



Mass Media Role in Agricultural and Rural Development

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Abstract

In order to obtain information about related difficulties, problems and their solutions, information and communication technologies between multiple communities are constantly being enhanced. Regarding agricultural development, mass media have played a very important role in emerging countries. Many emerging countries have achieved better results in the latest technologies. Newspapers, radio, television, smartphones and the internet are the most important communication devices that provide farmers with knowledge and information about agriculture. By using these modern technologies in several countries, it has been observed that the use of these new technologies has generated positive outcomes in agricultural development. In rural areas, radio is still the most popular communication tool. It can broadcast many programs about agriculture, and television has also contributed greatly to the dissemination of agricultural information in emerging countries. In addition, smartphones have reduced the distance between growers and consumers and now growers can communicate directly with customers and get product prices from the market. Mobile phone technology also offers growers a new way to get up-to-date information about weather conditions from the meteorological department before using pesticides and other related materials on their farms. But the internet is strewn with the latest information on commodity prices and marketing, and growers are getting information from around the world.

Keywords: Mass media, agriculture, rural development

Introduction

The agriculture sector is the diving industry, which is enhancing income in rural areas and the long-term stability of natural resources. This has produced various pursuits affecting growers, stakeholders, consumers, and government industries. Information and communication (ICTs) have conveyed the

essential knowledge or information regarding agriculture in emerging nations. These emerging nations are now associated with developing nations and have access to modern information and technologies on natural resources and weather, other vital information about agriculture production (Rao 2007; Pandey 2017; Luqman et al., 2019).

In many developing nations are utilizing several modern technologies and other new resources to modernize agricultural and commercial advancement. In this regard, emerging countries such as Asian and African countries provide the latest ICTs for agriculture and rural development. However, it turns out that the lack of communication and lack of understanding of these latest technology growers does not benefit from these new tools in their areas of work. Moreover, growers clearly cannot communicate with buyers, sell agricultural products at higher prices, or track medical costs of livestock and the cost of agricultural chemicals to gain knowledge from other sponsors (Aromolaran et al., 2016).

Information and communication technologies are showing different methods for transmitting and communicating different knowledge or skills. By using this latest technology, farmers' skills and experience can be improved. The term "information and communication technology" can be used on a variety of booths, as well as TV, the internet, smartphones, voice messaging, video and fax (Warren 2002; Pandey, 2017). The distance between several societies around the world (Herselman 2003; Rehman et al., 2013; Luqman et al., 2019). ICT symbolizes the development of information in the rural areas of the emerging world, and it can exchange information and expertise successfully collected for agriculture and rural modernization.

The utilization of ICTs in agriculture to promote rural advancement is extremely essential. In remote areas, it is necessary to adopt such latest technologies to improve agricultural production, especially in Asian and African countries, because these technologies can provide farmers with average agricultural knowledge, and in this case, growers in There are various challenges in connection of communication equipment (Meera Jhamtani and Rao 2004; Rehman et al., 2013). The use of ICTs has played a beneficial role in agricultural and rural advancement and the decision-making of grower communities in many countries (Cash, 2001; Galloway and Mochrie 2005; Opara 2008; Taragola and Van Lierde 2010; Rehman et al., 2013). ICTs have produced significant changes in agricultural improvement and relocation skills and information through new technologies that are different among growers (Birkhaeuer, Evenson and Feder 1991; Pandey 2017). ICT has the potential to spread agriculturally efficient information among growers, and television, radio, mobile phones, and the internet also can share suitable and relevant materials

that support the use of resources in a productive and useful way (Ekbia and Evans 2009; Ommani and Chizari 2008; Luqman et al., 2019).

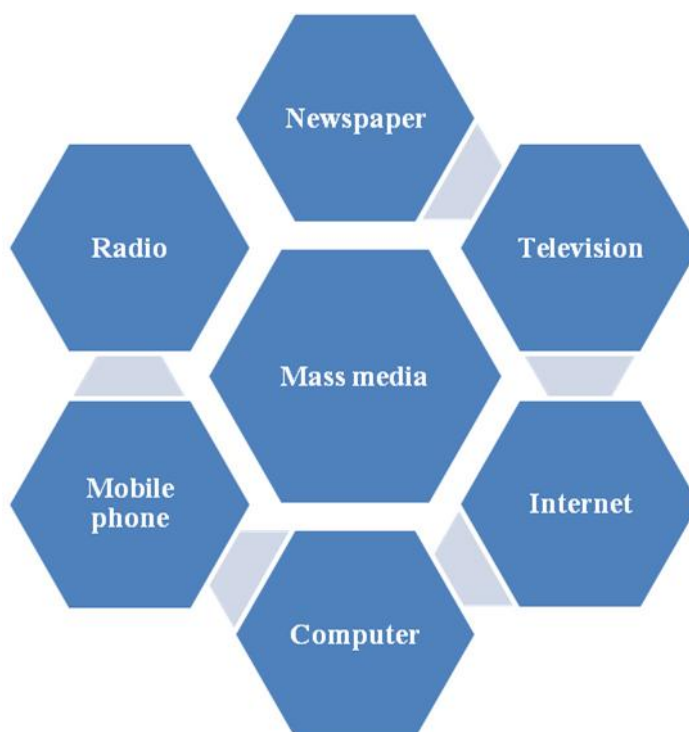
From past two decades, ICTs in agriculture development in the rural region have spread rapidly in wholly regions of the communities and also played a central role in remote advancement newly ITC has given very effective results in all over the world of rural area (Fawole and Olajide 2012; Aromolaran et al., 2016). ICTs have been combined with multiple tools such as smartphones, the internet, computers, radio, and television. ICT has an important position in the field of agri-food and can provide rapid knowledge and information about agriculture on a global scale. They provide useful information and communication technologies that can enhance agricultural modernization by increasing yield, efficiency and grower profits, and show stakeholders more important information and value (Rao 2007; Luqman et al., 2019).

In recent years ICTs have been initiated in agriculture schemes which have given the most effective outcomes in agriculture and rural advancement. For example, ICTs can be applied for distance learning systems and support the growers for understanding the latest skills for the usage of rural and agriculture production in emerging nations. New machinery can deliver the latest news update on prices, commercial income and weather conditions. It was indicated that those growers who have utilized the ICTs in farming have enhanced their better product information. Moreover, those farmers who have used e-commerce and e-services functions improved their income (Chapman and Slaymaker 2002; Sideridis 2010; Aromolaran et al., 2016).

Mass media play a very vital role in developing the farmers of the agriculture sector and rural areas. But there is a lack of proper knowledge about farming and rearing livestock techniques in urban and rural areas in developing countries. So far different research articles have been published on the role of mass media in agriculture and rural studies but still, there is a big gap between the role of mass media and farmers of agriculture and rural areas. The aim of this review is to reduce the gap between farmers and agriculture extension workers. Farmers could get the best and useful information and knowledge about the role of mass media in the management of their crops and livestock. Agriculture extension workers having good knowledge about the role of mass media could

persuade their knowledge to the farmers in the best way. This review would give a theoretical contribution to knowing the role of mass media to provide better information about agriculture and rural development.

This review is structured in three parts to deliver the theme of mass media in agriculture and rural development.



Mass media and its impact on farmers

Print media

Impact of newspaper

Most people in emerging countries still depend on "traditional mass media" such as newspapers, radio and television. Therefore, these three media sources may be effective channels for disseminating information about agriculture (Nazari and Hassan, 2011). In addition, mass media can enhance knowledge and change people's behavior by attracting attention to specific issues (Hassan et al., 2009; Kayode and Adeniran, 2012). Although radio and television are the fastest-growing mass media types, newspapers also have other advantages: fixed form, a large amount of information, and authority (Aiyesimoju and Awoniyi, 2012). Newspapers are regular publications that contain informative articles, editorial opinions, analytical articles, advertisements, special reports, pictures and comics. Newspapers can

also provide continuous and prominent coverage on specific topics and they are important in driving the public to change attitudes, raise awareness, increase knowledge and skills, and learn about different topics, including agriculture. Hence, newspapers play a very important role in disseminating development information, including agriculture production information.

Although newspapers play an essential role in disseminating important information to the public, in various nations, there are still concerns that newspapers will give priority to advertising, political, entertainment and criminal events, while neglecting development topics such as agriculture (Narayana and Kumar, 2009). A study in Nigeria showed that newspapers place little emphasis on agriculture. The front page featured 36 of 750 agricultural news (4.8%). In Botswana, Oladele and Boago (2011) stated that public newspapers report less on agricultural news than private newspapers. Agricultural information is usually limited in newspapers.

Electronic media

Impact of Radio

The research was performed in Bahawalpur, district of Punjab, Pakistan. According to reports, radio broadcasts were a more efficient source of agriculture information dissemination among the growers regarding agroforestry. Also indicates that many growers were interested in farming and business and growers were getting the latest information regarding all aspect of farming and raising their knowledge and skills. Furthermore, a study on broadcasting agriculture information among growers in Nigeria, presented that radio provides growers with information on fisheries, livestock and radio is a significant medium for communicating among growers in Nigeria (Abbas et al., 2009; Bolorunduro et al., 2004; Ashraf et al., 2015).

Okwu et al., (2007) completed the study and the efficiency of radio and agricultural programs is undeniable. The results showed that most growers like to participate in agricultural programs, which indicates that most growers listen to radio programs about plants and agronomic products. Furthermore, some growers like to listen to livestock knowledge. Broadcasting is a multi-dimensional resource that can provide effective information in remote areas of developing countries. The influence of broadcasting programs has proved a helpful role in several communities such as growers. There is no doubt that the latest information on agriculture cannot be disseminated on television. The results show that television is a good source of modern information for disseminating news or the best information about seeds, soil and wheat (Fossard 2005; Saadi et al., 2008; Ashraf et al., 2015).

Information and communications technology are a key component of providing modern technologies to increase agricultural yields. Connect with growers using these latest machines and learn how to successfully use these latest technologies in agriculture. The usage of radio broadcasting among rural growers is still very popular. Many growers rely on newspapers and radio. These broadcast networks can transfer important information between rural growers and can improve the skills and knowledge of agricultural development (Ani and Baba, 2009; Zhang et al., People 2016).

Technologies such as radio are important communication media and have played a key role in agricultural information and socioeconomic culture. It is a very influential communication tool in remote areas and can provide information about agriculture. Moreover, it was pointed out that in emerging countries, there is a power shortage in remote areas, and growers and other villages often rely on radio programs to gather their latest report requirements on health, education, weather and agricultural information. The completion of agricultural development plans in emerging countries depends on the overall development of the mass media in mobilizing people. Broadcasting is a good source for disseminating technical, scientific, and agricultural information to growers (Murty and Albino 2012; Aromolaran et al., 2016).

Studies have shown that radio broadcasting has brought different changes to several sectors of the community, such as broadcasting agricultural programs and new information for farmers. Broadcasting provides millions of farmers in the countryside with modern technology or skills. Radio is an effective communication device, especially for uneducated growers, which can collect a variety of better information about agriculture and other aspects of society (Sadaqath and Mariswamy, 2007; Aromolaran et al., 2016). Moreover, the Food and Agriculture Organization working in Mali has sent rural growers' better skills and information on the environment, marketing, weather, disease, water management, pest monitoring and assessment to enhance agricultural yield in the country. This latest news is disseminated via radio in rural areas. Broadcasting has played an important role in the agricultural sector, climate and pesticide use, and other relevant knowledge among growers (Weiss et al., 2000; Zhang et al., 2016).

Radio is an important tool or communication technology and play a vital role in agricultural development. Provide growers with the best information about markets and other new technologies. However, using radio technology, farmers have received previous answers to farming questions from agricultural professionals. Similarly, in remote areas of emerging nations, the influence of radio technology on social, economic and dissemination of different basic information is also important. Besides, according to reports, in some countries, growers do not have access to electricity, and other societies often rely on new technologies,

especially radios, to meet their latest information requirements on health, education, weather and agricultural news. In emerging countries, such as Bangladesh, Pakistan and India, where literacy is low and mass media is most important (especially electronic media), growers are kept up to date with their latest developments in the agricultural sector (Murty and Albino, 2012).

The radio transmission latest approaches, research results, new ideas and scientific evidence for growers in rural areas which improved their skills, knowledge and growers adopt such new technologies for improvement and enhance their agriculture production. Furthermore, mass media brought different programs and issue papers, newspapers, magazine concerning agriculture information in Pakistan. These latest technologies announced new methods for the growth of production such as secures from dangerous infections, utilization of pesticides or insecticides and marketplace knowledge of their products (Kalirajan and shand, 1984; Aromolaran et al., 2016).

Impact of Television

The advancement of agriculture in emerging countries depends mainly on the usage of ICTs, which can connect people's societies. Television and broadcasting technologies have played an essential role in improving the capacity-building of growers via disseminating various information about agriculture. Moreover, television broadcasts agricultural information among growers and provides important knowledge through dialogue with agricultural experts. In Ethiopia and India, television has played a key position as a medium for disseminating the best information about the agricultural sector. It has been pointed out that by watching farming-related agendas on TV, agricultural growers can easily obtain better information (Murty and Abhinov, 2012), Television disseminates information and skills to all patrons of society, and builds awareness, skills and information among farmers on the use of new technologies in agriculture, and broadcasts such an agenda that has attracted attention among the crowd And people often rely on the mass media to get the latest news on agriculture, health, and education (Age, 2012).

Fruitful results on agricultural development depend on access to opportunities, and community mobilization depends on television. Agricultural extension professionals believe that mass media can use

developing countries' ICTs to bring beneficial change and agricultural development to developing countries (Salleh, 2010). Television is a successful communication system that can quickly disseminate agricultural information or knowledge among growers. In some countries such as Pakistan, Sri Lanka, India and Bangladesh, the schooling level of growers is low, so television is the most popular communication technology. Growers can observe and obtain new information regarding the usage of multiple technologies and pesticides in a short time (Nazari and Hasbullah, 2008).

Similar research performed in Iran has shown that 68% of farmers consider that TV programs on agriculture are best for growers. However, it shows that these programs will be made in their own language and can bring greater benefits to growers. Moreover, most 87% of farmers believe that during this period, 6 to 8 pm is the appropriate time to broadcast agricultural programs. During this period, most growers are free to watch TV programs and sow in about 20 minutes. Studies have shown that different issues related to agriculture, such as television in bed conditions, are important tools to provide growers with relevant information about agriculture (Nazari and Hassan 2011; Loges, 1994).

News regarding agriculture can be broadcast by utilizing proper fee-based ICTs. For example, television is a transmission activity among well-known growers, with the aim of using decentralized agricultural knowledge. There are multiple ways to provide up-to-date news regarding agriculture through magazines, newspapers and brochures including electronic media, television, mobile phones and radio (Rolle and Satin, 2002). Many people operate ICTs in multiple directions, such as growers choosing to watch TV and get regular updates on markets and weather. Besides, growers use other new communication devices to obtain information. It is noted that many emerging countries have established several communication tool centres to pass the good news about agriculture to growers. Although in many countries, governments have launched agricultural information clearinghouses. Furthermore, TV is the best source of agricultural information for growers in emerging countries (Fara 2009; Goyal, 2010).

Electronic media has spread advanced changes in any area of the community, especially as growers are obtaining more information from new technologies such as television and radio. The TV offers the latest

options for growers to list and watch several shows about agriculture. Farmers have chosen a better way to get the latest news or information about agriculture. It has also been pointed out that television is not a rich source of agricultural knowledge, but other modern skills need to be disseminated to growers to obtain new information (Buren, 2000). New technologies, such as television, allow many stakeholders to share the best information on many issues, and growers have gained much better information from this latest technology and gained useful knowledge about agriculture. Television broadcasts new methods in emerging countries. Various new programs were announced on television to raise awareness among growers in remote areas of emerging nations. From the perspective of rural and agriculture advancement, TV directors and producers will come up with ideas for agricultural development by developing new agricultural growth plans (Age, 2012).

New age media

Impact of mobile phone

The role of the smartphone has decreased the huge gap among growers and traders and the same moment growers directly connect with customers and buyers to get the most excellent price of their agriculture product. Growers instead of going to the marketplace easily communicate one of the good customers who buy products at an excellent rate. In the remote areas or rural areas of developing countries smartphones spreading by various government and non-government organizations have introduced various projects for rural and agriculture advancement and enhance agriculture production by utilizing various new machinery in food production. Smartphone has built a small business facility for small growers and has provided access to knowledge and knowledge regarding weather, the market in rural areas. The use of smartphones by growers has a very positive impact on their production and income, as they travel with consumers and sell their products at higher prices (De-Janvry et al. 1991; Grameen 2007; Fafchamps and Vargas Hill, 2005; Ashraf et al., 2015).

Another study was completed in Ghana, where smartphones were launched among growers in the country to connect with buyers to sell their fruits in advance and talk to customers and get ratings. Smartphones effortlessly connect growers and customers directly, and they get higher ratings directly from customers and agents. Growers also have another

benefit of smartphones. Instead of going to the market, they directly contact and ask about their agricultural production speed. In this regard, farmers can save time, energy, and money (Muto et al., 2011; Lee et al., 2013; Luqman et al., 2019).

Smartphones have reduced the disparity between urban and rural populations. Mobile phones connect growers and market buyers. In Mali, growers in Timbuktu speak skillfully with family representatives living in urban areas. In addition, in Ghana, growers in the province of Tamale sent a text message to learn about the price of tomatoes and corn oil, a few kilometers from their urban area. Mobile phones have given them more opportunities and access to growers to gain better knowledge about agriculture from the tight markets of developing countries. Also, many growers live in rural areas and they do not have adequate access to new technologies in remote areas. Studies in South Africa show that smartphones have a very positive impact on growers' income and living standards (Aker and Mbiti 2010; Klöpper and Nelen, 2008).

The study was accomplished by Muto and Yamano (2009) showed that the impact of smartphones on Uganda growers' market information and agricultural products obtained the latest information on market efficiency. In 2003 and 2005, smartphone coverage increased by 10% in grower opportunities to participate in the market. Mobile phones are most beneficial for increasing information volume and yield. This latest technology is even better for growers who animate in rural areas of the country.

According to reports, smartphones have delivered a policy to growers to distribute and receive new information about agricultural production. Currently, many growers using smartphones for different purposes are using this method to obtain the price of agricultural products from the market, but some are openly communicating with customers to sell their products and commodities at high prices. Furthermore, growers are using SMS services to keep up-to-date information on pesticides and weather on the farm (Murthy 2009; Ashraf et al., 2015).

In developing countries, the most important role of mobile phones is that growers use their phones to get the latest information from multiple market information, while others contact agricultural cooperation experts to get information about fertilizers, pesticides, and insecticides in their

farmland new information on usage. For example, growers in Bangladesh communicate directly with consumers and obtain new information regarding vegetable and rice prices, and some of them ask about the value of coffee in international countries. For the past two decades, it has been problematic for growers to obtain new information or new skills about agricultural production from the market within minutes of the community (Kefela 2011; Ashraf et al., 2015). There is no uncertainty the cell phones were used in various departments of the community such as in education, health, rural progress and farming for the financial development in advance nations. The effect of mass media empowers growers' societies in remote areas and sent access to information about the market. Moreover, growers contact the customer in numerous markets of urban areas and sell their goods where they find a good price (Siraj 2011; Zhang et al., 2016).

Smartphones and the wireless device also were utilized in the monitoring system of climate or weather which has delivered many advantages to several communities in the form of enhancing the income, awareness and adoption level. Moreover, these types of new services must familiarize in the agriculture section which can give the latest methods to growers for their agricultural modernization and rural advance. Using ICTs without any distress smartphone staffs have delivered latest wireless Multi-hop for numerous features to connect with each other to resolve the difficulties about agricultural and rural development (javaid et al., 2011; Tahir et al., 2013 and javaid et al., 2013; Zhang et al., 2016).

Impact of internet

According to Berman (2008) pointed out that the latest mass media technology plays a very important role in the advancement of developing nations. In this context, Sri Lanka and India have made significant progress in using mass media in rural areas. On the Indian side, proletarian organizations supported by the government and UN organizations have begun to share a bottom-up approach to increase their progress plans in rural areas and provide functional virtualization with computers, communication arrangements and internet access Knowledge Center (VKC) growers, including using the Mike system. These VKCs from the internet have played an important role in growing growers' capabilities. However, the internet system has created many opportunities for society. Using the internet system, growers have gained new knowledge about yields from several markets in their area and

from large markets in the country. Also, get the latest knowledge about agriculture to improve the latest methods. The internet offers growers the opportunity to obtain new information and new knowledge on the market.

For the most part, growers are using their email and internet to communicate with friends and family in other parts of the country. The internet is very well known among Indian growers. Currently, growers are using various websites to gain important knowledge about the appropriate usage of pesticides in their agricultural areas (Joshi and Ayyangar 2010; Luqman et al., 2019). The Korean Agriculture, Forestry and Fisheries Information Service (AFFIS) has also played an important role in providing better information to growers and fishermen. The management education system was recognized in 2002. The key purpose of the department is to deliver growers and fishermen with offline and online education programs and incentive information facilities. Growers and fishermen are provided with facilities for learning and learning through internet facilities. Using internet growers has developed their information and skills, gained more knowledge, and used the latest technology in agriculture and rural areas.

A similar study was accomplished by Mori and Assumpcao (2007) results show that community internet access centers provide the best facilities for farmers. This approach can focus on the main number of decentralized initiatives where growers are receiving assistance in several remote areas. This shows that local governments' productive initiatives and international knowledge serve as examples to help spread internet hubs across the country. It cannot be contradicted that the federal government, with the support of local governments, has carried out a digital revolution and better services in remote areas, such as new technologies and skills not only benefiting fishermen and growers.

The study was accomplished by Sein and Furuholt (2009), who showed that the internet can also conduct research to discover the role of intermediaries. In the DNet project in Bangladesh, communities did not have immediate access to the internet, but workers helped them find their needs. Growers use their phones to communicate user questions to the Pallitathya Kendra Rustic Information Center. (KRIC). At the same time, operators access the internet system and then respond to growers with agricultural difficulties and try to solve their problems. Similarly, growers are informed

of the use of fertilizers and pesticides in their agricultural sectors. But in India, growers also use smartphones for weather-related information via the internet. In India, an information village research project has been implemented and a computer centre has been launched in Fisher Village, regardless of whether farmers and fishermen are regularly linked to the internet system and informed through weather reports from the Indian Metrology Agency. The speaker disseminated the estimate report via VHF broadcasting to introduce fishermen to information on high and low waves before going out to sea fishing and using pesticides or other important materials in their fields (Rao 2004; Aromolaran et al., 2016; Pandey, 2017).

The internet is an important source for finding the most important information about agriculture and other similar issues (Burke and Sewake 2008; Zhang et al., 2016; Luqman et al., 2019). Among growers, seeking the latest online data and news about banking is an important agribusiness system. In Malaysia, recent statistics show that 94% of growers use internet services to obtain agricultural information, while 85% of growers get the latest information via text messages (Hassan et al., 2010). In addition, in India, projects for growers' applications, mail and internet servers have been launched for growers, and the centre provides farmers with the latest news on agriculture. Network services are linked via cable in their rural areas. About 85% to 92% of growers are illiterate and they have no information about computer systems. Also, in order to communicate internet information, grower trainers have been selected to train growers. In this case, farmers would not hesitate to get new information regarding the use of internet services and knowledge about pesticides and markets (Meera et al., 2004).

Impact of computer

The computer plays a very important role in all over the world, especially, marketing, agricultural and rural areas. The computer with the internet disseminates important information to the farmer regarding agriculture techniques. Before the discovery of computers, people kept their information secret, but in the modern age everyone likes to share their information and disseminate data to the farmers in rural areas. Nowadays computer is available in every field but lack of technical staff in agriculture extension. The agriculture extension worker cannot persuade their information to the farmers in the right way about agriculture in rural areas. In today's world,

the computer is necessary for recording the information in the agriculture sector and rural development.

Conclusion

Findings indicate that researchers point to many issues related to the lack of mass media infrastructure in remote areas of emerging countries. New technology centres and media agencies are needed to disseminate agricultural knowledge among growers in remote areas. Governments must also adopt agricultural development projects and use national communications technology to provide training and up-to-date information. The education level of growers in emerging countries is also very low. As a result, governments in these developing countries must launch new equipment and education programs for their growers and use mass media to strengthen grower capacity so that growers can also benefit from these latest technologies and improve their financial systems and living standards. In addition, power shortages in rural areas have reduced agricultural production, so it is also critical to create other resources (such as solar systems for agricultural development) to promote agricultural production in these republics.

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