact disc)	60(60.00)	40(40.00)
9.	Internet	45(45.00)	55(55.00)
	e-mail	25(25.00)	75(75.00)
	SMS service	70(70.00)	30(30.00)
	e-magazine	05(05.00)	95(95.00)
	e-newspaper	06(06.00)	94(94.00)
	e-book	04(04.00)	96(96.00)
	Information kiosks	05(05.00)	95(95.00)
10.	Mobile phone	95(95.00)	05(05.00)
11.	Smart phone	60(60.00)	40(40.00)
12.	You tube	20(20.00)	80(80.00)
13.	Skype	05(05.00)	95(95.00)
14.	Google drive	10(10.00)	90(90.00)
15.	Google earth	10(10.00)	90(90.00)

**Table 2 : Distribution of respondents according to their overall knowledge about ICT tools**

Sr. No.	Knowledge	Respondents (n=100)	
		Frequency	Percentage
1.	Low	25	25.00
2.	Medium	69	69.00
3.	High	26	26.00
	Total	100	100.00

service) and smart phone followed by, radio (23.00%), computer (20.00%), bluetooth (20.00%), VCD (12.00%), internet (10.00%), e-mail (10.00%) and Laptop/LCD (07.00%), respectively. The meagre per cent of respondents were regularly ICT tools were viz., you tube, google drive (02.00%), video conferencing (01.00%), e-magazine (01.00%), e-book (01.00%), sky pe (01.00%) and google earth (01.00%), respectively.

The respondents were occasionally using ICT tools viz., radio (29.00%), computer (25.00%), e-mail (21.00%), VCD's (20.00%), smart phone (20.00%), internet (20.00%), bluetooth (17.00%), SMS service (15.00%), respectively. The 10.00 per cent respondents occasional using television and Laptop/LCD. The meagre

per cent of respondents were occasionally using ICT tools viz., e-book (06.00%), information kiosk (06.00%), e-magazine (05.00%), e-newspaper (05.00%), mobile phone (05.00%), you tube (05.00%), google earth (05.00%), google drive (04.00%), sky pe (03.00%) and video conferencing (01.00%), respectively. The great majority respondents were never use the ICT tools viz., video conferencing (98.00%), followed by sky pe (96.00%), e-magazine (94.00%), google drive (94.00%), e-newspaper (93.00%), e-book (93.00%), you tube (90.00%) and Laptop/LCD (83.00%), respectively. Findings were also supported by Jyothi (2000); Wims (2007) and Gavitt (2013).

The majority of respondents were never use ICT

**Table 3 : Distribution of the respondents according to extent of use of ICT tools**

Sr. No.	ICT tools	Use of ICT tools (n=100)		
		Regularly freq (%)	Occasionally freq (%)	Never freq (%)
1.	Telephone	70 (70.00)	10 (10.00)	20 (20.00)
2.	Radio	23(23.00)	29(29.00)	48(48.00)
3.	Television	85(85.00)	10(10.00)	05 (05.00)
4.	Computer	20(20.00)	25(25.00)	55(55.00)
5.	Laptop/ LCD (Liquid crystal display )	07(7.00)	10(10.00)	83 (83.00)
6.	Video conferencing	01 (01.00)	01(01.00)	98 (98.00)
7.	Bluetooth	20(20.00)	17(17.00)	63(63.00)
8.	VCD (Video compact disc)	12(12.00)	20(20.00)	68(68.00)
9.	Internet	10(10.00)	20(20.00)	70(70.00)
	e-mail	10(10.00)	21(21.00)	69(69.00)
	SMS service	40(40.00)	15(15.00)	55(55.00)
	e-magazine	01(01.00)	05(05.00)	94(94.00)
	e-newspaper	02(02.00)	05(05.00)	93(93.00)
	e-book	01(01.00)	06(06.00)	93(93.00)
	Information kiosks	02(02.00)	06(06.00)	92(92.00)
10.	Mobile phone	90(90.00)	05(05.00)	05(05.00)
11.	Smart phone	40(40.00)	20(20.00)	40(40.00)
12.	You tube	05(05.00)	05(05.00)	90 (90.00)
13.	Skype	01(01.00)	03(03.00)	96(96.00)
14.	Google drive	02(02.00)	04(04.00)	94(94.00)
15.	Google earth	01(01.00)	05(05.00)	94(94.00)

**Table 4 : Distribution of the respondents according to their overall use of ICT tools**

Sr. No.	Use of ICT tools	Respondents (n = 100)	
		Frequency	Percentage
1.	Low	16	16.00
2.	Medium	72	72.00
3.	High	12	12.00
	Total	100	100.00

tools viz., internet (70.00%), e-mail (69.00%), VCD (68.00%), bluetooth (63.00%), computer (55.00%) and SMS service (55.00%), respectively. By and large orange growers were mostly using ICT tools were mobile phone, television and telephone. Now-a-day's mobile phone emerged as the most important and easily available ICT tools for transfer of agricultural technology to the farmers. Extension agencies can utilize these tools for transfer of technology to orange growers. These findings were supported by Marimuthu and Radhakrishnan (2000). In case of radio similar findings were also found by Prameela and Ravichandran (2004).

The distribution of the respondents according to their overall use of ICT tools by orange growers in Table 4 shows that majority of the respondents (72.00%) had overall medium level of the use of ICT tools, followed by 16.00 per cent of the respondents having low use of ICT tools. Whereas, only 12.00 per cent of the respondents had high level of use of ICT tools for getting information about orange cultivation practices and market.

The probable reason behind this might that due to medium knowledge, medium availability of ICT tools and also internet accessibility and connectivity in rural area and may be the complexity of message. In addition to this less exposure to ICT equipments, lack of training, unaware about some ICT tools, lack of interest as most of them are middle age group.

### Conclusion :

The great majority of respondent orange growers had knowledge about ICT tools viz., mobile phones (95.00 %), followed by television (94.00 %) and telephone (80.00 %), respectively. The majority of respondents were also aware about ICT tools video compact disc (60.00 %), smart phone (60.00 %), radio (56.00 %) and bluetooth (50.00 %), respectively. Majority of the respondents (69.00%) were having medium knowledge about ICT tools followed by 26.00 per cent respondents had high and 25.00 per cent had low knowledge about ICT tools, respectively. The great majority of respondents were regularly using mobile phone (90.00%), followed by

television (85.00%) and telephone (70.00%), respectively. The 40.00 per cent of respondents were regularly using SMS service and smart phone followed by radio (23.00%), computer (20.00), bluetooth (20.00%), VCD (12.00%), internet (10.00%), e-mail (10.00%) and Laptop/ LCD (07.00%), respectively. It is also observed that majority of the respondents (72.00%) had medium use of ICT tools, followed by 16.00 per cent of the respondents having low use of ICT tools. Whereas, only 12.00 per cent of respondents had high level of use of ICT tools.

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