Extension NEXT

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Social Media for Agricultural Extension

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About the Publication

This occasional bulletin is aimed at imparting better understanding about recent developments in agricultural extension. It also intends to develop basic understanding about the role of extension in agricultural and allied sectors and start a dialogue on how to make extension efforts to contribute for better impact. Each issue of the bulletin will take up a single topic and discuss merits and implications. The target audience for the bulletin are extensionists, extension managers and administrators, extension students, policy makers, and agricultural practitioners.

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Message from Director General, MANAGE

Smt. V. Usha Rani, IAS
Director General, MANAGE

I am happy that our institute, MANAGE has started a new publication, "Extension Next". As we all know, traditional extension system has been by personally meeting the farmers and knowledge update through other extension approaches like, farmer to farmer/group approach, conduct of Farmer Field Schools (FFS), demonstrations, etc. With the advent of internet, it is our experience that social media is turning out to be a very easy method for extension officer to be always in touch with farmers.

The various platforms under social media, like Facebook, WhatsApp, etc., can be used to share the latest weather condition information which is all the more important with the recent climate change phenomena, adversely affecting agriculture. These initiatives also serve as a two-way communication, wherein farmers can post their problems and extension officer can offer solutions. The experience of various group members can also be shared for mutual advantage, apart from sharing prevailing market prices. However, there are two issues which are to be addressed, to make social media a very useful tool in the extension system. One is, the Governments should make provision for the extension officers to have internet access and provide charges which are not very expensive these days. There should be a monitoring mechanism at every district, to monitor contents of communication in various platforms, ensuring that social media is not used for any other purposes other than agriculture extension.

MANAGE and NIPHM have come up with a unique initiative, District Pest Management Plan, in Warangal District of Telangana State, wherein nearly 70,000 farmers were served by existing personnel with very less investment by developing WhatsApp groups, based on crops and their geographic distribution. This has enabled the farmers to quickly acquire the knowledge and get motivation from fellow farmers. I have no doubt that social media is going to play a very important role in delivering agriculture and allied extension services in days to come, provided, it is put to right use. I congratulate Dr. Saravanan Raj, Director (Agricultural Extension) and Dr. Suchiradipta Bhattacharjee, MANAGE Fellow, for bringing out this very first issue in Social Media as a part of Extension Next series.

(V. Usha Rani)

Social Media for Agricultural Extension

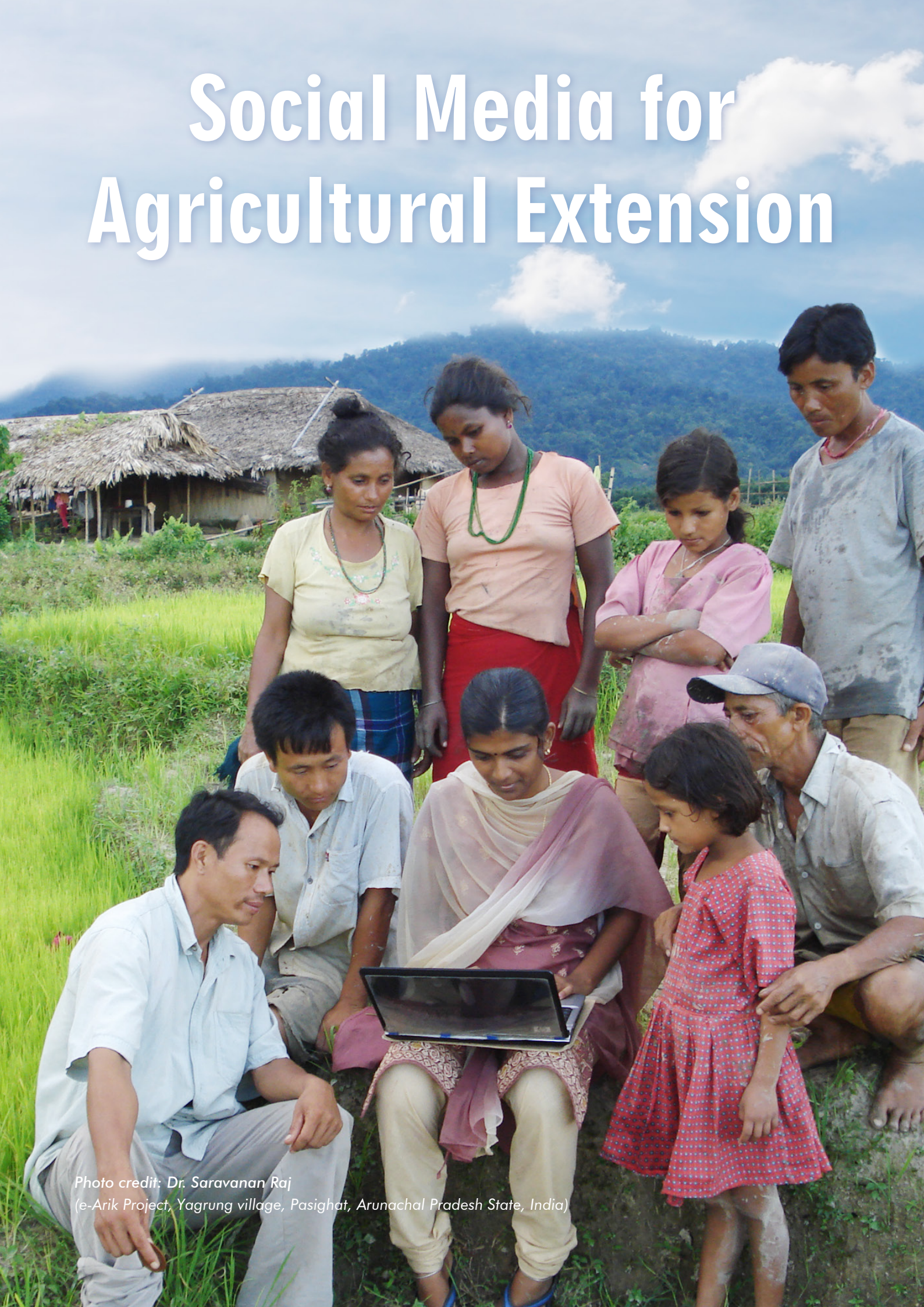


Photo credit: Dr. Saravanan Raj
(e-Arik Project, Yagrung village, Pasighat, Arunachal Pradesh State, India)

In this issue

Networking and Extension

Global agriculture has witnessed a paradigm shift in the past few decades and extension mechanism need to stay ahead and equip the farmers by developing their management and decision making skills; help rural people develop leadership and organizational skills; participate in cooperative credit societies and other support organizations. But the ground reality is hard-hitting with only one extension worker available for every 2879 farmers in India (Mukherjee and Maity, 2015). A recent survey reported that only 41 per cent of the farm households received any assistance from either government or private extension services, and the government extension machinery covering only 11 per cent of the households who received extension assistance (Bera, 2014). As an aftereffect of globalization, agriculture needed to change rapidly to keep pace with the global economy but infrastructural issues, low productivity, poor extension coverage, and low quality manpower became major challenges which still persist. In a world where information drives the change, extension needs to be adept with latest digital media to influence and facilitate farmers.

The most important issue with extension mechanism is the lack of technical human resource. A large number of positions in public extension system in India are vacant, leaving the extension workers personnel to overwork, thus decreasing their efficiency (Mukherjee and Maity, 2015). Also the extension system is entrusted with multiple development activities besides their mandated work, which eventually dilute the focus on extension and decrease efficiency. As statistics suggest, majority of the farmers still remain unreached. With the abilities of reaching large number of people individually and simultaneously, Information and Communication Technologies (ICTs) are assuming a greater role in the extension work. Though television and radio have been used for disseminating agricultural information for a long time (Purushothaman et al., 2003), the recent developments in the mobile, computing and networking technologies provide new ways of technology transfer. Increase in mobile subscriptions in the last decade have also increased the use of web based services and applications like web portals and mobile apps. According to the January 2017 update of ICRA Ltd. (Investment Information and Credit Rating Agency Ltd.), till 30 October 2016, there were 1078 million mobile subscribers in India and which is growing 7.5 per cent annually (ICRA Research Services, 2017). Unique mobile user penetration in 2016-2017 has been 35 per cent, whereas the mobile's share of web traffic is 79 per cent. India's internet users grew by 40 per cent while globally the growth was of 9 per cent, making the growth 4 times higher in India (ETtech, 2016). Social media penetration is 14 per cent while growth of social media users in 2016-2017 have been 40 per cent (55 million), which is second highest in the world (We are social, 2017). Social media platforms like Facebook, YouTube, Twitter and Google+ have higher levels of use among Indians compared to US, UK and European countries. These developments have opened up new avenues for improving reach of extension services for the needy farmers and other stakeholders.

Social Media: What, why and how?

What is social media?

Social media are web based tools of electronic communication that allow users to personally interact with others individually or in groups for the purposes of exchanging information, sharing thoughts and opinions, influencing and facilitating decision-making by creating, storing, retrieving and exchanging information in any form (text, pictures, video, etc.,) by anyone in the virtual world (Suchiradipta and Saravanan, 2016). These are digital networks that are used to share and discuss user generated information - opinion, 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. The definition of Ahlqvist et al. (2008) is focused on three basic components – content, communities and Web 2.0 - and operationalizes social media as the interaction of people and also to content creation, exchange and commenting in virtual communities and networks. According to Michelle Chmielewski (2011), social media is not about what each one of us does or says, but about what we do or say together, worldwide, to communicate in all directions at any time by any possible digital means. Social media is basically digital technologies facilitating communication of user generated content through constant interaction (Terry, 2009; Kaplan and Haenlein, 2010). 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 linkability and content sharing across multiple platforms. Different types of social media platforms are described in Table 1 below (Suchiradipta and Saravanan, 2016).

Table 1. Types of social media platforms

Type of platform	Examples	Description
Social networking sites	Facebook, Google+	Mostly used for creating personal profiles and networks with friends, colleagues and peers. They are the most popular form of social media platform and have the highest reach, mainly because of the personal reach.
Blogs and vlogs	Blogger, Wordpress	Earliest from of social media. They are mostly personal web logs but are increasingly being used by corporate houses to reach their clients. Media richness is high in blogs but not so much in vlogs.
Micro-blogs	Twitter, Instagram	Similar to blogs with character restriction (140 for Twitter) and allow users to create and share content. Media richness is high as in blogs. Use of hashtags (#) for highlighting content, mostly used in micro blogs helps in indexing of content and makes them easily searchable by other users.

Type of platform	Examples	Description
Collaborative projects	Wikis	Joint and simultaneous content creation by users. Media richness is generally low but they can become the main source of information for users due to mere diversity and broad base coverage.
Social bookmarking	Delicious, Blinklist	Group based collection, rating, and sharing of internet links and media content. Low media richness.
Virtual social worlds	Second life	Users are generally in their 3D avatars and interact in a virtual environment. These platforms give users the unlimited scope for self-presentation strategies. Users can also create content online and give opportunities to corporate houses for virtual advertisement, v-commerce and marketing research.
Social gaming	World of Warcraft, Farmbook	Similar to virtual social worlds, with high social presence and media richness. The users can interact with each other though the scope of self-presentation and self-disclosure is somewhat limited. They can also be leveraged by corporate houses for communication campaigns and reach millions of users
Content communities	Video (YouTube, Vimeo, Vine) Photo (Instagram, Flickr, Tumbler) Audio (Soundcloud, Podcasts) MS Office docs, PDF, PPT (Slideshare)	Mostly formed to share specific type of content easily amongst many users. Media richness is high for specific content. They are easy means to reach a global user base in an interesting way.
Forums, discussion boards and groups	Google hangout, Blackboard, Discussion groups (Dgroups)	Content creation and sharing among users with specific interests or activities is easier. Media richness is medium as all platforms do not support various formats of content.
Socially integrated messaging platforms	Whatsapp, Facebook messenger, Snapchat	Highly popular due to group messaging options and high media richness. Users can create and share any form of content in groups or to individuals.
Professional networking	ResearchGate, Academia.edu, LinkedIn	Specifically for professional networking, these platforms increase the scope for scientific discussions among peers and experts in specific fields. Increased networking among professionals increase the scope of research findings to be disseminated amongst wider audience.
Social news	Reddit, Propeller, Digg	News item sharing platforms where users can comment on the posts. The news items and comments can be ranked based on popularity. Media richness is high and can be very useful for keeping up with recent happenings and web trends.

Why use social media?

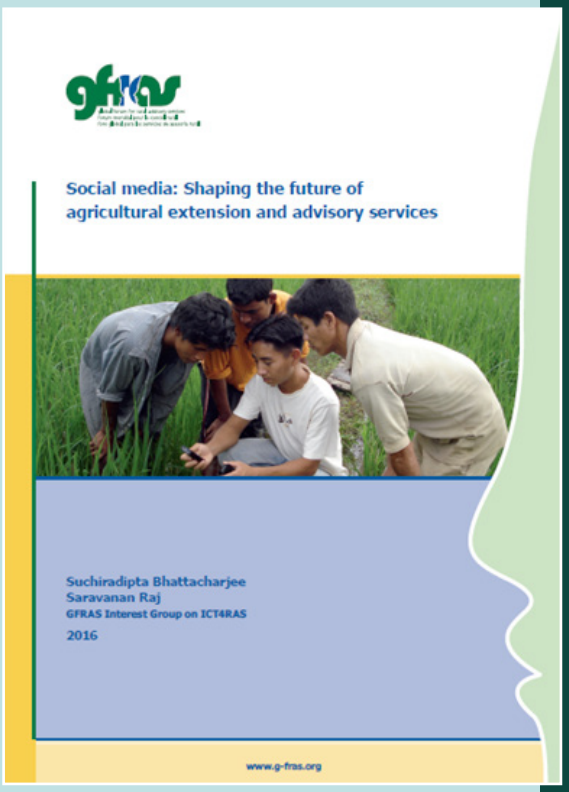
The special features of participation, openness, conversation, community and connectedness makes social media a unique user experience (Mayfield, 2008). Facebook has 195.16 million active users in India, YouTube gets more than 50 million unique users each month, Twitter has 23.2 million users, WhatsApp has 70 million users in India and the highest monthly active users in the world (www.statista.com, 2016). All these statistics prove the huge potential that social media can be for extension practitioners to reach out to the people. India is a huge market for social media that is constantly expanding into the rural areas and that improves the scope of reaching not only the farmers but the farm families and youth altogether for higher impact.

Social media can be advantageously used in agricultural extension, as discussed below (Saravanan et al., 2015):

- Highly cost effective
- Simultaneously reaches large numbers of clients
- Location and client specific, problem-oriented
- User-generated content and discussion among the community members
- Easily accessed from mobile phones
- Increases internet presence of extension organizations and their client reach
- Democratization of information by making it accessible to all
- Brings all stakeholders into a single platform
- Can measure reach and success by tracking number of visitors, friends, followers, mentions, Facebook 'likes', conversation index and number of shares

These potentials make social media a highly relevant and beneficial platform for extension personnel to engage with their clients and peers. Lack of connectedness with farmers have long been cited as a serious lacunae of extension services and social media gives ample opportunities to solve this issue. There are definitely shortcomings at personal (lack of interest in social media, negative attitude, or organizational restrictions), infrastructural (lack of internet connectivity for target clients or the extension personnel), and policy level (organizational policies that restrict use of social media for official purposes) that hinder the use of social media. With the challenges like limited availability of ICTs and internet facilities in rural areas, their suitability to only educated and online clientele, lack of awareness and readiness to accept social media by some farmers and extension professionals, breach of individual privacy, piracy of the materials and irrelevant information, the success of social media depends on commitment level of extension workers and community members in using social media for extension. (Saravanan et al., 2015). But in spite of these problems, social media are becoming popular among rural people.

About this publication: The discussion paper is based on a global survey conducted to understand the social media usage behavior ofExtension and Advisory service (EAS) providers across 62 countries. Facebook was the most popular social media platform used for EAS. Identifying news and events was the major activity, while lack of authenticity of shared information and 'fake news' was opined to be a drawback. Social construction of information (development and publication of information socially by the users through and in social media) was deemed to be the most important feature of social media by 95 per cent of the respondents, while 95.1 per cent respondents believed social media can play an important role in bridging gap between stakeholders of Agricultural Innovation Systems (AIS). Reaching clients was a major use of social media in EAS.



Available at http://www.g-fras.org/en/knowledge/gfras-publications.html?download=414:social-media-shaping-the-future-of-agricultural-extension-and-advisory-services

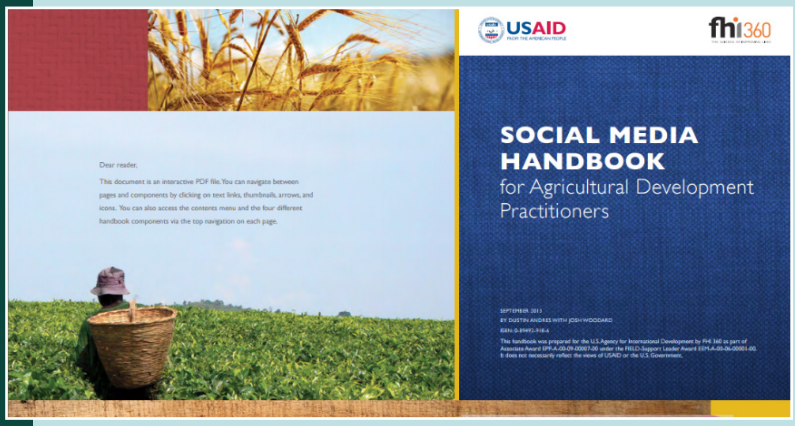
How to integrate social media in extension?

Internet based services are increasingly restructuring the daily life of people, instead of dividing them into on-line and offline experience. Rural people are using social media for connecting with friends and family, reading current news, to get information from peers. Connecting that to agriculture and leveraging it to bridge the farmer-extension gap can prove to be a boon to the agriculture sector and the farm families. A few pointers in engaging with farming community through social media are given below:

- A thorough planning is needed before engaging online through social media, specifically about objectives, target audience, channels and approaches.
- Posting information at times when target audience are most probably active online.
- Interacting in real time to keep the interest of the involved clients alive.
- Sharing only relevant posts or information.
- Focusing on specific platforms based on clients' preferences and engage them continuously rather than engaging in a number of platforms but failing to engage properly.
- Keeping holistic view in mind while sharing information rather than focusing on single enterprise as most smallholders have multiple enterprises on their farm.
- Tagging individual clients to whom the information might be specifically useful and share for all so that the intended audience receives it personally while others can also be benefited.
- Encouraging peer to peer communication as much as possible, so that information related to local

context can be brought out more efficiently.

- To tackle literacy issues, using more pictures and videos, even audios if possible, which is easier through Facebook and WhatsApp.
- Bandwidth and pricing is a hurdle to sustainable use of social media and so, strategic planning like low resolution videos and pictures, short audio files, fixing specific times for group chats, etc., can be taken up to ensure judicious consumption of data.
- Connecting farmers and consumers on the same platform for increased interaction. Also, that would increase the market for the producers.
- Making the most out of messaging apps as their popularity rose substantially in the recent years, especially among the youth.
- Social media use in extension should aim for steady growth that requires time, budget, patience, right subject matter, and commitment from extension professionals. Regular monitoring and evaluation of information shared, participating clients' preference of information, etc., needs to be done meticulously to most effectively record, synthesize, and interpret the information consumption habit and preference of clients.



About this publication: The social media handbook for agricultural development practitioners aims to provide practitioners with a foundational understanding of what is needed to create compelling social media content. Available at http://ictforag.org/toolkits/social/SocialMedia4AgHandbook.pdf

MANAGE facebook group (https://www.facebook.com/groups/610069809167737/) is created to inform, and share the training, research, consultancy, management education and documentation activities of the National Institute of Agricultural Extension Management (MANAGE). Further, it also act as an online platform to create the professional network to share the extension innovations, encourage conversation, facilitate the development dialogue and feedback among the MANAGE faculty, extension professionals, farmers, researchers, agripreneurs and farm input suppliers and other agricultural development stakeholders.

Challenges and opportunities of social media in extension

Social media use is not growing at a desired rate in rural India as there are multiple challenges that need to be taken care of to leverage the opportunities. The following table lists the challenges and opportunities of social media in extension (Table 2)

Table 2: Challenges and opportunities of social media in extension

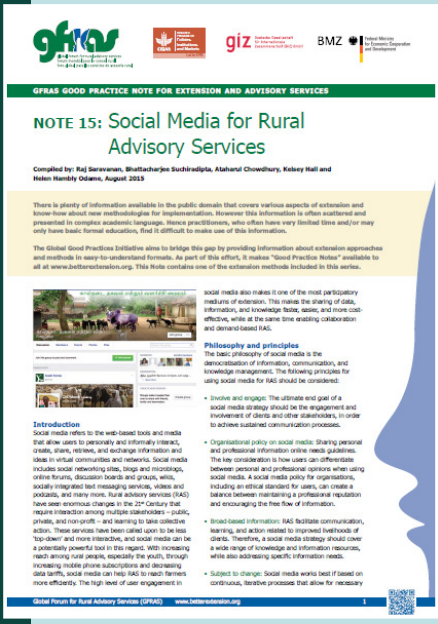
Challenges	Opportunities
• Ensuring participation • Quality control and monitoring of posts • Internet and IT infrastructure issues • Satisfying heterogeneous users • Institutionalising social media • Continuous engagement • Skilled human resource to maintain social media interactions • Measuring the impact – lack of capacity for tools and analytics that help monitoring and assessing the value of information • Creating awareness about social media's potential at the organisational level • Allocating time to update content • Encouraging stakeholders to access resources through social media links	• Few social media apps are available without internet • Forming global/national interest groups is possible • Reaching one to many • Greater engagement and dialogue • Allows for integration of a wide range of stakeholders • Can act as catalyst for resource mobilization (technological, organizational, and financial

(Source: Saravanan et al., 2015)

Photo credit: Dr. Saravanan Raj (m4agriNEI project, Meghalaya, India)

Social media in extension: Cases from India and around the globe

As the social media use for agriculture sector and extension has gained momentum in the recent times, only popular platforms like Facebook, Twitter and YouTube are used for agriculture and extension related works. WhatsApp is another major platform that is being used by extension professionals to communicate with peers or client farmers but the communication (individual and group) being personal in nature, not much information is available about the groups other than when highlighted by the media.


GFRAS GOOD PRACTICE NOTE FOR EXTENSION AND ADVISORY SERVICES

NOTE 15: Social Media for Rural Advisory Services

About this publication: Global Good Practice Note on Social Media for Rural advisory services, a ready reference for social media use in extension services targeted mainly for extensionists. Available at http://www.g-fras.org/en/navigation/gfras-2/670-social-media-policy-guidelines-for-agricultural-extension-and-advisory-services.html

Facebook

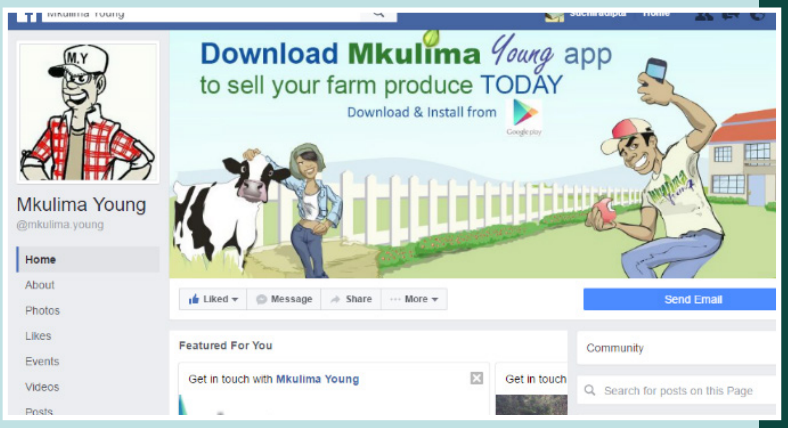
Facebook is the most used social media platform in the world with more than 1.87 billion monthly active users on the site (we are social, 2017). And this means an immense potential for extension professionals. A few examples where Facebook is being used as an extension tool by individuals, professional networks, and extension organizations are given below.

Facebook pages of international agricultural organizations

- Food and Agriculture Organisation of United Nations (FAO): https://www.facebook.com/UNFAO/?ref=mf
- International Crop Research Institute for Semi-Arid Tropics (ICRISAT): https://www.facebook.com/ICRISAT

Livestock Information and Market Centre (www.facebook.com/groups/Livestock.TN): This is a Facebook group of livestock farmers, extension personnel, scientists, local leaders, market functionaries, and consumers in the Indian state of Tamil Nadu to share information related to livestock production and management, marketing, etc.. The members of the group nearly doubled in 2 years (increased from 49,483 in December, 2014 to 93,955 in March 2017). It is a very unique example of how various stakeholders in livestock sector can work together, share important information, and influence change.

Mkulima Young (https://www.facebook.com/mkulima.young/): Meaning Young Farmer, this community page is an information sharing platform started by a young farmer to attract other youths towards agriculture and to communicate with each other. With above 102,824 followers in March, 2017 (39,082 in December, 2014), it mostly discusses about agro-advisory and market information.



Facebook pages of international agricultural organizations

- Bioversity International: https://www.facebook.com/bioversityinternational
- International Maize and Wheat Improvement Center (CIMMYT): https://www.facebook.com/CIMMYT
- International Potato Center (CIP): https://www.facebook.com/ifpri.org/
- World Food Programme: https://www.facebook.com/WorldFoodProgramme
- Young Professional for Agricultural Development (YPARD): https://www.facebook.com/YPARD/
- Global Forum for Rural Advisory Services (GRFAS): https://www.facebook.com/groups/gfras/
- World Farmers Organisation: https://www.facebook.com/worldfarmersorg/
- SAARC Agriculture Centre: https://www.facebook.com/saarcagri/

Agricultural Extension in South Asia

(https://www.facebook.com/groups/428431183848161/): The group has more than 18,323 members as of March 2017 (7,550 in December, 2014) and share information related to relevant publications on extension and advisory services, announcements of workshops and conferences, major policy decisions on extension, reports of meetings and workshops relevant to the broader theme of extension, examples of good practices, cases, tools and frameworks relevant for extensionists.

e-Extension

(GFRAS Interest Group on ICT4RAS (https://www.facebook.com/groups/1498057617111852/)): This is an interest group for ICTs in extension with 1,130 members. ICT practitioners, extension professionals, researchers, students and others interested in the e-Extension are members of this group and share information about relevant publications on e-extension initiatives, capacity development activities by using ICTs, progress in the ICT research and impact indicators, announcements of workshops and conferences, major policy decisions on e-extension, reports of meetings and workshops relevant to the broader theme of e-Extension, examples of good practices, cases, tools and frameworks relevant for the ICT4RAS practitioners, extension personnel and others.

Twitter

Microblogging site Twitter is one of the most popular social media platform globally with 320 million users. On a social context, it has been one of the major catalysts used for creating public opinions and for organizing people into groups. In agriculture too, it is one of the most used platform and some of the examples are as follows:

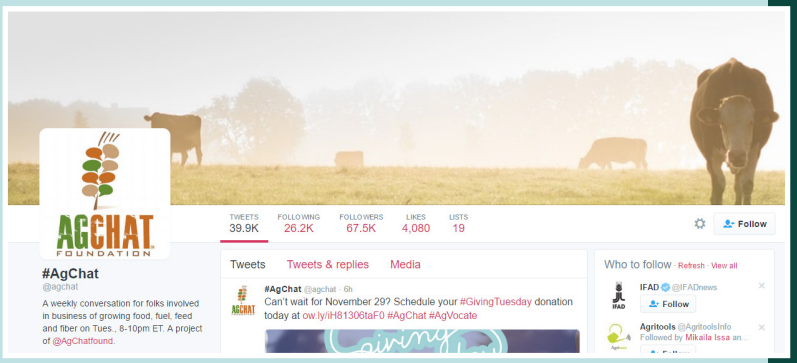
e-Agriculture

(https://twitter.com/e_agriculture): e-Agriculture is a global community of practice, where people from all over the world exchange information, ideas, and resources related to the use of information and communication technologies (ICT) for sustainable agriculture and rural development. The twitter handle is used to share information in real time to the 38,900 followers as of March 2017 and catalyst for institutions and individuals in agriculture and rural development to share knowledge, learn from others and improve decision making about the vital role of ICTs to empower rural communities, improve rural livelihoods, and build sustainable agriculture and food security.

YPARD

(https://twitter.com/YPARD): YPARD (Young Professionals for Agricultural and Rural Development) is an international movement by young professionals for agricultural development. It is a global network of professionals connected through online platforms encouraging young professionals to have a stronger voice and contribute to agricultural development individually and collectively across the world. The twitter handle provides a very active platform for the members to connect and share information and experiences.

#AgChat



(https://twitter.com/agchat): AgChat Foundation is a community of volunteers with collaborative mission of connecting consumers and producers to help initiate a better understanding of the farming process and the farmers' condition.

The foundation thus helps farmers gain a better outlook of consumers' choices and cater to the market needs more efficiently. The twitter handle is an extension of the same work in social media to engage producers and consumers. Weekly chat sessions are held on different topics related to farm and food. AgChat has given the farmers a voice and a platform to share their stories in their own words.

IFFCO (https://twitter.com/IFFCO_PR): Indian Farmers Fertilizer Cooperative Limited (IFFCO) is one of India's largest cooperative society with an amalgamation of over 36,000 Indian cooperatives with diversified business interests. The Twitter handle is a platform for initiating dialogue and engaging with stakeholders on topics related to health, agriculture, and cohesive growth.

Agriculture India (https://twitter.com/AgriGoI): This is the official twitter handle of Department of Agriculture, Cooperation and Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India. With all its focus on Indian agriculture and farmers' development, the twitter handle shares information related to the sector and gives opportunity to people to share their views and ideas to influence policy and development.

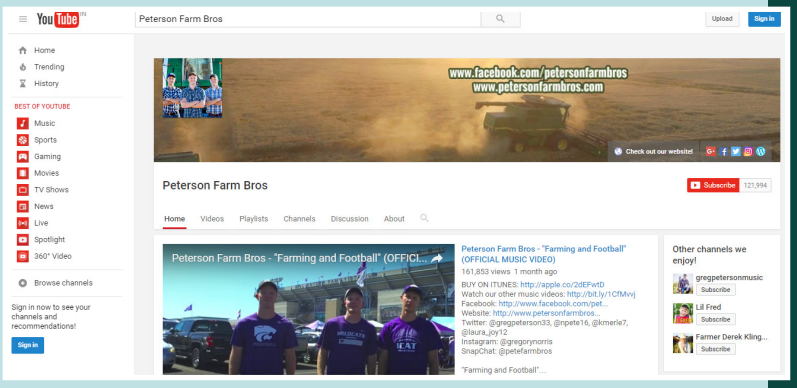
FAO (https://twitter.com/FAOKnowledge): The twitter handle is used to share documents, presentations, videos, news and events, etc., from the Food and Agriculture Organization of United Nations (FAO).

YouTube

YouTube, a video sharing platform, is the third most visited website in the world. A total number of 3.25 billion videos are watched on the website each month and more than half of the views are from mobile. Many individuals, organizations, and networks are leveraging its advantages. Few agriculture related YouTube channels in India and abroad are given below.

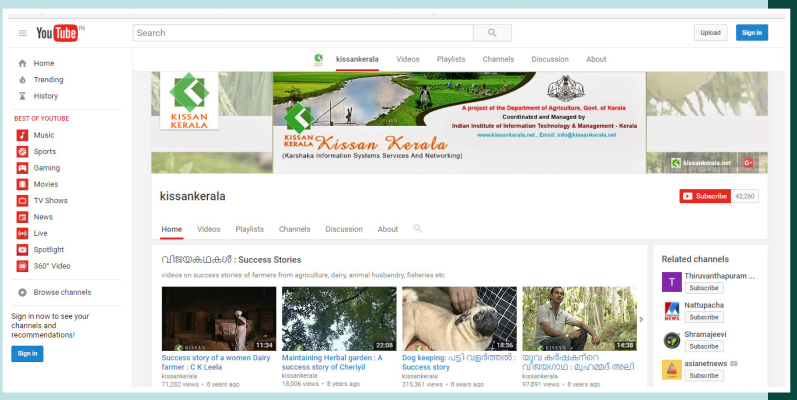
Peterson Farm Bros

(https://www.youtube.com/user/ThePetersonFarmBros): This YouTube channel, created and maintained by three brothers, is about their family farm and what operations are being carried out on the farm. The videos range from parodies to informational videos to entertainment videos. The videos are made to create awareness about life on farm, various agricultural operations and start a conversation about agriculture with the rest of the community. The channel has 121,994 subscribers and a total of 43,529,553 views on the videos.

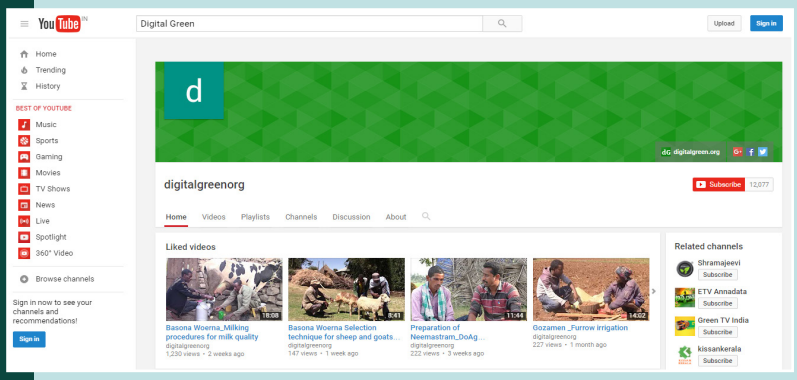


Kissan Kerala

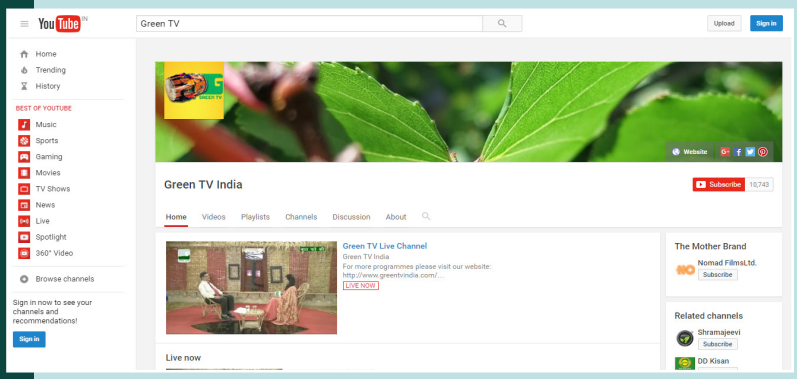
(https://www.youtube.com/user/kissankerala): Kissan Kerala is an integrated, multi-modal Agriculture Information System for Kerala. Conceptualized, implemented and managed by Indian Institute of Information Technology and Management - Kerala (IIITM-K), Kissan Kerala provides several ICT enabled agricultural information services to the farming community. Information services are provided through multi-modal delivery platforms like online services, television program, mobile based information services, touch screen kiosks etc. With 43,261 subscribers and more than 27 million views, this channel provides telecast quality informative videos on agriculture, animal husbandry, fisheries and allied topics.



Training conducted by m4agriNEI project staff with the help of YouTube videos (https://www.youtube.com/watch?v=kh7AkYY4uow)



Digital Green (https://www.youtube.com/user/digitalgreenorg): Digital Green is a not-for-profit international development organization that has been using an innovative digital platform for community engagement to improve the lives of rural communities across South Asia and Sub-Saharan Africa since 2008. As of June 2016, it has reached over 1 million individuals across 13,592 villages through 4,426 videos, which showcase and demonstrate best practices. As many as 574,222 viewers have adopted one or more of the best practices promoted through these videos and YouTube is one of the popular platforms of sharing the videos.



Green TV (https://www.youtube.com/user/Greentvindia1): Green TV is India's first premier agriculture television channel aiming to provide news updates of news and analysis on topical issues of national and international importance in agriculture. The channel also analyze issues involving biotechnology, farm mechanization, crop protection, horticulture, animal husbandry, food processing, agribusiness, research, high-tech agriculture etc. Since 2013, the channel has uploaded 912 videos, has 10,743 subscribers and 1,761,841 views in total on its videos.

Blogs

Blogs contain detailed information on specific topics. They create and facilitate in-depth discussion on any issue through comments from the readers. With increased popularity, many blog competitions are also organized worldwide for rural youth to encourage them start a discussion about farming. Even organizations like World Bank, Food and Agriculture Organization (FAO) and International Food Policy Research Institute (IFPRI) have their own blogs not just to discuss issues but announce their new publications like policy papers, working papers, reports and so on; communicate summaries of important publications; and to increase awareness and discussion on important issues related to agriculture and rural development. Some interesting blogs that can be followed by extension professionals are discussed below.

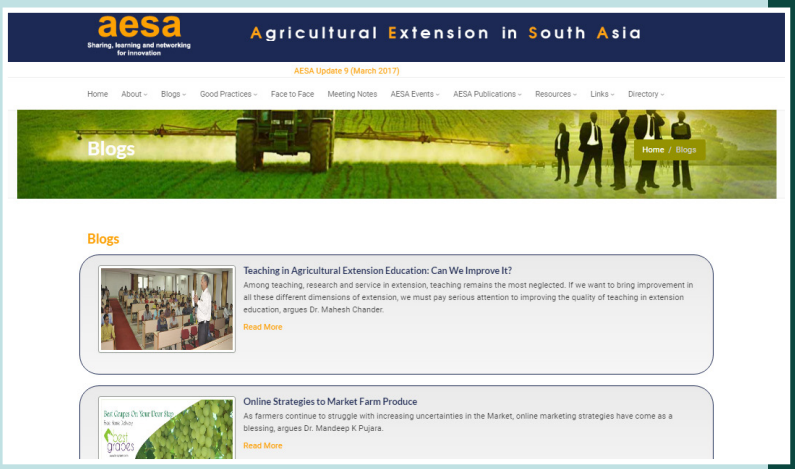
World Bank blogs:

(https://blogs.worldbank.org/) This is a very important source of information for any development practitioners with informative discussions on various issues in the domain of rural development. Archived since June, 2005, hundreds of blogs are submitted each month related to a diverse range of topics and having a wide readership all over the world. The bloggers themselves come from diverse sectors with varying range and level of experience and expertise, making them a rich resource for the development communities across the world.

Agricultural Extension in South Asia (AESA) blogs:

This blog explores the possibilities of social media in agricultural extension with examples from around the world about how it is currently being used. Available at http://www.aesa-gfras.net/Resources/file/Saravanan%20Final%20blog%2042.pdf

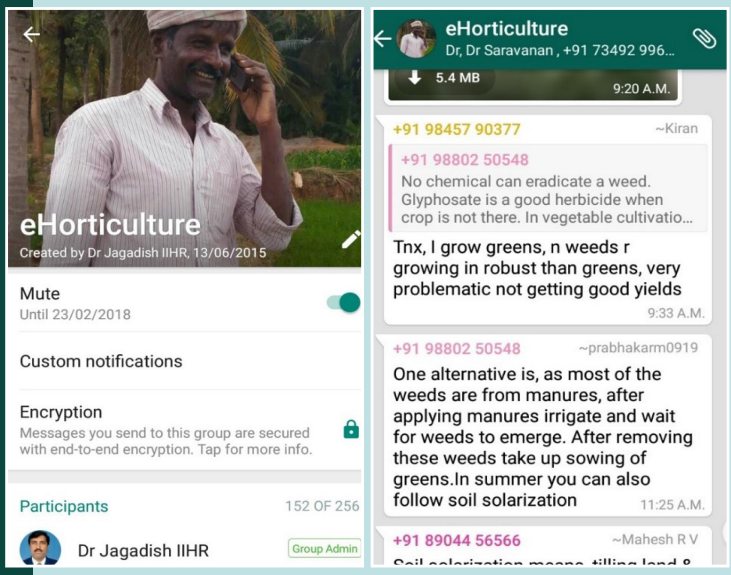
A network of agricultural extension professionals, the AESA blogs (http://www.aesagfras.net/blogs.php) regularly encourages rich discussion among the professionals about extension methodologies, farmers' plight, to increased attention to extension education at the college level for overall development of professionals. The blogs provide a very well depicted insight to the different issues pertaining to agricultural extension in south Asian countries.



Tamil Nadu Agricultural University (TNAU) Blog (http://agritech.tnau.ac.in/blogs.html): A unique initiative by the TNAU, the blogs in TNAU Agritech portal are one of the earliest examples of social media use and impact on farming community. The blogs are by farmers mostly, but contributions from extension professionals are also there. A varied range of issues are covered in the blogs pertaining to agricultural situation in Tamil Nadu and are available in both English and Tamil language.

WhatsApp

A messenger app for smartphones, it is an internet based messaging platform that supports text, audio, video, pdf and various other forms of files. Real time video chatting has also been integrated recently, making it more popular among users. Currently there are more than one billion users of the app in 180 countries. Though initially used for personal messaging, it is gaining more popularity among agricultural professionals and practitioners to share information, which is aided by the group messaging feature. There are few hundred thousand WhatsApp groups created for agricultural extension and advisory services in India. Two examples of WhatsApp use by farming community from India are given below.



eHorticulture: Created and maintained since 13th June, 2015 by Indian Institute of Horticulture Research (IIHR), Bengaluru, the group has 152 members and two administrators. A total of 78 posts on cultivation and management of horticultural crops, queries, press coverage, new technological innovations, etc. Experts of IIHR generally reply to the queries posted by farmers. Pictures were the most used media followed by URLs to web contents, documents, videos and audio files.

Directorate of Extension (DoE), University of Agricultural Sciences (UAS), Raichur: Dr. Sunil Kumar N. M., Subject Matter Specialist (SMS), Farm Science Centre (Krishi Vigyan Kendra-KVK), Bidar, Karnataka created the WhatsApp group Directorate of Extension (DoE), University of Agricultural Sciences (UAS), Raichur on 21st September, 2016 with 8 members and five administrators. The group is only for extension professionals of UAS Raichur and focuses on increased peer to peer communication. Majority of the posts are on trainings, press coverage, field visits, exhibitions/conferences, awards/facilitations, extension activities, etc. Images are the most popular multimedia followed by videos, URL to web contents, documents and audios.

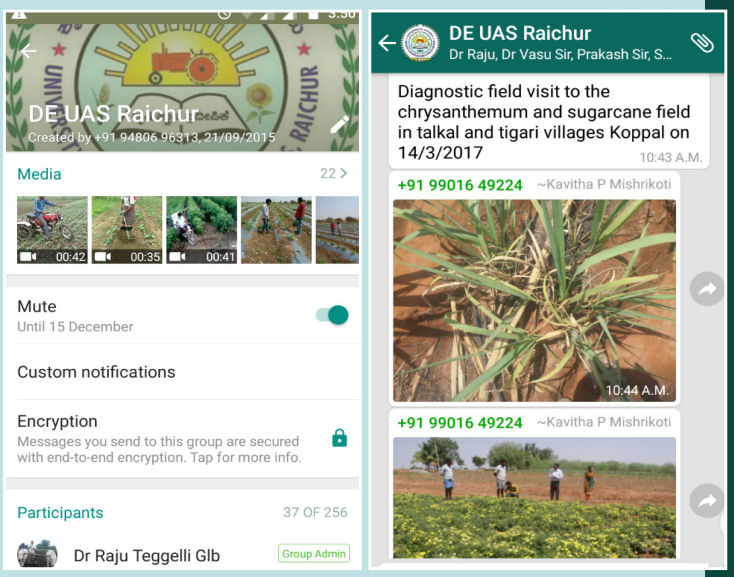
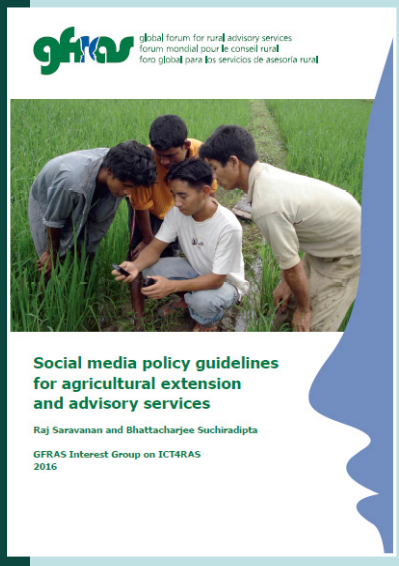


Photo credit: Dr. Saravanan Raj
(m4agriNEI Project, Meghalaya state, India)

Organizational use of social media: Dos and don'ts

Though social media offers various capabilities for fostering rural development, their potential for managing organizations is yet to be explored. But then again, organizational use of social media is totally different from that of personal use. While an individual can share his own opinion on social media, when they get associated with an organization, the personal views might be considered as the organizational views too, which might be a matter of concern. Also, organizational followers and personal followers have distinctly different demographics which can potentially create conflict of interest among them. As organizations get social media savvy, inclusion of social media policy guidelines are becoming important to provide the employees a clear direction of dos and don'ts while using social media. The Government of India has already issued a social media guidelines for its employees to follow across the country (http://meity.gov.in/sites/upload_files/dit/files/SocialMediaFrameworkDraftforPublicConsultation_192011.pdf). Also, depending on the mandate of each organization, they will need to frame their own guidelines.

Organizations need to identify their goals, objectives and targets clearly, before engaging with clients and the public through social media. Understanding how social media help in fulfillment of the organizations' mandates is a pre-requisite for devising organization's social media strategies. The organizations also need to work on how to engage, which platforms to choose and whom to connect with. As the social media information requires a variety of treatments based on their nature and clients, a unique and continuous engagement with every stakeholder is necessary. Merely having a Facebook/ Twitter page will not help extension workers and farmers. A good social media use is characterized by quick replies to queries, effective programme planning through event creation tools, develop and analyse polls on specific aspect, etc. Promotion of social media page is also important to increase visibility and reach the potential audience. But the most important part of engaging online is to know the audience better and accordingly decide the strategies (USAID, CCC and DI, 2016).



About this publication: With increased use of social media by EAS providers, there is also a heightened need for organizations to have social media policies to guide the interactions on the web platforms to uphold their professionalism. These guidelines also help the social media managers or the employees sharing information on behalf of the organization to share appropriate information. Available at http://www.g-fras.org/en/knowledge/gfras-publications.html?download=415:social-media-policy-guidelines-for-agricultural-extension-and-advisory-services

Creating an online identity is very important, especially for agricultural organizations to connect with the clients and facilitate networks and dialogue. Because of its unique position in the agricultural sector, extension organizations need to be social media savvy and therefore it becomes more important to have a guideline. Some examples of social media policy guidelines are given in Box 1.

Box 1. Examples of social media policy guidelines

- Saravanan, R. and Suchiradipta, B. (2016). Social media policy guidelines for agricultural extension and advisory services. GFRAS interest group on ICT4RAS, GFRAS: Lindau, Switzerland.
- Perdue University. (2016). Social media guidelines. https://ag.purdue.edu/extension/communication/Pages/socialmedia.aspx
- Cole, C. (2014). Social media best practices for non-profit organizations: A guide. Canadian Coalition for Global Health Research. http://www.ccghr.ca/resources/social---media-modules.
- Department of Electronics and Information Technology. (2011). Framework and social media guidelines for use of social media for government organizations. Ministry of Communications and Information Technology, Government of India, New Delhi.http://meity.gov.in/sites/upload_files/dit/files/SocialMediaFrameworkDraftforPublicConsultation_192011.pdf.
- IBM. (Unknown). IBM social computing guidelines. http://www.ibm.com/blogs/zz/en/guidelines.html
- Various other social media policies can be accessed from the Social Media Policy Database at http://socialmediagovernance.com/policies/

Organizational use of social media

About the publication: The publication by FAO enlists all the social media platform that the organization is present in; what kind of posts work for each particular platform; information available on the social media platforms, dos and don'ts of organizational social media use. This comprehensive publication can help other organizations in planning their social media strategies. Available at https://www.slideshare.net/FAOoftheUN/social-media-at-fao/1

Photo credit: Dr. Saravanan Raj
(e-Arik Project, Yagrung village, Pasighat, Arunachal Pradesh State, India)

What's the impact?

Turmeric farmers in Sangli district, Maharashtra were probably the first in India to use social media to enhance their bargaining power for their products in 2010-11. When prices crashed in the local market, they connected with other turmeric farmers across the country to know about the existing prices and decided to avoid the local auction. While organizing all the farmers in the district generally took months, about 25,000 farmers came together in just 10 days through Facebook. The farmers protest has helped them to get a reasonable for their turmeric product (Ghoshal, 2012).

Fishermen in coastal Tamil Nadu share information through SMS groups about rich catchment areas, weather alerts and warnings, and prices for the day. Plantation owners in Coorg, Karnataka used Blackberry app to find out coffee prices, pest alerts, etc., and shared the information with others. Thus, the implications of social media on agriculture and agricultural extension are huge. It can give farmers the bargaining power in deciding market price, help them better organize and change the way mobilization takes place. Social media platforms are full of diversity and it is not just about agriculture but farmers can get holistic information about overall development in the rural areas. It makes them socially, economically, politically and culturally aware, which in turn helps them take better decisions and stay well informed and connected. Social media can also be the channels through which rural people can influence the development of their community and influence flow of investment towards building infrastructure. Information and communication technologies can also bypass many infrastructural development as has been seen in the digital village of Akodara in Gujarat state where nearly all trade payments and transactions are carried out online by the villagers. Networked systems make capital more easily available within a village community, which takes it to a better position to invest on infrastructure. Social media also gives farmers the platform to connect to the consumer, increase awareness about farm related issues, make the whole 'farm to plate' process more transparent and be in touch with the nerve of the consumers.

Fig: Media coverage on increasing awareness of farmers about social media

Social media analytics

"Social media analytics is an emerging area where the data from blogs and social media websites are gathered and analysed to derive interpretations of the aspect under study and demographics of the people" (Rouse, 2012). To understand the engagement behavior of the clients in social media platforms and strategize accordingly, it is most important to identify and define properly the key performance indicators (KPIs). The KPIs may be the number of followers for the account/handle/channel, number of likes and shares the posts receive, and the number of clicks on links and contents. This data will help to analyze how the targeted audience engage with the information shared and how they react to it. Based on the behavior of the clients, further strategies can be planned. A number of tools are available (Box 2) that can be used for analyzing the traffic behavior of these sites.

Box 2. Resource materials for social media analysis tools

- Guido, M. (2016). The list of top 25 social media analytics tools. http://keyhole.co/blog/list-of-the-top-25-social-media-analytics-tools/. (Updated on 19 January, 2016; Accessed on 26 November, 2016).
- Smith, K. (2016). Top 15 social media analytics tools. https://www.brandwatch.com/blog/social-media-analytics-tools/. (Updated on 25 August, 2016; Accessed on 26 November, 2016).
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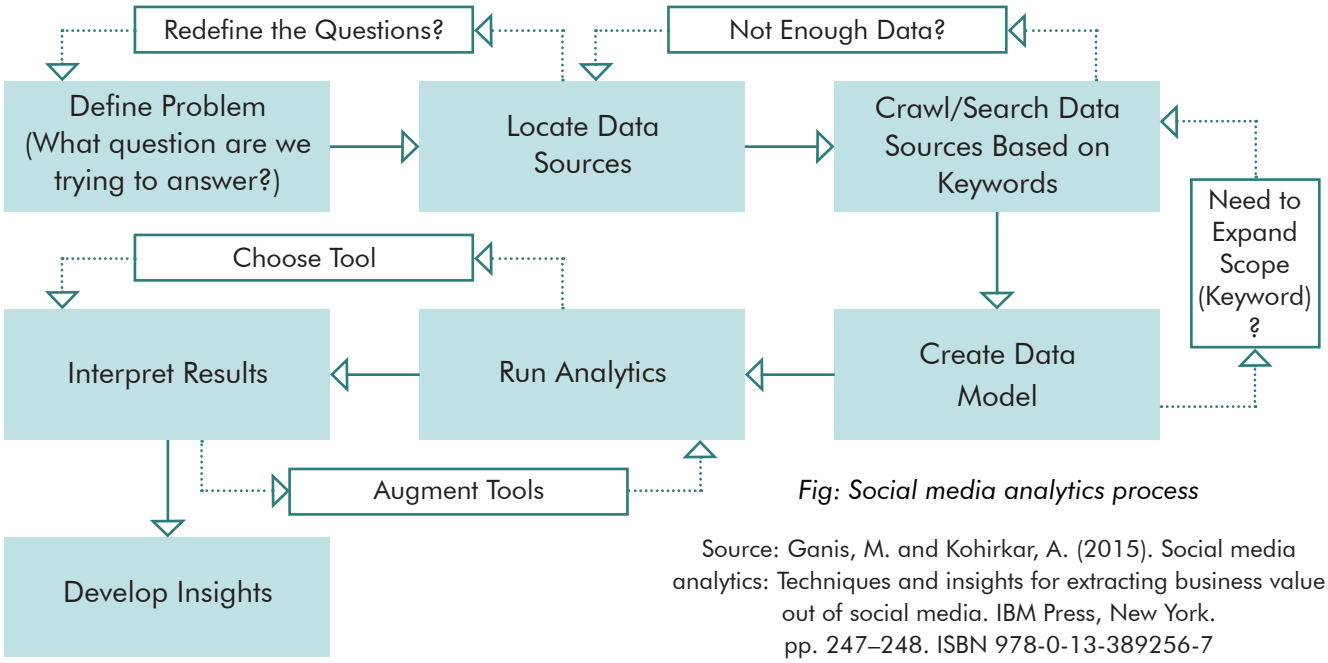

Fig: Social media analytics process

Source: Ganis, M. and Kohirkar, A. (2015). Social media analytics: Techniques and insights for extracting business value out of social media. IBM Press, New York. pp. 247–248. ISBN 978-0-13-389256-7

Implications for agricultural extension

All development sectors including agriculture, need their own voice – to create awareness, for advocacy, to bring in change. Social media has a number of implications on extension, and these are mentioned below:

1. Social media provides tools to extension professionals for sharing information and to be a part of discussions and debates on extension. It also helps them to be aware of the ongoing developments in the agriculture sector and stay updated.

2. With increasing awareness among urban consumers about the farm to plate journey that food makes in today's world, the agricultural practitioners and professionals can use social media for building informed communities and thus increase visibility of farmers (increase information access to consumers about farm conditions, mechanism of food production, plights of farmers, etc.)

3. The reach of extension personnel in rural areas (which is estimated to be around 1200-1500 farmers per extension personnel currently) can increase manifolds with the use of platforms like Facebook, WhatsApp, and YouTube.

4. Professional development of extensionists is an important aspect, which social media can help with. Networking, sharing ideas and opinions, even conducting research can ultimately help in career advancement of extension professionals and they become competent to serve the clients better.

5. Projects and initiatives for agricultural development that suffer from lack of funds can take the help of crowdfunding platforms like www.gofundme.com to reach a sustainable stage. Active use of social media to highlight development projects in critical areas can attract huge funds through crowdfunding, if promoted strategically through Twitter, Facebook and Instagram.

6. With increasing visibility of agriculture related issues faced today, many youth from non-agricultural and urban background are getting interested in agripreneurship and creating employment opportunities for others in the rural sector. Extension professionals can take advantage of this and effectively reach out to them through social media and collaborate. Also, a large number of farm youth who are moving out of the sector can be influenced to return to better agricultural practices through social media.

7. Social media provides insights and evidences required to influence policy and policymakers. It has long been established that social media can create and shape public opinion. When used efficiently in agriculture, social media can bring out the plights of farmers for developing immediate and effective interventions.

8. Capacity development is another issue that can be conveniently addressed through social media for field functionaries, rural youth and farmers. With technological advancement, platforms like

YouTube, WhatsApp and Facebook can be easily integrated in delivering content in different formats for self-learning of the target groups.

9. Inclusion in important development related discussions has increased due to social media and all stakeholders can become active participant and contributors in the discussions and follow-up actions.

10. As end to end extension is gaining more importance for holistic development of farming community, social media can be used as the common platform for all stakeholders to have a dialogue and increase inclusion of generally disadvantaged groups like women and the socially marginalized. Communication has shifted to a more open forum leading to a two way dialogue through social media. Digital India project of Government of India has emphasized on use of social networking in agriculture to increase farmers' access to information and extends timely services to them.

11. While it is true that infrastructure building is required to realize the full potential of the information obtained from social media, the platform also helps to draw attention to the required interventions required for obtaining the infrastructure, if not available.

Photo credit: Dr. Saravanan Raj
(e-Arik Project, Yagrung village, Pasighat, Arunachal Pradesh State, India)

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Photo credit: Dr. Saravanan Raj
(e-village Project, Yagrung village, Pasighat, Arunachal Pradesh State, India)

Annexure

Free e-learning courses on social media for development practitioners

Course: Social Media for Development
Created and delivered by: Food and Agriculture Organization of the United Nations (FAO)
Objective: This course explains the potential of social media tools to enhance the efficiency of organization, increase their outreach, impact and visibility, and contribute to the improvement of the effectiveness of the social issues they work with.

Target audience: Individuals working for sustainable development looking to social media as a means to connect geographically dispersed team and to strengthen coordination and knowledge sharing.
Language: English, French, Spanish
Status: Ongoing
URL: http://www.fao.org/elearning/#/elc/en/course/W2

Course: Introduction to Social Media Analytics
Created by: Emory University; Delivered by: Coursera
Objective: Social media activity of the clients is also interpreted as voice of the clients and this course will help learners with analytic methods that can be used to convert social media data to marketing insights.
Target audience: Social media marketing professionals, Entrepreneurs, development professionals

Language: English
Status: Starts April 24, 2017
URL: https://www.mooc-list.com/course/introduction-social-media-analytics-coursera

Course: The power of social media
Created and delivered by: University of Southampton
Objective: Explore the various properties of networks in order to understand more about how we can measure online power and influence. Understand the distinct qualities of social media networks like Twitter, Facebook and LinkedIn and how learn how organisations can use these qualities to learn more about the people participating in the network, and the communities they represent.
Target audience: Development practitioners and social media managers
Language: English
Status: Upcoming
URL: https://www.class-central.com/mooc/5792/futurelearn-the-power-of-social-media

Course: Social media for health and development
Created and delivered by: Global Health eLearning Center
Objective: The course aims to help development practitioners define the common principles of social media, identify the ways it can be used in global health and development, and describe functionalities and features of popular social media platforms.
Target audience: Development practitioners
Language: English, Arabic, French, Portuguese, Spanish
Status: Ongoing
URL: https://www.globalhealthlearning.org/course/social-media-health-and-development

National Institute of Agricultural Extension Management (MANAGE)
(An organization of Ministry of Agriculture and Farmers Welfare, Govt. of India)
Centre for Agricultural Extension Innovations and Reforms
Rajendranagar, Hyderabad – 500030, Telangana State, India
www.manage.gov.in

About the issue

Social media has changed the landscape of global development. Worldwide, it is not just shaping communication but also the future, by influencing opinions and mobilizing masses. This digital communication method has become an inseparable part of everyday life. With increased popularity, it has become the most used medium for business and development sectors alike.

This popularity though, is yet to reach a mass scale in agriculture all over the world and beyond the boundaries of developed nations. The documentation of the use of social media, in a few rural areas in lower and middle income economies, is minimal. Also, psychological, technical as well as institutional barriers, to some extent, limit the use of social media among the agrarian stakeholders.

Considering the growing popularity of social media among the young and old alike, irrespective of their urban or rural distribution, this issue focuses on the innovations, resources and examples that social media brings forth for agricultural extension and its implications on shaping the future of extension.