International Journal of Chemical Studies

P-ISSN: 2349–8528
E-ISSN: 2321–4902
IJCS 2018; 6(6): 1598-1600

Received: 06-09-2018
Accepted: 07-10-2018

Anuranjan
Project Director, ATMA, Hazaribagh, Jharkhand, India

BK Jha
Assistant Professor (SS), Department of Agril. Extn. & Communication, BAU, Ranchi, Jharkhand, India

MC Nair
Deputy Director, IGNOU, New Delhi, India

PK Sarkar
Block Technology Manager, Kanke, Ranchi, Jharkhand, India

PK Jha
Junior Scientist, ZARS, Darisai, BAU, Ranchi, Jharkhand, India

Correspondence
Xiaodong Dong
Project Director, ATMA, Hazaribagh, Jharkhand, India

Factors associated with access of agricultural information by the farmers

Anuranjan, BK Jha, MC Nair, PK Sarkar and PK Jha

Abstract
Access of agricultural information is influenced by social, personal, psychological and economic factors. These led to plan and conduct a study on factors associated with access of agricultural information by the farmers. The findings revealed that family education, computer literacy extension contact, exposure to mass media and IT, innovation proneness, attitude towards IT, and agricultural information needs were found positively and significantly correlated with agricultural information access at 1% level of probability, as depicted by the correlation coefficient value (r) of 0.527, 0.165, 0.371, 0.458, 0.208, 0.471 and 0.642, respectively. Annual agricultural income was found to have positive and significant correlation at 5% level of probability. All the selected variables could explain the variability up to 61.50%. The variables *viz*. agricultural information needs, extension contact, attitude towards IT, family education and exposure to mass media and IT explained the variability by 61.30% of which information needs alone contributed to the tune of 41.30%. Hence, an appropriate extension strategy could be adopted so that unfelt needs of the farmers get converted into felt needs for enhanced information access by the farmers.

Keywords: Agricultural information, access, factors, farmers, information needs

Introduction
The main role of extension is to empower farmers and enable them to identify and analyze their agricultural problems and be able to make the right decisions (Kimaro *et al*., 2010) [4]. Jain (2010) [3] pointed out that the central task of extension is to assist rural families to be able to help themselves through application of science to their daily life of farming and home-making and that it uses communication of valuable information, which helps people make sound decisions. In recent past, information access has been facilitated by technological and institutional interventions in the field of ICT.

The Information and Communication Technology (ICT) has brought about revolution in communication sector and contributed significantly to industry, business and governance. (Bhatnagar and Rao, 2007) [7]. Government has been promoting IT-enabled services in rural areas through common service centres (CSCs).

Farmers access different types of agricultural information from different sources. The gamut of information includes variety, seed rate, seed treatment, fertilizer management, inter-cultural operations, insect-pest management, disease management, weed management, water management, weather, market price and post–harvest and value addition. The sources available for accessing this information may be Scientists, Extension personnel, Bank officers, PACS, Input Dealers, Krishak Mitra, Progressive Farmers, Kisan Call Centre, and Common Service Centre etc. However, access of agricultural information is influenced by the socio-psycho-personal and economic characteristics of farmers.

In this background, a study was conducted to find out association and relative contribution of the variables viz; size of holding, family education, computer literacy, social participation, extension contact, exposure to mass media and IT, innovation proneness, attitude towards IT, annual agricultural income and agricultural information needs towards access of agricultural information.

Methodology
The research design adopted for the study was ex-post facto, since the phenomenon had already taken place. The study was conducted in the purposively selected three districts one each from three divisions of Jharkhand state i.e.

Deoghar from Santhal Paragana, Hazaribag from North Chhotanagpur and Ranchi from South Chhotanagpur. Two blocks each were purposively selected from selected district based on the suggestions of special purpose vehicle (SPV) which is responsible for promotion of CSCs in the state. Thus Sarath and Mohanpur blocks from Deoghar district, Katkamdag and Churchu blocks from Hazaribag district and Kanke and Ormanjhi blocks from Ranchi district were selected for the study. Five Panchayats from each block were selected randomly. Ten farmers from each Panchayat were randomly selected. Thus, the sample size constituted 300 farmer respondents. On the basis of extensive review of literature and discussion with experts of the discipline, relevant variables were selected for in-depth study. The selected dependent and independent variables were measured with appropriate tests and scales.

Results and Discussions

Association and relative contribution of socio-psycho-personal and economic characteristics *viz.* size of holding, family education, computer literacy, social participation, extension contact, exposure to mass media and IT, innovation proneness, attitude towards IT, annual agricultural income and agricultural information needs of farmers towards access of agricultural information were calculated which are presented in subsequent tables.

Association of access of agricultural information with socio-psycho personal and economic characteristics of farmer respondents

Correlation coefficients of agricultural information access with socio-psycho-personal and economic characteristics of farmer respondents are presented in Table 1.

Table 1: Correlation co-efficient of agricultural information access with socio-psycho-personal and economic characteristics of farmer respondents

Sl. No.	Independent variable	Correlation co-efficient (r)
1	Size of holding	0.053
2	Family education	0.527**
3	Computer literacy	0.165**
4	Social participation	0.050
5	Extension contact	0.371**
6	Exposure to mass media and IT	0.458**
7	Innovation proneness	0.208**
8	Attitude towards IT	0.471**
9	Annual agriculture income	0.136*
10	Agriculture information needs	0.642**

*. Significant at the 0.05 level of probability
**. Significant at the 0.01 level of probability

It is evident from the table that out of 10 selected variables family education, computer literacy, extension contact, exposure to mass media and IT, innovation proneness, attitude towards IT, and agricultural information needs were found positively and significantly correlated with agricultural information access at 1% level of probability, as depicted by the correlation coefficient value (r) of 0.527, 0.165, 0.371, 0.458, 0.208, 0.471 and 0.642, respectively. Annual agricultural income was found to have positive and significant correlation at 5% level of probability. Rest of the variables viz. size of holding and social participation was found non-significant.

Extension contact and exposure to mass media and IT broaden the mental horizon of the farmers. Similarly, family education, computer literacy, innovation proneness and attitude towards IT plays significant role in the access of agricultural information. The agricultural information needs motivate and annual agricultural income capacitated the farmers to go for higher information access.

Meera (2003) [5] also reported that irrespective of the land holding, all types of farmers were using the IT services. Chauhan (2008) [2] elucidated that independent variables like education, land holding, contact with NRI's, experience of internet use and mass media exposure are significantly and positively correlated with the judgment of farmers about the use of internet for farming community.

Linear regression analysis of socio-psycho-personal and economic characteristics of farmer respondents towards agricultural information access

Linear regression analysis of socio-psycho-personal and economic characteristics of farmer respondents towards agricultural information access is presented in Table 2.

Table 2: Linear regression analysis of socio-psycho-personal and economic characteristics of farmer respondents towards agricultural information access

Sl. No.	Independent variable	Coeff. 'b' value	Std. Error	t-value
1	Size of holding	-0.009	0.050	-0.182
2	Family education	0.207**	0.035	5.977
3	Computer literacy	0.004	0.087	0.045
4	Social participation	-0.074	0.105	-0.703
5	Extension contact	0.075*	0.030	2.542
6	Exposure to mass media and IT	0.074*	0.029	2.587
7	Innovation proneness	0.032	0.041	0.773
8	Attitude towards IT	0.096**	0.016	5.941
9	Annual agriculture income	0.001	0.000	-0.256
10	Agriculture information needs	0.240**	0.024	10.028
		R^2 =0.615 Adj R^2 =0.601		

*. Significant at the 0.05 level of probability
**. Significant at the 0.01 level of probability

It is indicated by the table that the selected 10 variables *viz*; size of holding, family education, computer literacy, social participation, extension contact, exposure to mass media and IT, innovation proneness, attitude towards IT, annual agriculture income, agriculture information needs could explain the variability to the extent of 61.50% as revealed by R^2 value of 0.615. The variables like family education, attitude towards IT and agricultural information needs were found positive and significant at 1% level of probability. Similarly, the variables *viz*. extension contact and exposure to mass media and IT, were found positively significant at 5% level of probability. Omani and Chizari (2007) [6] observed that the level of education, IT knowledge, social participation, level of job satisfaction, income and extent of information seeking motivation may well account for 76% of changes in perceptions of agricultural extension agents.

Regression model of agricultural information access

Regression model of agricultural information access is presented in Table 3.

Table 3: Regression model of agriculture information access

Sl. No.	Variable	R^2 Value	Method
1	All independent variables	0.615	Enter
2	Information needs in agriculture, extension contact, attitude towards IT family education and exposure to mass media and IT	0.613	Backward
3	Information needs in agriculture	0.413	Forward

Regression model of agricultural information access was computed by enter, backward and forward method. Enter method takes into account all the variables which could explain the variability up to 61.50%. In backward method the variables *viz*. agricultural information needs, extension contact, attitude towards IT, family education and exposure to mass media and IT explained the variability by 61.30%. The forward method revealed that information needs alone had explained the variability to the tune of 41.30%.

It could be inferred from the findings that agricultural information need is the most vital factor for agricultural information access. Need in fact drives the individual to action, thereby farmers strive for access of agricultural information. Therefore, the strategy should be formulated so that unfelt needs of the farmers get converted into felt needs. The extension contact, exposure to mass media and IT should be increased by massive extension programmes. Attitude towards IT could be made favorable by training and demonstration activities.

Conclusions

Independent variables viz: family education, computer literacy extension contact, exposure to mass media and IT, innovation proneness, attitude towards IT, annual agricultural income and agricultural information need were found positively and significantly correlated with agricultural information access. Rest of the variables *viz*. size of holdings and social participation were found non-significantly correlated with agricultural information. All selected independent variables together could explain the variability to the extent of 61.50%. Among all, Information needs in agriculture, extension contact, attitude towards IT family education and exposure to mass media and IT together were found important. It could be concluded from the findings that agricultural information need is the most vital factor for agricultural information access. Therefore, strategy should be formulated so that unfelt needs of the farmers get converted into felt needs. At the same time, extension contact, exposure to mass media and IT should be increased by massive extension programmes and attitude towards IT should be made favorable by training and advisory activities.

References

1. Bhatnagar PS, Rao PTPR. Impact Assessment Study of e-Government Projects in India, Indian Institute of Management, Ahmedabad, 2007.
2. Chauhan NM. Use of Internet Technology in Agriculture. Kisan World. 2008; 35(7):56-57.
3. Jain CK. Agricultural extension-worldwide innovations. Oxford Book Company, 2010.
4. Kimaro WH, Mukandiwa L, Mario EZJ. (Eds.). Towards improving agricultural extension service delivery in the SADC region. Proceedings of the Workshop on Information Sharing among Extension Players in the SADC Region, Dar es Salaam, Tanzania. July, 2010, 2010.
5. Meera SN. A critical analysis of information technology in agricultural development: impact and implications. Unpublished Ph.D. Thesis, IARI, New Delhi, 2003.
6. Ommani AR, Chizari M. Appropriateness of E- learning-based Information, 2007.