Prospects and Opinions of the farmers from ICT in agriculture at Village level

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Abstract

Amongst the various means of information communication available, satellite based internet communication has been found very efficient, accurate, quick and somewhat cheaper in disseminating the information from research system to farmers. Internet communication has touched almost all the district in our country and up to the village levels. Internet offers a means for bridging the gap between developmental professional, rural people and agricultural producers through the initiation of interaction and dialogue. Keeping all the views in mind it was decided to study the expectations and opinion of the farmers regarding internet facility with the following specific objectives. (1) To study the expectations and opinion of the farmers towards internet facility. (2) To ascertain the relationship between personal profile and opinion of the farmers towards internet facility

The objective of the study was to know the expectations and opinion of the farmers regarding Community Internet Center at village level for sustainable agricultural development. Most of the respondents expected the Community Internet Center (CIC) facilities at panchayat office of the village. They were also expecting six sets of computer with agriculture graduate having computer knowledge as operator at CIC. They expect that Government should bear expenses to run CIC. The information on farmers' related sites was expected by most of the farmers in Gujarati language that too in the audio-visual form. The major purposes to have CIC explained by the respondents were to collect agricultural information, to collect information on government's programmes, and to know more about market prices. Majority of the respondents expressed their desire to use Internet daily or twice in a week of their own .All of them expressed positive response to have proper training about the use of Internet facility through government agency, at CIC. Chauhan and Thakor, (2004) reported the same results. The results showed that majority of the farmers understood that internet is a rich source to collect world wide information on agriculture and it is the fastest way to exchange information in shortest time. Majority of farmers completely or to a certain degree felt that though internet is costly affair for the farmers but it is also the best mean to collect information on market prices of agricultural products. 82.00 percent of the farmers wanted their children to make positive use of internet at the same time. 81.00 per cent of them had opinion that farmers should make use of internet. Chauhan and Chauhan, (2006) also reported the same results.

It can be concluded from the results that out of the 10 independent variables, five variables like Education, Land holding, Contact with NRI's, Experience of internet use and Mass media exposure are significantly and positively correlated with the opinion of the farmers about the use of Internet for farming community. More than 70 per cent of the farmers opined that internet is the rich source and fastest way of exchanging information in short time. It must be used by the farming community for their betterment.

Keywords: Information Communication, Internet Agricultural Producers, Farmers, Community Internet Centre (CIC).

1. Introduction

The economy of our nation is based on agriculture and allied agro based industries, animal husbandry and other agriculture based businesses. Agriculture continues to be the major occupation and way of life for more than half of the total population. Thus, overall development of our country is not possible by ignoring the agriculture and farmers in the process of development. Since major segment of our population lives in the rural areas, quick dissemination of technology information from the agriculture research system to the doorstep of the ultimate users and reporting their problems to research system are the critical inputs in transfer of agricultural technology. Buddhadev, B. V. (2003). It is observed that the information and communication support during last few decades has mainly been conventional. This approach has not been able to reach large mass of the farmers who are spread across the whole country.

Farmers are more desirous and become anxious to get quick, exact and authentic information in the changing scenario of agriculture at global level. Dissemination of the required and recent agricultural information to the farmers in scattered villages at the variegated geographical situation in India is very difficult task. Transfer of technology to the level of farmers is not

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a onetime exercise because new farm technology is being constantly evolved. A continuous flow of technologies in an appropriate manner is vital to provide quick benefit of this development to the farmers. There has been a technological explosion in the field of agriculture. This demands that the farmer has to know all aspects of technology prior to its adoption. It can only be possible through the use of satellite based Internet technologies.

Agriculture continues to be the major occupation and way of life for more than half of the total population. Thus, overall development of our country is not possible by ignoring the agriculture and farmers in the process of development. Since major segment of our population lives in the rural areas, quick dissemination of technology information from the agriculture research system to the doorstep of the ultimate users and reporting their problems to research system are the critical inputs in transfer of agricultural technology. It is observed that the information and communication support during last few decades has mainly been conventional. Amongst the various means of information communication available, satellite based internet communication has been found very efficient, accurate, quick and somewhat cheaper in disseminating the information from research system to farmers. Internet communication has touched almost all the district in our country and up to the village levels. Internet offers a means for bridging the gap between developmental professional, rural people and agricultural producers through the initiation of interaction and dialogue.

The number of satellite based Internet connections in India has crossed the two million mark and the number of telephone connections is over 320 million. Internet connectivity has touched almost all the districts in the country and is moving down up to the village levels (Aditya, 2003). Many pilot projects to connect rural community to cyber-space are underway at various locations. The initial response of the rural people, particularly farmers has been very encouraging; many organizations are trying to establish internet connectivity to make best use to satellite based communication technology. Keeping all the things in mind the present study has been undertaken with a view to know the Expectations of the farmers regarding Community Internet Centre (CIC) at village level as well as to study entitled opinion of the farmers regarding internet facility was carried out in Anand district of Gujarat state.

2. Methodology

The investigation was carried out in Anand district of Gujarat state because the district is agriculturally one of the more advanced districts. Farmers having good interaction with their relatives in foreign countries. Four villages Viz. Vasad, Mogar, Napad and Navli having more than 5000 population and comparatively sound infrastructure facilities were selected purposively. A list of progressive farmers was prepared with the help of village level worker from all the selected villages. Finally, 25 farmers were selected from each villages using simple random sampling technique. Thus, the study was confined to 100 farmers. Keeping in view the objectives of the study, data were collected using structured interview schedule prepared for the purpose. Statistical tools such as frequency and percent and co-efficient of correlation were employed to analyze the data.

3. Results and Discussion

Profile of the respondents

It was observed that 64 per cent of the internet facility expecting farmers were from the middle age group, with a high school and higher secondary level of education (45 per cent) and had joint family. Sixty percent of the respondents belonged to the small category of farmers with mixed farming as main occupation. In order to earn additional income along with farming about 46 per cent of them possessed two or more animals. More than half of the respondents were found to be the members of one or more organizations.

Expectation of the farmers about CIC

The data presented in Table 1 indicates that cent percent of the respondents expected to have CIC at village level. It shows that farmers have realized importance of Internet facility in villages as an effective source of information as well as for the speedy communication.

It can be observed from the data in table 2 that Building of Panchayat was preferred by 95.00 per cent of the respondents, followed by building of primary school by 81.00 per cent, building of co-operative dairy by 76.00 per cent and buildings of high school and community hall by only 5.00 and 3.00 percent respondents, respectively. The building of Panchayat is such an informal place, where people feel much familiarity, thus it was preferred by great majority of the farmers to have CIC. The data in Table 3 indicate that operator or guide, printer, separate cabin, downloaded information in printed form and extra seating facilities were expected by 98.00, 72.00, 68.00, 63.00 and 53.00 per cent of the farmers, respectively. The data in Table 4 indicate that agriculture graduate with computer knowledge was preferred by nearly cent per cent (98.00 per cent) of the farmers as a manager of the centre, followed by any educated person of the village was preferred by 76.00 per cent, expert of computer by 57.00 per cent and primary school teacher by 28.00 per cent of the farmers. With a view to knowing farmers' choice of source to take initial financial support to start CIC, information was collected and presented in Table 5. The first choice of the farmers to take initial financial support to start CIC was Government agencies followed by co-operative societies, villagers sharing, voluntary donation and foreign relatives. Nikulsih M. Chauhan. (2010) also reported the same.

The information regarding choice of the farmers to bear expenses to run CIC was also collected and presented in Table 6. It can be seen that respondents said that Government should bear expenses to run CIC, at the same time other preferences given by them to bear expenses to run CIC were village Panchayat, co-operative dairy and collecting charges from users.Respondents were also asked to give there expectation regarding number of internet connected sets of computers (Table-7). Majority of the farmers (78 per cent) suggested that more than six sets should be there at CIC while 22.oo per cent expected 5 to 6 sets of internet connected computer sets at CIC.

It can be seen from Table-8 that most of the farmers expected information in Gujarati language that too in the form of photographs and written form on agricultural related webs as well as on ICT. At the initial stage if it is difficult to provide

information on most expected form, thus many of them also expected information in audio-visual form, written form and audio form.The data presented in Table 9 reveals that the major uses of internet expected by the respondents were to collect agricultural information, to collect information on government's programmes, for speedy communication, for exchange information, for entertainment, to collect information for their children's education, to contact foreign relatives, to contact relatives in India, to know information on agriculture of developed country and to know more about market prices (Buddhadev, 2003). The farmers are ready to use Internet for agricultural information but on majority of the agricultural sites, information is available in English language so they are not in a position to use it. Thus, all State Governments should launch farmers' related sites in local languages. Many State Governments have initiated their efforts in this direction

The result Table-10 shows that farmers have real interest to be a part of Internet communication process thus, majority (78.00 per cent) of the respondents were expecting to use Internet of their own while, 22.00 per cent wanted to use it with the help of others. The expected frequency of the farmers to use Internet facility at CIC was measured. The result (Table –11) indicates that majority (63.00 per cent) of respondents wanted to use internet at CIC daily or twice in a week, followed by 28 per cent whenever needed, 06.00 per cent once in a week and 3.00 per cent once in a fortnight. Thus it can be said that favorable expectation was observed among the farmers to use Internet at CIC. The data presented in Table-12 indicate that majority (70.00 per cent) of respondents expected training through government agency, followed by 13.00 per cent expected training by Agricultural University, 11.00 per cent respondents by Gram Panchayat. Only 4.00 and 2.00 percent of them expected such training by co-operative society and NGOs.

The data presented in Table 13 indicated that 71.00 per cent of the farmers understood that internet is a rich source to collect world wide information on agriculture and its allied fields, while 72.00 per cent supported the statement that 'Internet is fastest way to exchange information in shortest time'. Looking to the present cost involved in this technology, it is not easy for the farmers to have this facility individually at his home, thus, 65.00 per cent of the farmers completely or to a certain degree felt that internet is costly affair for the farmers. Internet is best mean to collect information on market prizes of agricultural products but as it is being new system for our farmers, mix opinion was observed for this aspect and it was observed that 41.00 per cent of the farmers realized its use for agricultural marketing while 35.00 per cent partially realized it and nearly one fourth (24.00 per cent) of them did not realize this feature of internet. Chauhan and Chauhan, (2006) also reported the same results.

The results point out that majority (69.00 per cent) of the respondents agreed with the statement that "Internet can be a very useful mean to the farmers during present time". It was exciting to note that majority (61.00) percent of the farmers did not believe that use of internet is only time pass activity. It means that they opined it as a useful medium for farming community. Of course, farmers are not in position to use this information for the development of their agriculture because sites available on agriculture are in English language. This fact was reflected in study so 88.00 percent of the farmers partially or absolutely realized that information available on Internet is difficult to understand.

It was really pleasing to note that majority (86.00 percent) of the farmers, out of them 56.00 per cent totally and 30.00 per cent partly assumed that development of Indian farmers is possible through Internet. Internet is best mean to learn all new things for young generation, thus, 82.00 percent of the farmers were wishing their children to make positive use of internet at the same time 81.00 per cent of them opined that farmers should make use of internet.

The perusal of the data in table-14 revealed that out of the 10 independent variables, five variables like Education, Land holding, Contact with NRI's, Experience of internet use and Mass media exposure were observed positively significant while, remaining five variables such as type of the family, was observed negatively significant with the opinion of the farmers about the use of Internet for farming community. The independent variables like Age, Occupation, Animal wealth, Modern agricultural equipment, Type of family, Extension contact and Organization participation were observed non significant with the opinion of the farmers about the use of Internet for farming community.

4. Conclusion

Cent per cent respondents expected the Community Internet Centre (CIC) facilities at village level. Slightly less than cent per cent of them preferred Panchayat office as the best place of CIC and they were expecting agriculture graduate with computer knowledge as operator or guide at CIC. The respondents wanted more than six sets of computer, further they expect that Government should bear expenses to run CIC. The information on farmers' related sites was expected by most of the farmers in Gujarati language that too in the audio-visual form. The major purposes to have CIC explained by the respondents were to collect agricultural information, to collect information on government's programmes, to speedup communication, to exchange information, and to know more about market prices. Majority of the respondents expressed their desire to use Internet daily or twice in a week of their own. All the respondents expressed positive response to have proper training about the use of Internet facility through government agency, at CIC for sustainable agricultural development.

It can be concluded from the results that out of the 10 independent variables, five variables like Education, Land holding, Contact with NRI's, Experience of internet use and Mass media exposure are significantly and positively correlated with the opinion of the farmers about the use of Internet for farming community. More than 70 per cent of the farmers opined that internet is the rich source and fastest way of exchanging information in short time. It must be used by the farming community for their betterment.

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Table 1 : The expectation of CIC at village level

n=100

Sr. No	Type of Expectation	Number	Per cent
1	Yes	100	100.00
2	No	00	00.00
	Total	100	100.00

Table 2 : Respondent according to choice of the place of CIC

n=100

Sr. No	Place	Number	Per cent
1	Panchayat	95	95.00
2	Primary school	81	81.00
3	Co-operative Dairy	76	76.00
4	High school	05	05.00
5	Community hall	03	03.00

Table 3 : The respondents according to expectation of service

n=100

Sr. No	Expectation of service	Number	Per cent
1	Operator/Person to Guide and help	98	98.00
2	Printer	72	72.00
3	Separate cabin	68	68.00
4	Collected information in printed form	63	63.00
5	Extra seating facilities	53	53.00

Table 4: Respondents according to choice of person to manage CIC

n=100

Sr. No	Person	Number	Per cent
1	Agriculture graduate with computer knowledge	98	98.00
2	Educated person of village	76	76.00
3	Expert of computer	57	57.00
4	Primary school teacher	28	28.00

Table 5: Respondents according to their expectation of provision of financial facility

n=100

Sr. No	Institution	Number	Rank
1	Government	2.00	I
2	Co-operative societies	0.92	III
3	By villagers' sharing	0.07	V
4	Voluntary Donation	0.65	IV
5	Foreign relatives	1.45	II

Table 6: The respondents as per the choice to bear expenses to run CIC

n=100

Sr. No.	Responsible for expenditure	Number	Rank
1	Government	1.60	I
2	Village Panchayat	1.02	II
3	Co-operative Dairy	0.92	III
4	By collecting charges from users	0.79	IV

Table 7: the Respondents' choice to have minimum computer sets at CIC

n=100

Sr. No.	Internet set	Number	Per cent
1	1 to 2	00	0.00
2	3 to 4	00	00.00
3	5 to 6	22	22.00
4	More than 6	78	78.00
Total		100	100.00

Table 8: Respondents choice on form of information on internet and ICT

n=100

Sr. No	Type of information	Mean value	Rank
1	In Gujarati language	1.98	I
2	Photographs with written form	1.94	II
3	Audio-visual form	1.91	III
4	Written information	1.42	IV
5	Audio form	1.20	V

Table 9 : Respondents according to their purposes to have CIC

n=100

Sr. No	Purpose	Mean value	Rank
1	To collect agricultural information	1.71	I
2	To collect information on Government's Programmes	1.64	II
3	For speedy communication	1.61	III
4	For exchange information	1.21	IV
5	For entertainment	1.11	V
6	To collect information for their children's education	0.74	VI
7	To contact foreign relatives	0.67	VII
8	To contact relatives in India	0.64	VIII
9	To know information on agriculture of developed country	0.56	IX
10	To know more about market prices	0.51	X

Table 10 : Respondents' wish to involve in the process of exploring internet

n=100

Sr. No	Way of internet use	Number	Percent
1	By own	78	78.00
2	With the help of others	22	22.00
Total	100	100	

Table 11 : Respondents expected frequency to use internet at CIC

n=100

Sr. No	Expected frequency to use ICT	Number	Percent
1	Daily	32	32.00
2	Twice in a week	31	31.00
2	Once in a week	06	6.00
3	Once on fortnight	03	3.00
4	Once in month	00	00.00
5	Whenever needed	28	28.00
	Total	100	100.00

Table 12 : Respondents expected agency to receive training to use CIC

n=100

Sr. No	Agency	Number	Per cent
1	Government	70	70.00
2	Co-operative society	04	04.00
3	NGOs	02	02.00
4	Gram Panchayat	11	11.00
5	Agricultural University	13	13.00
	Total	100	100.00

Table 13 : Opinion of the respondents about use of internet facility

n=100

Sr. No.	Statements	Opinion		
		Agree Per cent	Partially agree Per cent	Disagree Per cent
1	Internet can be a very useful mean to the farmers during present time	69.00	10.00	21.00
2	Internet is rich source to collect worldwide information on agriculture and allied fields	71.00	12.00	17.00
3	Internet is fastest way to exchange information in shortest time	72.00	14.00	14.00
4	Internet is costly affair for the farmers	41.00	24.00	35.00
5	Internet is best mean to collect information on market prizes of agricultural product	41.00	35.00	24.00
6	The use of Internet is nothing other than time pass activity	28.00	21.00	61.00
7	Information available on Internet is easy to understand	12.00	41.00	47.00
8	Development of Indian farmers is possible through internet	56.00	30.00	14.00
9	I wish that my children should make positive use of internet facility	81.00	10.00	09.00
10	I wish that farmers should make use of internet	81.00	19.00	00.00

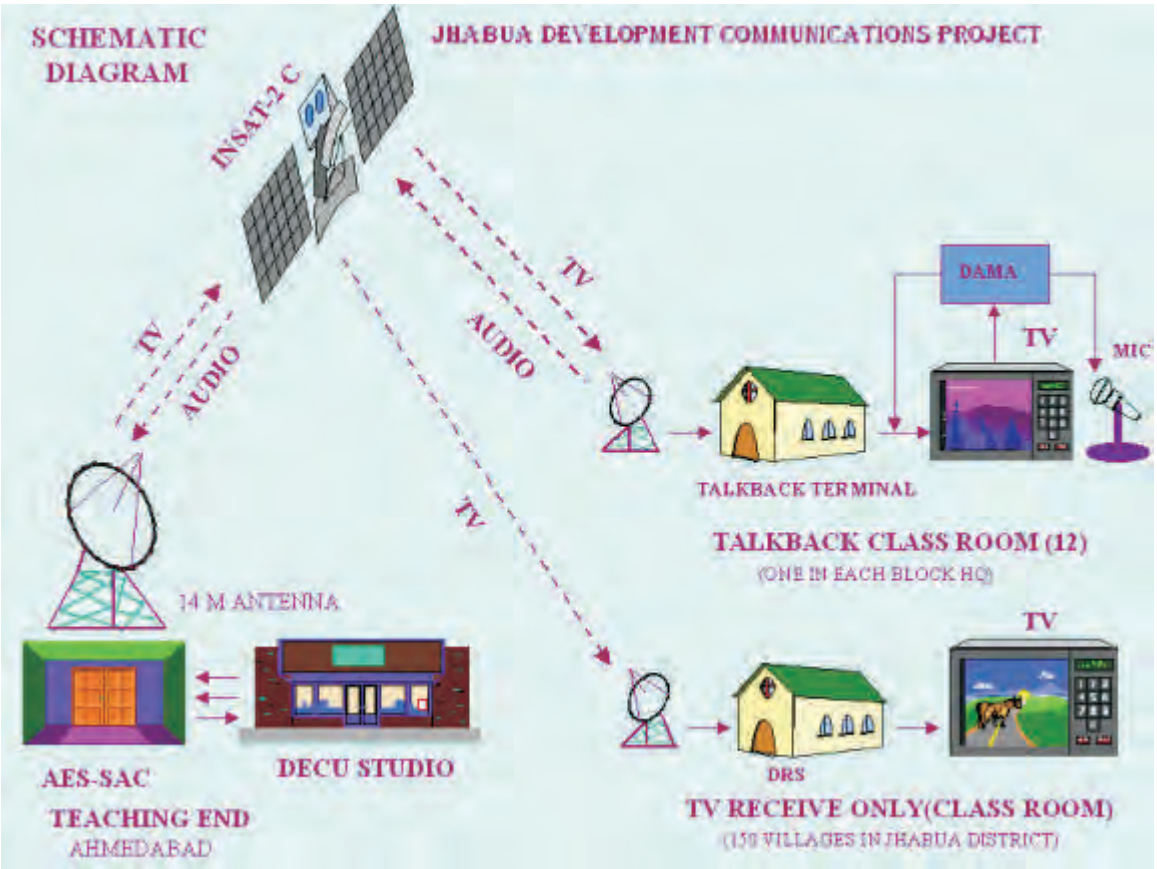
Table 14 : Relationship between profile of the farmers and their opinion about internet

n=100

No	Independent variables	Correlation coefficient ("r" value)
I	Personal variable	
1	Age	0.1368
2	Education	0.3263*
II	Economic variable	
3	Occupation	-0.0092
4	Land holding	0.2459*
5	Animal wealth	0.0195
6	Modern agricultural equipment	-0.0087
III	Social and communication	
7	Type of family	-0.2472*
8	Contact with NRI's	0.2603*
9	Experience of internet use	0.2718*
10	Mass media exposure	0.2462*
11	Extension contact	0.1239
12	Organization participation	0.1247

•*Significant at 0.05 level of probability*


GLIMPSES OF JDCP PROJECT


SCHEMATIC DIAGRAM
JHABUA DEVELOPMENT COMMUNICATIONS PROJECT
INSAT-2 C
TV
AUDIO
TV
AUDIO
TV
DAMA
TV
MIC
TALKBACK TERMINAL
TALKBACK CLASS ROOM (12)
(ONE IN EACH BLOCK HQ)
14 M ANTENNA
TV
AES-SAC
TEACHING END
AHMEDABAD
DECU STUDIO
DRS
TV RECEIVE ONLY(CLASS ROOM)
(150 VILLAGES IN JHABUA DISTRICT)

Farmers collecting information from farm net

Information Super Highway….

Information Dissemination through Inter Net…

Farmer using Kiosk….

CIC at Village in the service of farmers.

Unity in Diversity.

Acclimatization of the farmers with ICT in Agriculture.