

SOCIAL MEDIA AND FARMERS

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Abstract

In the present era, social media plays a key role in the society. The widespread use of Information and Communication technology redefined the way people think and work. Every walk of life has been enhanced by ICT. In countries like India, where agriculture is the main occupation of the mass, it is of great concern whether ICT and social media has gone into the mass, thereby improving their life. In this paper, we present a study of social media as a tool for farmers. The application of social media in agriculture, the technology acceptance by farmers and major scope and challenges are discussed with special emphasis given to the scenario in India in general and Kerala in particular.

Keywords: Agriculture, Social Media, Farmers, ICT

1. INTRODUCTION

The introduction of social media has changed communication more virtual than physical. Information and Communication Technology has an immense power in developing sectors. Communication is becoming more and more dynamic each day. Platforms like Facebook and Twitter have 1.18 billion and 316 million active monthly users as of 2015. The use of social media is picking up in rural areas of developing and least developed countries as well. Moreover, it is clear that after a short period of time, social media will shape the way people interact, share information, form opinions and also lead individual and collective actions. Social media is gaining popularity among agriculture sector too. Many organizations have developed agricultural apps for farmers to receive information on agricultural practices and engaging clients online, in addition to a wide range of social media tools for agricultural extension and advisory services. In spite of all the advantages, its actual use in rural areas of developing countries is still low due to economic conditions and infrastructure availability.

The use of social media can prove to be a powerful aide if utilized up to its potential. The farmers of rural areas should understand about the use of social media for their agricultural growth. Conducting training programs, awareness campaigns, and workshops will help them to make understand the agricultural app and use social media better. Facebook, Twitter, YouTube, and blogs are the major platforms for agricultural information dissemination. At present, there are 2.078 billion social media users in the world. Approximately 500 million tweets are sent every day. YouTube is the second largest search engine and third most visited site on the web. The major activity on social media was searching for news and events and sharing information. A major impeding factor for social media use was the lack of authenticity of information shared online. Professionals

are using social media to form networks and farmers are taking to social media to talk to peers and consumers. All big things in agriculture – new technology or innovations, seminars and meetings, workshops and trainings, reports, publications – get tweeted or hash tagged on social media. In general, social media is a very useful tool in agricultural extension and rural advisory services.

2. SOCIAL MEDIA - ON FINGERTIPS

Social media refers to the internet-based digital tools for sharing and discussing information among people. It refers to the user generated information, opinion, video, audio, and multimedia that is shared and discussed over digital networks [1]. Social media is the most recent form of digital communication and it is a great place to start conversation, connect with both the young and old generation alike, and get people excited. It has changed the topography of personal communication and taking on the world of professional communication as well. The advent of social media has revolutionized the way people communicate worldwide. Aided by mobile phones, social media is spreading fast across the world. Accessing news through social media by using mobile devices is also gaining popularity [2]. Social media is the recent addition to find news and information on fingertips of people who use ICT's services. Social networking sites, Blogs, Socially integrated messaging platforms, Forums, discussion boards and groups are the different types of social media platforms. Social media sites gained their popularity not only because they connected friends and family but the huge potential of communication was rapidly realized and it started finding its use in professional communication. It is difficult to classify these social media in a strict category as evolution of social media platforms depends on user's preference and integration of new features makes them fit in more than one category at times.

3. SOCIAL MEDIA AND AGRICULTURE – A REVIEW

Agriculture is a major sector which is vital for the survival of modern man. Limited success of Green Revolution in Asia and its complete failure in Africa, conflicts, political unrest and government missteps added with increased pressure on agricultural lands, abandonment of agricultural activities, highly subsidized agricultural activities, unstable global food prices, and climate change are pushing people more and more people into poverty and food insecurity [3]. It is important that rural people should overcome these challenges by creating informed communities. By adapting and making use of ICT helps to improve agricultural progress and everyone benefits from the union of these sectors. ICTs have been used in Agriculture Advisory Services for facilitating communication among farmers and agriculture experts, stakeholders, and various applications.

Social media gives an opportunity to connect and interact with one's audience in agriculture, educate them and helps to know more about the industry. It makes promotion of extension programs easier, allows real time interaction with clients, helps extend outreach to new audiences, and promotes development of relationship among actors in Agricultural Innovation Systems (AIS) [4]. The organizations can create effective social media pages to share information, engaging farmers and stakeholders through conversations. Social media is a platform of engagement where agriculture is the content and for agricultural producers, the major reason for using these platforms is mass influence [5]. It gives farmers a voice and an opportunity to directly connect with their customers, which can help in direct marketing and increased profits alongside facilitating mass-personal communication [6]. Also, they don't need to depend on a single source for information anymore and with increased contact with peers, tried and tested information at the right time can prove to be a very important input.

To agriculture as an industry, the key values of communication that social media provides are peer to peer networking, farmer – industry networking, consumer engagement, and crisis communication [7]. Social media provides agribusinesses and agri-entrepreneurs the opportunity to connect with consumers and build relationships they ever had. Social media platforms like Facebook, Twitter and Whatsapp encourage high interaction among users benefiting everyone involved. Twitter has numerous accounts related to agriculture by global organizations, agriculture ministries of different countries, development organizations (profit and non-profit based), agribusinesses and farmers. These large numbers of likes for pages, members of groups, followers of accounts, and subscribers of channels indicate the growing space of agriculture in social media and increased popularity of farming among the non-farming community as well. This provides a unique opportunity for extension to reach an increased number of audiences in lesser time and with reduced resources. A further probe about the followers/members of these groups shows the increasing

number of users from developing countries too. Blogs are efficient platforms in agriculture for personally connecting with clients and peers and sharing stories, opinions, and experiences aided by interactivity with audience at an individual and organizational level. For research and extension organizations, they also provide the opportunity of opinion mining to understand farmers' concerns, their problems and opinions, and evaluation of their attitudes towards agricultural aspects [8].

Whatsapp groups of farmers in India are actively sharing information and seeking advice from experts when needed and are requesting the government to use Google Earth and Whatsapp for accurate and efficient information delivery [9][10]. A recent study shows there has been 100 per cent increase in the past year in rural social media users in India and many reported going online only to join social media [11]. Farmers are becoming more and more innovative in using social media and photographs, selfies or farming selfies trending across social media platforms, Farmingselfie.com, (<http://farmingselfie.com/>). These shows the increasing interest and number of users of social media platforms in agriculture from the grassroots but more important than that, it shows the increasing audience for agricultural information throughout the globe. The use of social media platforms is dependent on the users, region, and economic status as internet enabled devices and data usage are still costly affairs for many, but with increased reach of internet and increased use of social media platforms, the opportunities for new agricultural applications are huge too.

4. GLOBAL STUDY ON SOCIAL MEDIA IN AGRICULTURAL EXTENSION

Social media has become part of everyday life for most people in the developed world. But it has created a life-changing experience for many people in rural areas who have come to use it. Agricultural organizations are using a range of social media and find it effective on farm management. Study on social media in agricultural extension helps to understand about the social media preferences and the interest of people using it.

Social media is the fastest way to communicate worldwide. Facebook is the most preferred social media platform by a large majority followed by Whatsapp, Google Plus, Twitter, Blogs and YouTube. Social media platform for agricultural extension is widely used by the people of developing and developed countries, also used by underdeveloped countries. The intensity of use of internet is different among developed and developing countries due to the availability of infrastructure and economic condition. A recent study about how farmers use media found that 42% of farmers who use Facebook and Twitter are using it every day. Farmers are making their presence on social media for sharing personal stories or using the sites as news sources online. YouTube is the most popular social media platform for agriculture professionals about 51% of farmers that use the site. Farmers are more likely to be found on social media in the

early morning hours or in the evening. Personal mobile phones were the most used device to access social media followed by personal laptop and personal computer. Globally, it is reported that an individual spends about 2.4 hours a day on social media. To facilitate innovation, communication and interaction among stakeholder organizations and institutions is important and social media have the potential to provide the platform in agricultural sector. Defective internet connection and unproductive use of time were considered as the major drawback in using social media. Internet connections are infrastructural issues should be looked into by the service providers and governments, personal constraints and privacy concerns can be easily taken care of with awareness creation and learning to better use social media through trainings and workshops, if needed.

4.1 Attitude Towards Social Media

Social media has an amazing growth within few decades. It has become part of everyday life for most people in the developed and developing countries. At present social media is the world's largest communication network. It is the simplest and fastest way for sharing information such as file, photos, videos etc. Social media is not only a tool for reaching large audiences; it is also an opportunity to develop relationships. The study shows that the young generation is highly involved in using social media also the old generation is interested to know how to access social media. People are aware about the importance of social media in agricultural extension services.

4.2 Social Media In India

India almost has the world's second largest Internet user base by December 2015, overtaking the US, according to a report, 'Internet in India 2015' Report released by the Internet and Mobile Association of India (IAMAI) and IMRB International. India will have 317 million internet accessed users by October 2016. One out of every six Indians accesses the internet through mobile phones. In Urban India, the mobile Internet user base grew by 65 per cent over last year to reach 197 million in October 2015. Or else in Rural India, the mobile Internet user base is expected to reach 87 million by December 2015 and 109 million by June 2016. Internet in India took more than a decade to move from 10 million to 100 million, and three years from 100 million to 200 million, it took only a year to move from 300 to 400 million users. It is clear that; today internet is the mainstream communication channel in India which helps start-ups, small businesses and digital India. Social media tools are compatible with most smartphones, allowing producers to stay in touch wherever they are. Many agri-business companies have Facebook pages to communicate with their clients. Also many organizations have developed websites and mobile application for agriculture extension. Farmers use mobile based agro advisory services, with its reach among all the members in a farm family, sharing photos, videos and audios have also gained popularity among the farmers. The increasing number of apps for crop and weather information and alerts compatible with Apple,

Android and Windows operating systems indicates the increasing use of high end smartphones among the farmers of developing countries and more importantly, their awareness about the utility of the devices in farming.

4.3 Social Media In Kerala

According to Telecom Regulatory Authority of India, the urban subscriber base as on March 31, stands at 73.69 million and the rural broadband internet subscriber base stands at 25.51 million. Kerala is the second highest number of broadband users in rural area at 2.52 million and 89.7% of people use Smartphone, thus the use of social media also increased. People live in the era of social media, for information sharing and opinion building across the world. Dr. P Rajendran, Vice Chancellor, Kerala Agricultural University stated that a large number of educated youth are taking interest in conversations around agriculture on social media platforms such as WhatsApp and Facebook [12]. Social Media therefore helps brings the agriculture community together and helps them connect better. However, the reduced infrastructure, availability of poor optical fiber connectivity and power supply condition in rural areas, low computer penetration in rural areas owing to high cost as compared to household income in rural areas and low literacy are a few major reasons behind low rural broadband Internet penetration.

5. SOCIAL MEDIA AND FARMERS - OPPORTUNITIES AND CHALLENGES

In spite of all the advantages, practical use of social media in agriculture is still in emerging stage and the challenges are at more than one level.

- Possibility of sharing ideas/information into action: Awareness created through social media can be converted to practical actions in many instances in development sectors, agri-business, agri-tourism etc. Organizing the people to do something with the information they are exposed to online will be the biggest opportunity of social media.
- Forming special interest groups: Special groups and pages can be created in Facebook, Twitter, WhatsApp etc to share information and ideas among the farmers, stakeholders and agricultural experts. Stories of success and failures in agriculture practices helps to learn from others experience also help in developing better connections personally. Social media can be effective in agricultural crisis like pest or disease outbreaks as well facilitating faster communication among experts, farmers, and other actors helping in containing situations quickly.
- Developing innovation competencies: Social media is the recent place for giving users an opportunity to contribute their views and ideas making it an interactive environment where no one is just an audience. Apart from traditional media social media enables new ways of collaboration and content creation with target audience. It is an exposure to different views and trying them out in their own situations can help the smallholders develop innovation competencies.
- Cost effective: Internet is available worldwide. Though mobile phone subscriptions have increased, usage

of internet also has been increased. But getting a good network is still a struggle in many rural areas of Asia and African countries. Data charges in developing countries and developed countries are different. But high internet cost restricts the use of multimedia like images and videos as they consume much more data than text message. Also, in some areas internet connection is provided through telecommunication centres.

- **Lack of infrastructure:** Internet usage in least developed country is less, compared with the developed and developing countries. The major reason of this is the lack of power supplies in rural areas, also the lack of fibre optic lines, cell towers and wireless spectrum, as well as the limited use of smartphones. So there is a limitation in reach and benefit of internet connectivity for using social media.
- **Literacy:** Illiteracy is still one of the biggest challenges holding back the development efforts. Social media requires both educational and technical literacy which are both lacking among majority of the population, especially women of developing countries.
- **Ensuring participation:** Engaging farmers and stakeholders with social media is a challenge. Many visit the group pages, only few posts, share and discuss ideas, and issues. This limits the scope of the information shared to reach a global audience as well as the potential of the platforms.

6. SOCIAL MEDIA PLATFORMS AND THEIR USE IN FARMING PRACTICES

As the number of social media platforms is increased, many organizations have developed diverse agricultural extension advisory service providers. Each type of platform has more or less utility to individuals depending on type of user, purpose of use, content shared, technical literacy level, etc. Social media is creating a life-changing experience for many farmers in rural areas who have come to use it. What is exciting is that agriculture has not only embraced social media but is also using it to bring real and positive impact on to the fields. They discuss best farming practices, answer product demand and supply related queries and come together to create a sustainable market situation. Farmers, producers and labourers can now voice their opinions, concerns and also share their success stories. "The use of social media has its own advantages and disadvantages. I believe, the challenge to agricultural extension is how to exploit the potential and the opportunities that social media can offer the intended beneficiaries of information and technology so that its benefits will be generated to the fullest" [13].

7. SOCIAL MEDIA IN AGRICULTURE – MAJOR ISSUES

7.1 Lack Of Skills And Usage Of Extension Services

Compared with traditional communication system social media is a new communication medium to connect people globally. Even though more and more young people are using them, the online presence of the older generation is

still low, especially in rural areas of developing countries. In India, women and older men constitute 27 per cent of the social media users in urban India and in rural areas, the trend is lower [11]. Besides they prefer to avoid using them because of their low levels of skill and competency in using social media. Basic skills in using social media can be easily acquired by anyone with regular use of these tools.

7.2 Infrastructure

Proper physical infrastructure is needed for getting better access to social media and utilization of information in farm life. Lack of mobile networks or poor connectivity, faulty internet connections, high data charges, low bandwidth limits the access of social media to a large extent. Generic infrastructural issues in developing countries leave very little scope for rural community to practically implement them.

7.3 Attitude Towards Social Media

Social media is popular worldwide, but in some developing countries people avoid using the facilities of social media platform. Due to lack of understanding on working of social media, privacy concerns, and control of digital footprint, many researcher, extension workers and academics host a feeling of negativity towards social media. And age is a factor that sometime affects the attitude towards social media and sometimes don't. Popularizing social media needs awareness and training for each farmer and stakeholder. Understanding the incentives of communicating through social media first hand can play a critical role in increasing its use.

7.4 Training Needs

At present, an important force that is stopping more people at rural level from using social media are psychological barriers and concerns that arise due to lack of knowledge about how social media works. So proper trainings, workshops, and awareness programs should be given to the farmers, stakeholders, extensionists and other actors to make them understand and use social media better. Encourage this positive attitude and behavior towards social media at individual and institutional level.

7.5 Engaging Rural Community

The most important factor for using social media in agricultural extension is engaging the rural community continuously. Ease of use, continuous advisory support, sharing information etc. will engage people involving in social media. Also the frequency of use and comfort level on the platforms can increase the involvement of social media.

8. SOCIAL MEDIA IN AGRICULTURE: PROS AND CONS

The use of social media sites, blogs etc help to enable collaboration, information sharing and partnerships for innovation among literate farmers, stakeholders,

extensionists and other actors. Enabling farmers and others to “gain a voice”, offering localized and customized information, helping to share and manage the information are the main advantage in using social media in agricultural extension services. Also social media creates meaningful relationships with customers and improves market intelligence and get ahead with competitors. Technical and educational illiteracy, unavailability of high speed internet connection and recording equipments, unauthentic information, data charges and accessing device are the main limitations.

9. SOCIAL MEDIA IN AGRICULTURE – THE WAY FORWARD

From the reviews and study, it is clear that social media is fast becoming an integral part of agricultural sector. To overcome the challenges, a multipronged approach is needed at different levels:

9.1 Infrastructure Level:

- Basic infrastructure like power supply and access to network services are necessary to access social media.
- Free Wi-Fi in public places in rural areas by the government can be helpful in accessing social media.
- A common market place for organic products

9.2 Organizational Level

- A clear understanding of the audience should be the foremost step to plan a social media strategy.
- Encouraging use of social media to promote organizational goals, actions, and success.
- Organizing trainings and workshops for clients to create awareness about utility of social media and also developing skill to use it.
- Engaging clients according to their preference is considered.
- Individual level
- Encouraging farmers, agri-entrepreneurs, and agribusinesses to directly connect with consumers through social media can raise awareness about agriculture in the general public and increase income.
- Continuous engagement at individual level is needed for mass influence and to carry out fruitful discussions and encourage rural communities to get involved.
- Policy level
- Social media awareness campaigns and other such initiatives for increasing social media technical and educational literacy of rural people.
- Promoting use of social media at the government level can encourage faster adoption.
- Regulation of data tariffs in the rural areas and introduction of zero rating services [14] by the government can help in making it accessible to the rural people.

10. CONCLUSIONS

ICT and social media can contribute a lot in the agriculture sector for better production, marketing and thereby sustained development. Barriers to the use of social media includes lack of poor and costly internet connection and lack of awareness and expertise. Systematic training, cheaper thin clients such as mobile phones, omnipresent internet connectivity and availability of apps with ergonomically designed interfaces will improve the present status of usage of ICT in general and social media in particular for the betterment of agriculture leading to a better life for farmers in villages.

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