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Assessment of Socio-Digital Approaches for Agricultural Extension in Shri Muktsar Sahib District of Punjab

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ABSTRACT

Electronic and print media has always played an important in transfer of technology. Now the social media has been becoming instrumental in bringing changes in behavior of people. Keeping in view the importance of social media, the Krishi Vigyan Kendra, Sri Muktsar Sahib started using social media for the purpose of agricultural extension. This centre has enrolled 799 farmers for spreading scientific technologies among farmers. To study the preference and constraints faced by farmers in using social media, a survey of 250 respondents was conducted during the year 2019. The majority (56.4%) of the respondents selected in the study were in the middle age group, medium level education and medium land holdings of size. The results revealed that social media has become a preferred source of information for farmers. Only 0.8 per cent of the farmers preferred radio as source of information, 7.2 per cent preferred television, while 70 per cent of the farmers preferred social media (WhatsApp) as source of information for latest agricultural technology. The preference for use of social media in agricultural extension had significant correlation with age, education, media exposure, economic motivation and socio-economic status. Fake and irrelevant messages were considered as major problem in communication through social media by majority of the farmers. Present study indicates the increasing importance of social media for transfer of technology to farmers.

Keywords: Preference, Social media and technology transfer, WhatsApp

INTRODUCTION

Social media are tools of electronic communication that allow users to interact with others individually or in groups for the purposes, sharing thoughts, information and opinions (Suchiradipta and Saravanan, 2016). Digital networks are used to share and discuss information – opinion through video, audio, and multimedia (Andres and Woodard, 2013). Merriam-Webster (2015) defines social media as 'forms of electronic communication through which users can create online communities to share information, ideas, personal messages and other content'. Social media is basically digital technologies facilitating communication of user generated content through constant interaction. Accessibility of social media through mobile phones and the scope of mass-personal and mass-self communication makes it a popular platform among the masses to share ideas and increase link ability and content sharing across multiple platforms. The unique experience of openness, conversation, community and connectedness makes social media an important tool of communication (Mayfield, 2008). Due to increasing popularity of social media the users are increasing day by day. Therefore, there is a vast scope to use social media as potential communication tool to reach out large number of farmers by extension workers. Furthermore, the reach of social media is constantly expanding into the rural areas making it easy and convenient for reaching

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out farmers and farm families. Sandhu *et al.* (2012) concluded that mobile based delivery ensures timeliness and is of great use to the farmers. Nain *et al.* (2019) concluded that most of the content shared was knowledge intensive with a mix of personal farming experiences. Public extension services had limited capacity and were reaching to only 6.8 per cent of the farmers (GFRAS, 2012). The fast growing use of social media and mobile technologies create opportunity for dissemination of technologies. Recent innovations in information technology can deliver agricultural information with high speed, to large number of people and with more accuracy (Goyal, 2011). The recent communication technologies are reviving agricultural extension services throughout the world (World Bank, 2016). Moreover, ICT interventions have received support from the Indian Ministry of Agriculture (ICAR, 2016) for agricultural extension purposes. In recent times two mobile based applications were launched on crop insurance and agri-market by government (GOI, 2015). Social media gives opportunities for creating content and promotes co-learning (Jackson *et al*., 2009). The advantages of using social media are beyond cost effective ways of communication to empowerment (Neill *et al*., 2011). Networking, engagement and community involvement through social media among farmers can be a good way for development (Stanley, 2013 and Mains, 2013). Thus, present study was conducted with the objective to know the preference of farmers towards social media for getting agricultural information and problems faced by farmers in getting information through social media.

METHODOLOGY

Present study was conducted during the year 2019 in Sri Muktsar Sahib district of Punjab. The Krishi Vigyan Kendra, Sri Muktsar Sahib has enrolled 799 farmers in different WhatsApp groups for sharing agriculture and allied field related information among farmers. The details of name of different WhatsApp groups, number of participants and type of information shared has been given in Table 1.

The data were collected from 250 randomly selected farmers who were actively engaged in agriculture and were member of one or the other social media group formed by KVK, Sri Muktsar Sahib. For the purpose of data collection a questionnaire was developed. The questionnaire contained three parts. Part I was developed to gather information regarding socio-personal characteristics of farmers, Part II dealt with the preference of farmers towards different media for receiving information related to agriculture and Part III dealt with constraints faced by farmers in using social media (WhatsApp). The data gathered was analyzed using frequencies, percentages and correlation between independent and dependent variable was also studied.

RESULTS AND DISCUSSION

In different social media groups formed by KVK, Sri Muktsar Sahib, information related to crop production, availability of different crop seeds, weed control, insect pest management, weather information, marketing related

Table 1: Details of WhatsApp groups operated by KVK, Sri Muktsar Sahib of Punjab

Socio-media group	Group Admin.	No. of members	Type of information shared
KVK Muktsar	KVK & Farmers	234	Crop production, seed availability, plant protection, IPM*, INM**, CRM***, marketing, agro-advisory, weather forecast and allied enterprises.
CRM Muktsar	KVK & Farmers	252	CRM, weather forecast, weed control and insect pest management
Beekeeping Muktsar	KVK& Farmers	78	Summer and winter management of honey bees, control of wax moth and varoa mite, marketing of honey etc.
Progressive young farmer	KVK & Farmers	170	Feedback on technology demonstrated, farmer problems and information sharing for quick dissemination of technology
Khumb Kheti Muktsar	KVK & Farmers	65	Mushroom production, span availability, marketing and value addition

*integrated pest management, ** integrated nutrient management, *** Crop residue management

information, information related to bee-keeping, mushroom farming, animal science, home science etc. was shared. Maximum numbers of farmers were enrolled in 'KVK, Muktsar' group followed by 'CRM Muktsar group' with 252 members and 'progressive young farmers group' with 170 members. Data reveals that social media has become preferred source for getting and sharing agricultural information and other social messages. The traditional electronic media viz.; Radio had least preference among print, electronic and social media. Radio was most-preferred media for only 0.8 per cent of the farmers and preferred media for 3.2 per cent of the farmers. Majority of the farmers (54.0%) reported it as not-preferred and 28.8 per cent as least preferred. Print media was most preferred for 8.8 per cent of the respondents and 31.2 per cent revealed it as somewhat preferred. Television was most preferred source of agricultural information for only 2.0 per cent of the farmers while 32.8 per cent and 32.0 per cent opined it as not-preferred and least preferred media. Social media (WhatsApp) was most preferred media for 28.0 per cent of the respondents. Total, 70.0 per cent of the farmers reported WhatsApp as preferred media for getting agricultural information. Social media was perceived as somewhat preferred by 8.0 per cent of the respondents and only 4.8 per cent reported it as least preferred (Table 2).

The socio-personal characteristics viz.; age, education, media exposure, extension contact and socio-economic status had bearing on preference towards use of social media for sharing agricultural information. The findings presented in Table 3 show the correlation ('r' value) between preferences towards social media and socio-personal characteristics of the respondents. It is quite evident from the findings that respondents' age had negative correlation (-0.28) as for preferences of respondents for seeking information from social media is concerned. This means that young generation was more inclined towards social media as a source of information. While variables such as education, media exposure, extension contact, economic motivation and risk orientation were positively correlated with preference towards use of social media for seeking agricultural information.

There are certain factors which create noise in every communication channel. Attempt was made to study the problems faced by farmers in communication through social media (WhatsApp). The data given in Table 4 reveals that major problem faced by farmers was the spread of fake messages. Majority of the farmers (27.6%) revealed that fake messages shared by group members were annoying factor in communication through WhatsApp. This was followed by problem of irrelevant messages which was expressed as noise in communication by about one fifth (21.2%) of the farmers. Excessive message load especially during festival days was perceived as problem by 13.6 per cent of the group

Table 3: Relationship of socio-personal characteristics with preference towards social-media as tool for receiving agricultural information

Dependent variable 'y'	Independent variable 'x'	r value
Preference towards social media as tool for receiving agricultural information	Age	-0.28*
	Education	0.38*
	Land holding	0.17
	Extension contact	0.20
	Media exposure	0.39*
	Economic motivation	0.485*
	Risk orientation	0.38*
	Socio-economic status	0.14

*Significant at 0.05 level of significance

Table 2: Distribution of farmers according their preference for getting information through WhatsApp group (n=250)

Different media	Not preferred	Least Preferred	Somewhat preferred	Preferred	Most Preferred
Print media	50(20.0)	62(24.8)	78(31.2)	38(15.2)	22(8.8)
Radio	135(54.0)	72(28.8)	33(13.2)	08(3.2)	02(0.8)
Television	82(32.8)	80(32.0)	70(28.0)	13(5.2)	05(2.0)
Social media (WhatsApp)	43(17.2)	12(4.8)	20(8.0)	105(42.0)	70(28.0)

Figures in parenthesis are percentages

Table 4: Problems associated with communication through WhatsApp in Shri Muktsar Sahib district of Punjab

Problems	Frequency	Percentage
Connectivity problem	12	4.8
Irrelevant message	53	21.2
Excessive message load	34	13.6
Fake messages	69	27.6
Personal chat	14	5.6
Long duration of video content	19	7.6

members. Similarly, long duration videos (7.6%), personal chat (5.6%) and connectivity problem (4.8%) were other problems expressed by WhatsApp group members.

CONCLUSION

Social media can be easily included for sharing information related to agriculture along with different other media. The social media has become a preferred media for receiving and further sharing information among all the stake holders. The direct participation of the all the stakeholders can be enhanced in agricultural development related discourses. It is easy to take follow up and receive feedback from the stakeholder with use of social media and even course correction can be done at monitoring of different extension programmes. Social media has been instrumental for open discussions on complex issues like crop residue management and foremost for two way communication.

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