IMPACT OF MEDIA ON AGRICULTURE

J Component- Project Report

HUM1043

Mass Media and Society

Winter Semester 2019-2020

Submitted to

School of Social Sciences and Languages

Vellore Institute of Technology, Vellore

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DECLARATION BY THE CANDIDATES

We hereby declare that the project report entitled "**IMPACT OF MEDIA ON AGRICULTURE**" submitted to VIT University, Vellore is a record of J-Component project work carried out by us under the guidance of **Dr.Kubendran A**. We further declare that the report has been written in our own words and have provided proper references whenever we referred to other articles or the internet.

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ACKNOWLEDGEMENT

I take immense pleasure in thanking **Dr. G. Viswanathan**, my beloved Chancellor, VIT University and respected Dean, SENSE, for having permitted me to carry out the project.

I express gratitude to my guide **Dr. Kubendran A**, for guidance and suggestions that helped me to complete the project on time. Words are inadequate to express my gratitude to the faculty and staff members who encouraged and supported me during the project. Finally, I would like to thank my ever-loving parents for their blessings and my friends for their timely help and support.

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ABSTRACT

Agriculture is the first occupation of man. In earlier days people used to follow the hymns of Rig Veda and Atharvaveda for doing farming. They used to get information like preparing the manure from useless things, importance of rains, cattle's etc. Based on that information people used to choose what crops to grow in that season. But now the success of agricultural development programs in many countries largely depend on the nature and extent of use of mass media. Farmers can also share innovations and knowledge alongside solving problems from social media. The internet allows farmers to share their experiences via YouTube, web forums and online groups. Face book is the most likely social media for pages. There are Twitter feeds that farmers can go to, ask questions, or share experiences. This review paper gives you brief Idea about the usage of Mass media and Social media in agriculture.

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1. Introduction

1.1. Agriculture in Past:

1.1.1. AGRICULTURAL RESEARCH IN INDIA: AN EXPLORATORY STUDY

This paper is more about the Indian agriculture under the five-year plans in Post-colonial India. They have included about all eleven five-year plans (i.e. 1951 to 2012) pros and cons and what are the critical research gaps. This paper says that Agricultural research in India has an interesting history regarding its growth and development. It started during the colonial era and today the agricultural research system in India includes some 27,500 scientists and more than 100000 supporting staff actively engaged in agricultural research, which makes it probably the largest research system in the world. They are distributed in the ICAR system, Agricultural Universities, General Universities and other organizations. In the present research system, the Indian Council of Agricultural Research (ICAR) at the National level mainly aids, promotes and coordinates research and education activities throughout the country. The research and education responsibilities at the state level rest with the State Agricultural Universities. In addition to these main streams of research, some general universities and other agencies like scientific organizations related to agriculture, Government Departments, voluntary organizations, private institutions etc. participate in the nation's research efforts. Hence, the role of National Agricultural Research System in the development of agricultural research is of great importance within which all these organizations come. Five-year plans play a major role regarding investment, technology transfer and other aspects related to agricultural development in India. Although agriculture has been playing the most vital role in Indian economy, during the course of the study, it has been found that not much emphasis has been given to the history of evolution of agricultural research in India.[1]

1.2. Agriculture in Future:

1.2.1. Impacts of population growth, economic development, and technical change on global food production and consumption

Over the next few decades, Mankind will demand more food from less land and water resources. This study Quantify the impact of Millennium's four alternative development scenarios on food production and Special report on ecosystem assessment and emission scenarios. Partially and jointly considered Land and water supply impacts due to population growth, technological

change, as well as forest and Demand for agricultural products is shifting from population growth and economic development. The impact of income on food demand is calculated with dynamic elasticity. Simulations with a global, partial equilibrium model of the agriculture and forestry sector show that per capita food levels increase in all examined development scenarios have minor impacts on food prices. Global farmland will increase by up to 14% between 2010 and 2030. The limitation of deforestation strongly impacts the price of Land and water resources but have little impact on global food production and food prices. Predicted income changes have the highest partial impact on per capita food consumption Level, population growth leads to the largest increase in total food production. Impact of technology changes will amplify or mitigate by the adaptation of land management intensities.[2]

1.3. Agriculture in Mass media:

1.3.1. Utilization of Mass Media among Farmers in Ikwere Local Government Area of Rivers State, Nigeria

The study analysed the utilization of mass media by farmers in Ikwere local government area of Rivers state, Nigeria. Specifically, it identified the available mass media in the study area, ascertained the extent of use of these mass media, assessed the perceived effectiveness of mass media and identified constraints militating against the use of mass media. A sample of 180 farmers was obtained using multistage sampling technique. Data were elicited from the farmers using a set of structured questionnaire and were analysed using percentages, mean statistic and bar chart. Result revealed that television (90.83%), radio (89.17%) and mobile phone (81.00%) constituted the most available mass media in the study area. It also showed that radio (M = 2.38), television (M = 2.10) and mobile phones (M = 2.20) were the utilized mass media in the study area. Furthermore, mass media were perceived to be effective at replication of information (89%), creation of awareness (85.9%), training of farmers (79.2%), dissemination of innovations (79%) and overcoming language and location barriers (79%). Erratic power supply (91.67%), institutional barriers (91.50%), limited coverage of farmers' needs (80.34%), and inadequate credit (80.17%) were the major constraints to the use of mass media.[3]

1.3.2. Role of Mass media in Promoting Agricultural information among farmers of district Nankana

This paper is a study carried out to explore the relevance and effectiveness of media for farmers in providing agricultural information. Media effectiveness was assessed by examining access and availability of Sources used, frequency, preferred medium of sources and the scope of factors affecting agriculture Productivity by source. The Nankana sahib district of Punjab was chosen for this purpose. Multi-stage sampling technology Adopted to randomly select the two Tehsils of Nankana Sahib (Shahkot and Sangla Hill). In addition, five villages from these Two tehsils were conveniently selected and 90 farmers were approached using convenient sampling techniques. The findings mean that TV and radio subscribers are quite high, but the use of media for agricultural information is not As effective as it is. The survey found that most participants had access to television and radio but preferred pamphlets, Brochures, newspapers, pesticide company agents, and other farmers to get relevant information. Most of the agricultural information provided through television and radio was in Urdu while the participants preferred

Punjabi or local language as a medium for such information. However, T.V and Radio are providing sufficient coverage to weather forecast and plant protection methods hence address major factors affecting agricultural productivity. Some other important agricultural factors like machinery and information about variety of crops are slightly covered.[4]

1.3.3. Assessment of mass media performance in agricultural information dissemination to rural farmers in Girei Local Government Area of Adamawa State, Nigeria

This study assessed mass media performance in agricultural info dissemination to rural farmers in Girei authorities' space of Adamawa State, Nigeria. the precise objectives of the study were to: identify the socio-economic characteristics of the respondents; examine the languages employed by mass media stations in broadcasting agricultural programmes; assess the performance of mass media in agricultural information dissemination; establish the respondents' most well-liked languages for receiving agricultural information; and, establish the factors militating against mass media performance. The performances of the remainder of the mass media were all rated as dangerous, with the exception of the Adamawa Broadcasting Corporation, the performance of that was rated as terribly dangerous. The foremost most well-liked languages known for receiving agricultural information square measure Hausa and English as indicated by forty seventh and half-hour of the respondents severally. Some of the major issues known square measure adequate funding for

agricultural programmes; erratic or generally lack of electricity provide. the most important recommendations created were: mass media stations ought to additionally broadcast agricultural info in native or endemic languages of the respondents. the quantity of days that agricultural info is disseminated per week ought to be exaggerated to a minimum of a minimum of 3 days per week by all the mass media stations studied.[5]

1.3.4. Usage of Mass Media by Farmers in Sri Lanka

The agricultural sector plays a major role in ascension the economy in Democratic Socialist Republic of Sri Lanka cannot be argued and conjointly mass media is more and more turning into a veritable instrument for remodelling agricultural data. As farmers need to adopt the new technologies and place them to use, the new ideas should reach their farms through effective communication channels. The study examines the usage of mass media by farmers in Democratic Socialist Republic of Sri Lanka as a resource for sensible agricultural data. The selected mass media for getting sensible agricultural information was analysed to work out the usage of sensible agricultural data by farmers through mass media in four provinces as a sample in Democratic Socialist Republic of Sri Lanka. they're Sabaragamuwa Province, North Central Province, North Western Province and Central Province. hand-picked mass medias square measure used for this study is, Television, Radio, Newspapers, Journals and Magazines. a complete of 750 farmers were at random hand-picked and surveyed. Tv was the foremost most popular media by the farmers. as a result of the tv cuts across the literacy and different barriers needed Newspapers, Journals, Magazines etc... The study conjointly shows that educational intervention through tv resulted in important information sweetening. however, the study shows that farmers' main data supply for his or her sensible agricultural data is Agricultural Extension Officer. These results clearly indicate the effective role of tv as a resource for sensible agricultural information by farmers and conjointly highlight the role of Agricultural Extension Officer in up agricultural knowledge of farmers in Democratic Socialist Republic of Sri Lanka.[6]

1.3.5. Using Mass Media and ICT for Agriculture Extension: A Case Study

This paper examines the role of mass media and ICT in agriculture information dissemination to the farmers in their own language to teach them in farm technology, agriculture, meteorology, agronomy, disease management, post-harvest management, warning for flood/cyclone etc. The farmers living within the remote areas of the developing countries with very little laptop skill, need the access to farming and allied technology to boost food production, vegetable and fruit yield, placental mammal production. He needs information concerning improved

sort of seed, fertilizer, and a marketplace for sale of the merchandise. The paper puts forward a model for victimisation the technology to supply the farmers living in rural areas, the data right from the choice on the crop to be planted and ending with the sale of turn out at the wholesale market. Video primarily based coaching aided with help is found simplest in motivating farmers to adopt new agricultural practices for concerning simple fraction of the price of ancient extension systems. Farmer's feedback shows that viewing a apply on a video whereas being told concerning it by a help improves the effectiveness of video in inspiring changes in rural behaviour. The paper concludes with a case study undertaken in state (India) and analyses the profit accumulated to the farmers. The analysis more shows however the farmers square measure willing to adopt the new technology. The encumbrance is on the States and also the scientists to supply them the information keeping in view their limitations.[7]

1.3.6. ROLE OF MASS MEDIA IN AGRICULTURE

The success of agricultural development programmes in developing countries largely depends on the character and extent of use of mass media in mobilization of people for development. The planners in developing countries understand that the development of agriculture can be hastened with the effective use of mass media. Radio, tv are acclaimed to be the foremost effective media for diffusing the knowledge domain to the plenty. But whereas a country like Bharat, where acquirement level is low, the selection of communication media is of important . The tv and radio square measure importance, as they transfer trendy agricultural technology to literate and illiterate farmers alike even in interior areas, inside short time. In Bharat farm and residential broadcast with agricultural thrust were introduced in 1966, to enlighten farmers on the use of assorted technologies to spice up agricultural development. however. The farmers will simply perceive the operations, technology and instruction through tv. Among the many mass media, newspaper and farm magazine square measure usually used. they need a significant role to play within the communication of agricultural information among the literate farmers. Agricultural journalism is of recent origin in Bharat. It came into existence simply 5 decades past. Bharat has farm magazines in each state, revealed principally in native languages. Agricultural department conjointly encourages the publication of such farm magazines notably through farmers association. In this paper, a shot is formed to deal regarding the importance of radio, television, newspaper and farm magazines and their result within the field of agriculture through sound communication.[8]

1.4. Agriculture in social media:

1.4.1. A Study on Role of Social Media in Agriculture Marketing and its Scope

This paper is about the role of social media in agriculture and its scope. In this paper, based on their study they have shown data's like age, gender and education of the respondents and also whether they have social media accounts if yes, what are the social media platforms and the frequency of visiting and also what is the purpose of visiting and also what are the problems they are facing while using social media in agricultural marketing.

From their analysis it is found that social media is very useful tool in agricultural marketing. It saves time and cost of the farmers for getting information. YouTube videos are most popular for information getting with applications. WhatsApp is the handy use of social media and mostly preferred for related groups. Many officials are having their official pages, blogs, and groups on social media and it helps in getting information and solving the problems. Challenges were adoption of social media as tool of marketing. People are less trusted on e-buying, e-selling of agricultural commodity on social media.[9]

1.4.2. USE OF SOCIAL MEDIA IN AGRICULTURAL EXTENSION: SOME EVIDENCES FROM INDIA

This paper is about the use of social media in agricultural extension. Agricultural extension is the application of scientific research and new knowledge to agricultural practices through farmer education. In this paper they have wrote about few fb pages and their details like number of peoples and posts. And also, about few WhatsApp groups and information about them like type of content shared and information about members. And also, about few YouTube channels video and the views of the video and language of the video. And also, about YouTube videos on dairy farming in India. And also, about Use of Facebook by different Agricultural Research Organisation and by different state animal husbandry departments.

From their analysis it is found that Most of social media tools are through individual efforts. There is definite lack of organized efforts to use social media from public extension system in India. Appreciably, in recent times, the Government of India including Indian Ministry of Agriculture has given importance to Social Media. The Minister of Agriculture in India not only maintains a Facebook account but also recently he answered the queries of the public online using Facebook (The Statesman, 2016) which is a significant move forward to enhance use of social media. Using social media tool for agricultural extension activities can be regarded as 21st century skill (Neill et

al., 2011). However, the stakeholders currently may be unaware about using it for agriculture extension activities (Gharis et al., 2014; Hill, 2014). The quality of information shared through social media would be an important factor for its use by farming community.[10]

1.4.3. Social Media for Agricultural Extension (Bulletin)

This quarterly 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.

They have Included Some Fb pages of international agricultural organisation and details about them with photos. And also, Some Twitter accounts and details about them with photos. And also, Some YouTube channels and details about them with photos. And also, Some blogs and details about them with photos. And also, Some WhatsApp group and details about them with photos. And also, Organizational use of social media Dos and Don'ts. And also, What's the impact and social media analytics and Implications for agricultural implications [11]

1.4.4. Social media: Shaping the future of agricultural extension and advisory services

This paper includes types of social media platform and their brief description. And also, description about Some of the fb pages, twitter accounts, blogs, YouTube channels and their target users. And also, Reasons for using social media for agricultural information and for general purpose also. And also Type of information shared and Social media applications in AEAS the pros and cons.

For agricultural extension and advisory services (AEAS), whose primary element is communication, social media can be a potential goldmine. Engaging with clients online, helping rural community gain a voice, making development bottom-up, more fruitful innovation brokering, engaging with all the actors in agricultural innovation systems on the same platform – social media has more than one use for AEAS. But in-spite of all the advantages, its actual use in rural areas of developing countries is still low due to infrastructural difficulties and psychological barriers. Also, skill and competence in using social media is also lacking. Though national and international organizations are opening up to the prospects of social media, at local level this digital media still faces scepticism. Training programs, awareness campaigns,

and workshops can help actors in agricultural extension understand and use social media better. Extension is not just about communicating but bringing behavioural change and social media can prove to be a powerful aide if utilized up to its potential [12]

1.4.5. An overview of social media use in agricultural extension service delivery

This paper is an overview of the current perspective of Social media and agricultural extension service delivery. According to the survey they have found fb having highest popularity. And they have also included about twitter accounts, YouTube channels, blogs and their location. And also, Benefits of using social media in extension education. And about Social media user's preference and Types of social media users. And also use of Social media for agricultural information purpose and Challenges in the use of social media for agricultural extension service delivery. Although, stakeholders have positive perception on social media use in agricultural extension service delivery, majority are passive participant. There are a number of new and complex challenges at personal, infrastructural, institutional and security levels in the use of social media for agricultural extension service delivery. [13]

1.4.6. Using Facebook as a Communication Tool in Agricultural-Related Social Movements

Facebook may be a social networking device during which users move through conversations, and build relationships by networking with different users. Facebook teams square measure created as a part of a smaller community at intervals the social networking web site and specialise in explicit interests or beliefs regarding bound problems. the aim of this study was to work out why people use social media, specifically Facebook, to speak information in social movements associated with agricultural problems. Eight semi-structured interviews were conducted with Facebook cluster directors United Nations agency actively contribute to the promotion of associate degree agricultural-related movement. Results indicated that Facebook was a useful communication tool to assist the social movements reach a lot of people. The Facebook cluster directors were motivated to get involved with the movement thanks to personal experiences. Although Facebook is that the primary technique accustomed reach audience members, the participants aforesaid they use a variety of different communication channels. extra analysis ought to explore different social movements to determine the impact social media has on communication efforts.[14]

1.4.7. Social media and Farmers

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, they 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. Systematic training, cheap thin clients for mobile phones and the ubiquitous Internet connectivity and availability of apps with ergonomically designed interfaces will Improve current usage ICT in general, especially on social media Improving agriculture, leads to better lives for farmers.[15]

1.4.8. Analysis of social media mainstreaming in E-extension by agricultural development programmers' in North Central Zone, Nigeria

This study analyzed the mainstreaming of social media Providing e-extension services through the North Central Agricultural Development Program (ADP) Nigerian zone. The four ADPs of Kogi, the Federal Capital Territory, Nasarawa and Niger are Participated in Research Extension Farmer Input Linkage (REFIL) activities in November 2017 Intentionally selected and used for research. Secondary data generated from REFIL report and analysed descriptively. As a result, insufficient field extension agents have been established to reach them effectively to 1.412 million farmers in the zone. The results also revealed zero exclusions for social media Facebook, WhatsApp, chat, YouTube and mobile phone tools in ADPs communication etc. strategy Communication targets for ADPs lived heavily on old media such as radio (21%) and television (50%) were expensive and achieved low forecast targets. Mainstreaming social media with e-extension, become more effective in engaging farmers and overcoming observed labour shortages in the field problem. The latest networking tools and Facebook, WhatsApp, we recommend YouTube, chat, mobile phone tool for sending short messages, voice call Include in their communication strategy. In this regard, the REFIL organizer and the Federal Department Extension are promoting staff training on ADP innovation and social media, Abilities and skills of agricultural value chain provider actors in extended delivery to Agribusiness community. [16]

2.Results and Inference:

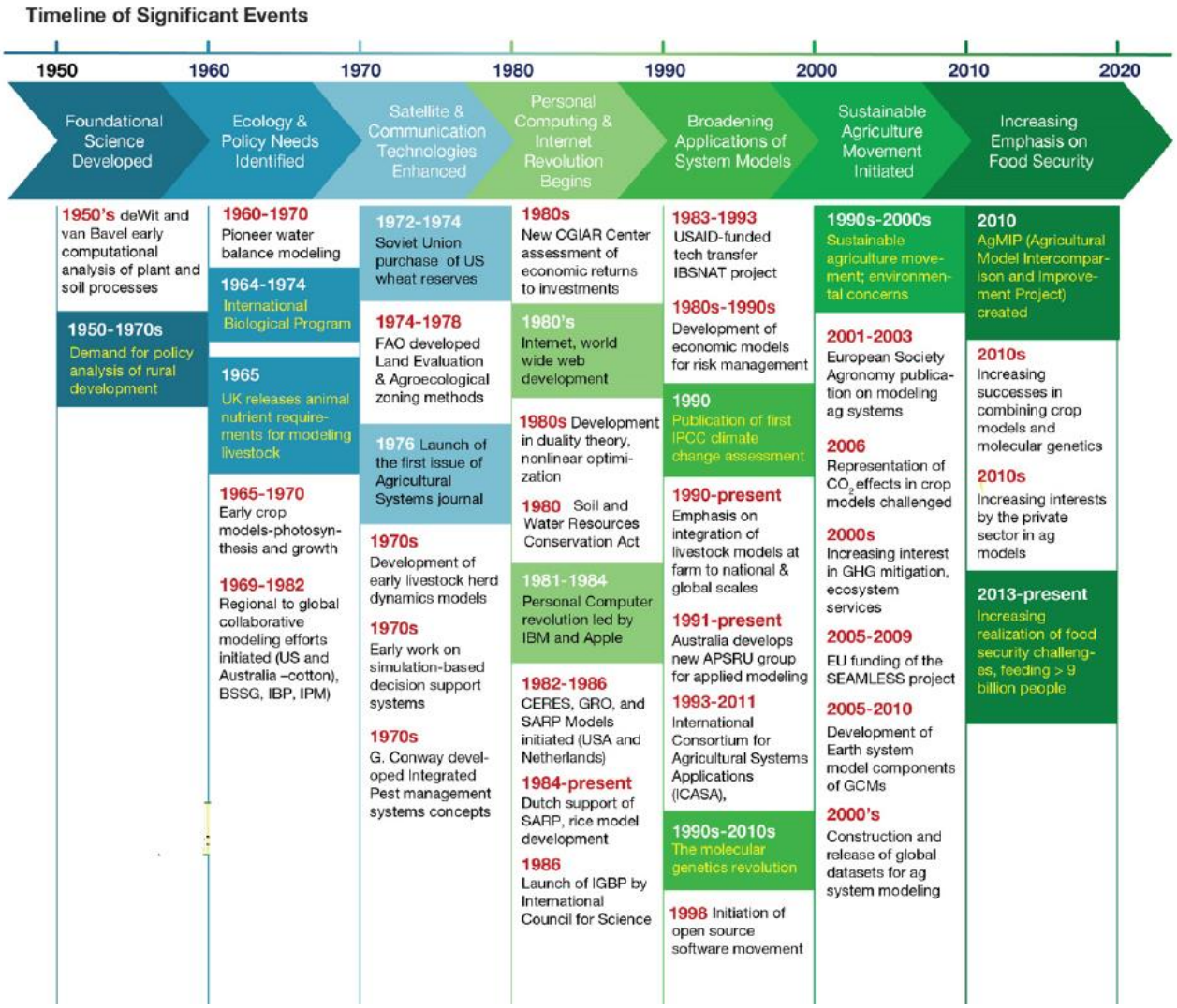

Fig. 1. Summary timeline of selected key events and drivers that influenced the development of agricultural system models.[17]

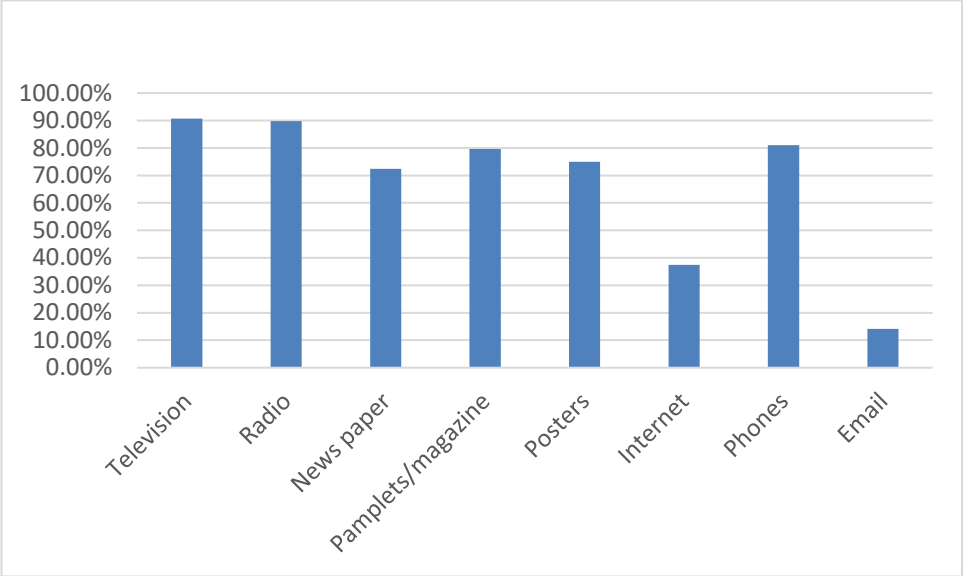

Fig2: Bar chart showing mass media availability in the Nigeria, Sri lanka and Pakistan

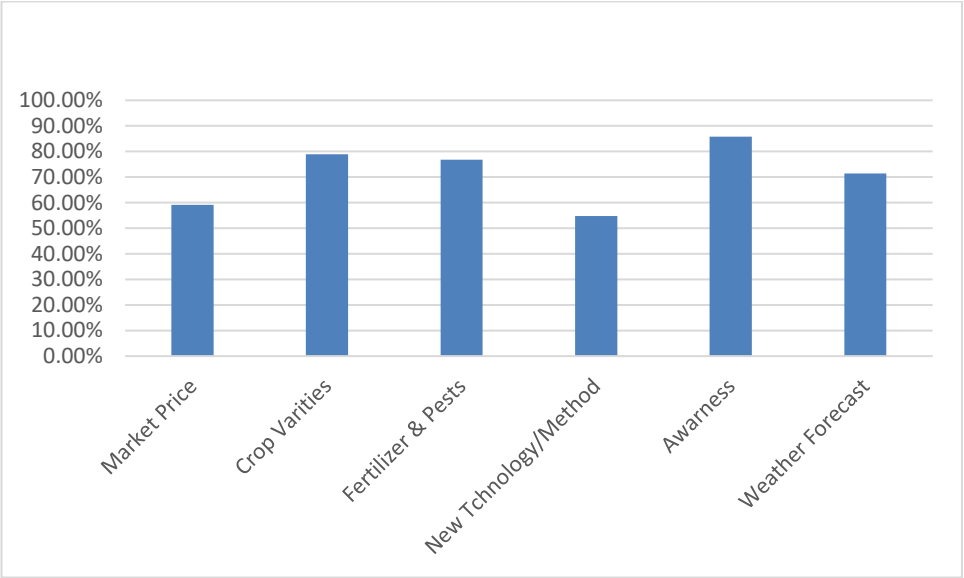

Fig3: Type of Information Obtained through Mass Media by the Farmers

Inference:

In the Fig2 & Fig3, we can infer that most of the farmers in Nigeria, Sri lanka, Pakistan (Total:4,00,840) watches TV (90.742%), Radio (89.045%),Newspaper (72.406%), pamphlets/magazine (79.62%), Posters (75%), Internet (37.5%), phones (81%), Email (14.17%). Most of the information obtained through Mass Media by Farmers is Awareness program (85.74%), Crop varieties (78.9%), Fertilizers (76.74%), Weather (71.45%), Marketing (59.9%), New Methods (54.725%). Based on Survey conducted between 2012 to 2015.[3][4][6]

3.Seconary data on Social media:

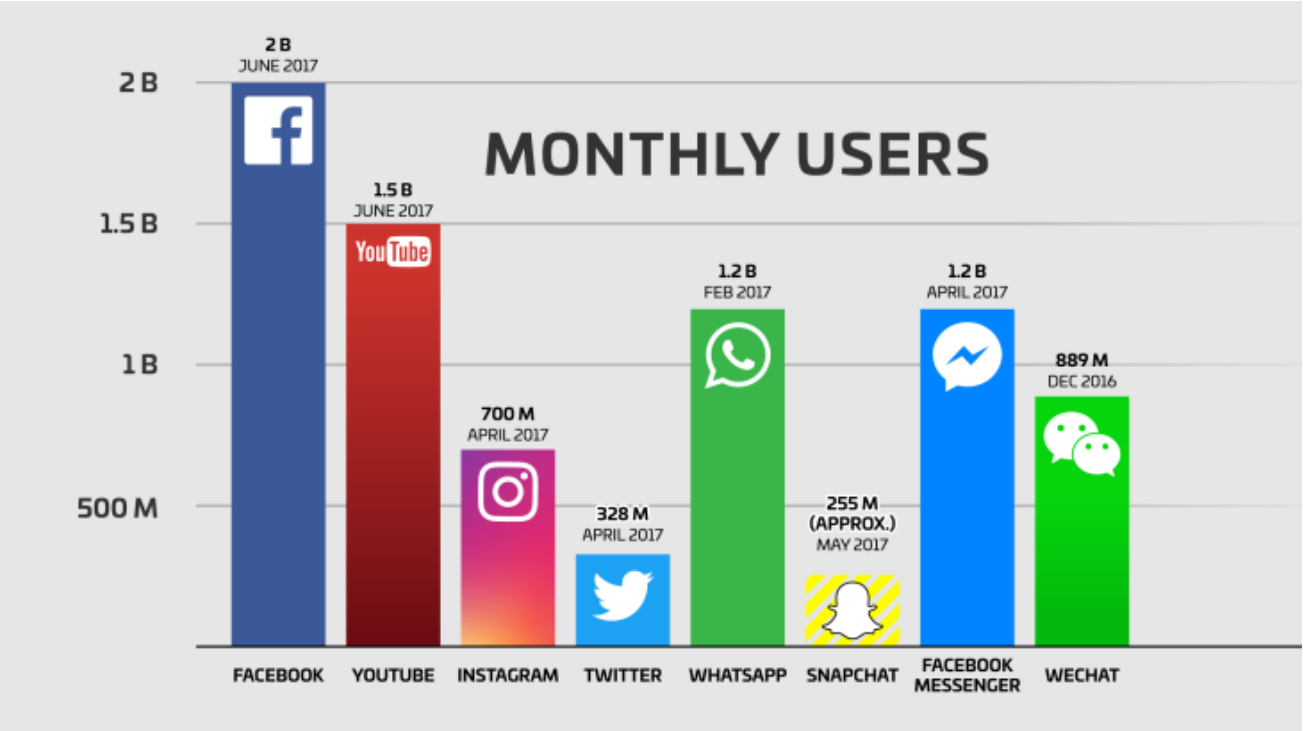

Fig4: Monthly social media users' data.

Source: https://techcrunch.com/2017/06/27/facebook-2-billion-users

Media/Page	Location/Region
Livestock Information and Marketing Centre (https://www.facebook.com/groups/Livestock.TN/)	India
Mkulima Young (Young Farmer) (https://www.facebook.com/mkulima.young)	Kenya
Turmeric Farmers' Association of India (https://www.facebook.com/turmeric.farmers)	India
National Ecological Producers Association(APNE) (https://www.facebook.com/anpe.peru)	Peru
Krishi Vigyan Kendra, Namakkal (https://www.facebook.com/krishi.namakkal)	India
Agricultural Extension in South Asia (AESA) (https://www.facebook.com/ groups/428431183848161/)	South Asia
Global Forum for Rural Advisory Services (GFRAS) (https://www.facebook.com/groups/gfras/)	Global
Vivasayam Karkkalam (Let us Learn Agriculture) (https://www.facebook.com/groups/madhualan)	India

Fig5: Facebook social media platforms

Source: Saravanan & Suchiradipta, 2014

Media/Page	Location/Region
AgChat (https://twitter.com/agchat)	USA, UK, Australia, New Zealand, Ireland
Agriculture Proud (https://twitter.com/AgProud)	USA
Young Farmers (https://twitter.com/F4YFKenya)	Kenya
USDA (https://twitter.com/USDA)	USA
INGENAES (https://twitter.com/INGENAES)	Global
eXtension4U (https://twitter.com/eXtension4U)	USA
MEAS (https://twitter.com/MEAS_extension)	Global
GFRAS (https://twitter.com/infogfras)	Global
e-Agriculture (https://twitter.com/e_agriculture)	Global

Fig6: Twitter social media platforms

Source: Suchiradipta & Saravanan, 2016

Media/Page	Location/Region
Gate to Plate Blog (Michele Payn-Knoper) (http://www.causematters.com/blog/)	USA
Ecoagriculturist (Oluwabunmi Ajilore) (https://ecoagriculturist.wordpress.com/)	Nigeria
The Unconventional Farmer (Gil Carandang and Patrick Gentry) (http://theunconventionalfarmer.com/flog/)	Global
AGRF Blog (African Green Revolution Forum) (http://www.agrforum.com/blog/)	Africa
Agricultural entrepreneurship (Penn State Extension) (http://farmbusiness.blogspot.in/)	USA
TNAU Agritech Portal blog (Tamil Nadu Agricultural University) (http://tnauagritechportal.blogspot.in/)	India
Farmingselfie (http://farmingselfie.com/)	Global

Fig7: Blog social media platforms

Source: Suchiradipta & Saravanan, 2016

Media/Page	Location/Region
Farming First (https://www.youtube.com/user/FarmingFirst/)	Global
CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) (https://www.youtube.com/user/CCAFS)	Global
IFADTV (https://www.youtube.com/user/IFADTV/)	Global
Farmers Weekly Video (https://www.youtube.com/user/FarmersWeeklyVideo/)	UK
Farm Radio International	Global

Fig8: You tube social media platforms

Source: Suchiradipta & Saravanan, 2016

4.Conclusion:

Farming has been improved and improving by gaining knowledge from Rig Veda to Mass media and Social media. But Social Media and Mass media allows Users to interact, create, share, retrieve, and exchange information and ideas in any format that they can discuss, archive, and use in virtual communities and networks. There are many social media platforms used worldwide to provide agricultural extension services but Facebook having highest Priority popularity and penetration. But there are a number of new and complex challenges at personal, institutional, infrastructural and security levels in the use of social media for agricultural extension service delivery.

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