REVIEW ARTICLE

Impact of mass media in agriculture: An overview

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Mass media significantly impacts the agricultural sector, influencing information dissemination, community building and sustainable farming practices. It provides farmers with real-time updates on weather forecasts, market trends and agricultural practices, enabling them to optimize their operations and improve yields. Mass media also serves as an educational tool, raising awareness about sustainable farming practices and environmental conservation. Documentaries, educational programs and articles inform farmers about biodiversity, soil health and water conservation. By promoting sustainable practices, mass media encourages farmers to adopt methods that enhance productivity while protecting the environment. This educational aspect is significant in encouraging a responsible approach to agriculture, ensuring sustainable practices for future generations. The impact of mass media on agriculture is multifaceted, enhancing communication, education and community engagement. As technology evolves, the influence of mass media in agriculture will likely expand, providing more opportunities for farmers to thrive in an ever-changing landscape.

Key Words: *Mass media; Information; Sustainable farming; Farmers; Agriculture*

INTRODUCTION

Mass media plays a pivotal role in the agricultural sector, serving as a vital conduit for information dissemination, education and advocacy. Its influence is far-reaching, impacting the decisions, practices and overall development of agriculture worldwide. In emerging nations, the majority of people still rely on "traditional mass media" including radio, television and newspapers. Accordingly, these three media outlets could be useful for spreading agricultural-related information [1]. Educating the public about new government initiatives, methods and technology is one of the main roles of mass media in agriculture. Numerous media platforms such as radio, television, advertising, movies, the internet, newspapers, magazines and so on are among the technologies used in this communication [2]. Mass media is important in helping farmers receive developments in contemporary agriculture [3]. Furthermore, by drawing attention to certain concerns, the media can improve people's understanding and alter their behavior [4,5]. Newspapers provide additional benefits, such as stable form a wealth of information and authority, even if radio and television are the mass media formats with the quickest rates of growth [6]. Additionally, the media serves as a link between farmers and resources and markets. It offers vital details on demand patterns, market pricing and the most effective ways to promote agricultural goods. This relationship aids farmers in making wise choices and maximizing their earnings. Furthermore, media outlets provide farmers with access to professional viewpoints, guidance and solutions to issues in agriculture, helping them to address obstacles more skillfully. The media is very important for lobbying and influencing policy. Through drawing attention to problems that farmers confront, such the effects of climate change, water shortages and financial restrictions the media may persuade decision-makers to take these issues seriously. By advocating for farmers, we can make sure that their needs are met and that their voices are heard. On the other hand, the media also supports government programs and policies meant to assist farmers and make sure they are aware of the advantages that are accessible to them. In several nations, grower communities decision-making and the progress of agriculture and rural areas have benefited from the usage of Information and Communication Technologies (ICTs) [7-9].

Through new technologies that are unique to producers, ICTs have significantly changed agricultural improvement and relocation skills and knowledge [10]. In addition to the potential for ICT to disseminate agriculturally efficient information among producer's other media such as radio, television, mobile phones and the internet can also facilitate the exchange of pertinent and appropriate materials that promote the efficient and productive use of resources [11,12]. The integration of technology with mass media has further revolutionized agricultural communication. Digital media including social media platforms, mobile apps and websites offer real-time updates and interactive platforms for farmers to engage with experts and peers. This technological integration has made information more accessible and timely, allowing farmers to adapt quickly to changing conditions. However, traditional media such as television and radio still play a significant role particularly in rural areas where access to digital technology may be limited. Programs customized to local languages and cultures enhance understanding and adoption among diverse audiences.

LITERATURE REVIEW

Mass media plays a significant role in the dissemination of agricultural information, influencing the practices, decisions and overall development of the agricultural sector. Here's a review of the role of mass media in agriculture:

Information dissemination

Awareness creation: Mass media helps raise awareness about new agricultural technologies, practices and government schemes. It reaches a wide audience, ensuring that farmers are informed about innovations that can enhance productivity.

Education and training: Educational programs broadcasted through radio, television and online platforms provide farmers with knowledge about improved farming techniques, pest management and sustainable practices.

Advocacy and policy influence

Highlighting issues: Media can bring attention to challenges faced by farmers, such as climate change impacts, water scarcity and financial issues, influencing policymakers to address these concerns.

Promoting policies: Government policies and initiatives aimed at supporting farmers are communicated through mass media, ensuring that farmers are aware of the benefits available to them.

Technological integration

Digital media: The rise of digital media and mobile technology has revolutionized the way agricultural information is shared. Social media platforms, mobile apps and websites offer real-time updates and interactive platforms for farmers to engage with experts and peers.

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Television and radio: Traditional media still play a significant role in rural areas where access to digital technology may be limited. Programs customized to local languages and cultures enhance understanding and adoption.

Behavioral change and adoption

Influencing attitudes: Media campaigns can change perceptions and attitudes towards certain agricultural practices, encouraging the adoption of environmentally friendly and economically beneficial methods.

Success stories: Sharing success stories and testimonials of farmers who have benefited from adopting new technologies or practices can motivate others to follow suit.

Challenges and limitations

Access and literacy: Not all farmers have access to mass media or the literacy level required to fully benefit from the information provided.

Content relevance: Information must be relevant and customized to local contexts to be effective. Generic content may not address specific regional agricultural challenges.

Use of newspaper in agriculture

Newspapers are important for providing the public with vital information, but there are still worries around the world that they will prioritize political, entertainment and advertising over development issues like agriculture [13]. According to a Nigerian survey, newspapers don't focus much on agriculture. 36 out of 750 agriculture news stories (4.8%) were featured on the first page. Oladele reported that public media in Botswana cover agricultural news less frequently than private publications. Newspapers typically don't provide a lot of information on agriculture [14]. According to Rolle et al., there are other means to get the most recent information on agriculture outside of periodicals, newspapers and pamphlets such as electronic media, television, mobile phones and radio [15].

Use of radio in agriculture

Radio has been a significant tool in agriculture, providing farmers with vital information and support, especially in rural and remote areas. Its widespread reach, accessibility and ability to deliver timely information make it an effective medium for agricultural communication. Radio plays a vital role in the dissemination of critical information, including market pricing and weather predictions, which is one of its main advantages. Farmers may make better marketing decisions and increase profitability by using market pricing information, which they can use in conjunction with timely weather updates to assist them prepare for planting, harvesting and other operations. The study was concluded by Okwu et al., and it is evident that radio and agricultural initiatives are effective [16]. The majority of farmers like taking part in agricultural programs, according to the statistics which suggests that most producers tune in to radio programs about plants and agronomic items. Moreover, some farmers like hearing about cattle expertise. Radio transmission is still widely used by farmers in rural areas. A lot of farmers rely on radio and newspapers. According to Zhang et al., these broadcast networks have the potential to enhance agricultural development skills and knowledge while serving as a vital conduit for critical information among rural producers [17].

In India's rural agricultural markets, where there isn't a consistent and reliable electricity supply in remote and rural locations, it serves as a potent communication tool. The radio is the only source of information, entertainment and education that people can rely on. For instance, All India Radio (AIR) operates a number of radio stations under the "Kisanvani" concept. The goal is to provide local farmers with up-to-date information regarding weather reports, daily market pricing and other micro-level details in their individual areas. Kisanvani is currently broadcast from 96 AIR stations located all across the nation. "Kisanvani, Samruddhi, Krishi jagat and Suno kisan" is one of the several programs [18].

Use of television in agriculture

Television has become an indispensable tool in the field of agriculture, playing a pivotal role in disseminating information, providing education and encouraging community engagement among farmers. With its unique ability to deliver both visual and auditory content, television offers a powerful medium for conveying complex information in a manner that is both engaging and easy to understand. Because of its influence and scope, it has proven to be a useful instrument for promoting innovations and sustainable farming methods. Without a doubt, television cannot provide the most recent agricultural facts. The findings demonstrate that television is a useful medium for distributing current information, such as news or the greatest knowledge available on wheat, seeds and soil [19]. Television has been a vital tool for spreading the most accurate information about the agriculture industry in Ethiopia and India. It has been noted that agricultural farmers may readily receive improved information by viewing television programs related to farming [20]. All members of society may obtain knowledge and skills *via* television, which also helps farmers become more knowledgeable about the use of new technology in agriculture and transmits content that grabs viewer's interest. Also a lot of people rely on the media to provide them with the most recent information on health, education and agriculture [21]. It is observed that many developing nations have set up a number of communication hubs to spread the word to farmers about the benefits of agriculture. Nonetheless, governments have established agricultural information clearinghouses in several nations. Moreover, producers in developing nations can obtain the most agricultural knowledge *via* television [22]. Television directors and producers will devise new strategies for agricultural growth in order to generate ideas for agricultural development from the standpoint of rural and agricultural progress [21].

Use of social media in agriculture

Social media has become an invaluable tool in agriculture, transforming how farmers connect, share information and promote their products. Platforms like facebook, twitter, instagram and linkedin allow farmers to engage with a broader audience, including consumers, suppliers and industry experts. Farmers may promote a favorable image of agriculture by using social media to highlight sustainable agricultural methods, share success stories and highlight their practices. Social media is the term for digital devices that are mostly based on the internet and are used by individuals to share and discuss data. It makes reference to knowledge, opinions and digital networks allow for the sharing and discussion of multimedia, music and video. Social media components that make them indispensable and accessible. Easy tools exist to enhance verbal communication gain access *via* mass non-public, mass self and mass mobile phone communications. an extensive network of weak links to ensure the receipt of new ideas. In essence, new media is all about what is popular and viral and the most popular platforms these days are youtube, facebook and instagram as they are easily available to anyone. In a research by Thakur et al., social media platforms used in agricultural communication activities were analytically tested [23]. The results showed that users preferred whatsapp over facebook because of its advantages over facebook, including ease, privacy and fewer data usage. Information quality, timeliness and accuracy will all increase as a result of social media technologies connecting the farming community with agricultural organizations. This promotes continuing communication with the agricultural community and the sharing of information in both directions. It also has several drawbacks, such a high frequency of pointless messages, excessive data use and spotty Internet access. According to Tamizhkumaran et al., youtube has a lot of potential for advising and extension services [24]. Client attention is drawn to graphics and videos that provide important information. Positive feedback may be obtained when extension agents respond to customer remarks, enabling two-way contact. State Agricultural University (SAU) and Krishi Vigyan Kendras (KVK's) can lead even the on-farm studies and front-line demonstrations to investigate the profitability of youtube. The use of social media by stakeholders in the agriculture industry is increasing. Professionals, researchers and other stakeholders in the agricultural sector are using social media at an increasing rate. Buying and selling of agricultural goods is made possible by the usage of internet media in the agricultural sector. Social media improves agriculture's marketing, education and communication while linking farmers with customers and the larger agricultural community. This allows farmers to innovate and adapt in a fast changing business.

DISCUSSION

Modern media

Impact of internet in agriculture: The use of the internet in agriculture has transformed the sector, enhancing productivity and efficiency. Farmers now have instant access to a wealth of information, allowing them to stay updated on best practices, pest management and crop health. Precision agriculture has emerged, utilizing sensors, drones and satellite imagery to monitor field

conditions. This data shared *via* the internet, enables informed decisions about irrigation and fertilization leading to increased yields. Moreover, the internet facilitates market access through e-commerce platforms, allowing farmers to sell directly to consumers and research market prices. As farmers communicate through social media and online forums to exchange experiences and seek advice, networking and collaboration have also improved. With the use of online learning resources and training materials, farmers may enhance their skills by using new methods and technologies. Indian gardeners are very internet literate. According to Luqman et al., growers are already using a range of websites to obtain essential information on how to apply pesticides in their agricultural areas in an appropriate manner [12]. The most important information on agriculture and other related topics may be found online completed the study, demonstrating that research on the internet may also be used to determine the function of intermediaries [12,17,25]. Although communities in Bangladesh's development network initiative lacked instant access to the internet, staff assisted them in identifying their requirements. Growers contact the Pallitathya Krishi Resource and Information Center (KRIC) with user questions *via* their phones. Operators use the internet system in tandem to reply to producers experiencing agricultural challenges and attempt to resolve their issues. According to current surveys, 94% of Malaysian producers utilize the internet to receive agricultural information, while 85% get the most recent information through text messaging. Furthermore, mail and internet servers as well as projects for grower's applications have been developed in India and the center gives farmers access to the most recent agricultural news. In remote locations, network services are connected using cable. The percentage of producers who lack literacy and knowledge of computer systems ranges from 85%-92%. Additionally, grower trainers have been chosen to instruct growers in order to transmit knowledge *via* the internet. In this scenario, farmers would not think twice to learn new information about using online resources and about markets and pesticides [4,26]. Additionally, farmers may sell directly to customers and investigate market pricing to the internet's e-commerce platforms, which make it easier to access markets. As farmers communicate through social media and online forums to exchange experiences and seek advice, networking and collaboration have also improved. Farmers may improve their abilities by adopting new technology and techniques with the help of online education and training tools.

Impact of mobile phone in agriculture: The use of mobile phones in agriculture has revolutionized farming practices, enhancing productivity and connectivity for farmers. With instant access to vital information, farmers can receive real-time updates on weather forecasts, market prices and pest management through Short Message Service (SMS) alerts and mobile applications. They may use this knowledge to make well-informed decisions on planting and harvesting. Additionally, mobile phones allow for direct contact between suppliers and customers, which lessens the need for middlemen and improves the negotiating position on prices. Farmers may also use mobile devices to receive advisory services from agricultural groups, which enables them to consult experts on sustainable methods and crop management. Another trial was finished in Ghana, where fruit producers were given smartphones to connect with buyers, sell their crops in advance, interact with consumers and get feedback. Growers may easily communicate with customers directly using smartphones and they receive greater evaluations directly from customers and agents. Smartphones also provide growers another advantage. They get in touch with them immediately and inquire about their agricultural output pace rather than visiting the market. Farmers stand to benefit financially, energetically and temporally from this [12,27,28]. Small farmers now have access to small business facilities and information about the market and weather in remote locations with smartphones. Growers that use cellphones to go with customers and offer their products at higher prices see a significant increase in productivity and revenue [19]. Reports state that producers now have a framework in place for disseminating and receiving updated information on agricultural productivity in cellphones. Many farmers currently use cellphones for many purposes and one of their uses is to get the market price for agricultural products. However, some openly communicate with clients in order to sell their commodities and products at premium rates. Moreover, producers use SMS systems to receive the most recent information about weather conditions and chemicals on their farms [19,29]. Without a doubt, cell phones were utilized in a variety of community sectors, including farming, health, education and rural development to support the economic advancement of developed countries. Mass media has the impact of empowering farmer's organizations in isolated locations and providing them with market knowledge. Additionally, producers reach out to consumers in a variety of urban marketplaces, selling their produce wherever they discover a competitive price [17,30]. Smartphones and other wireless devices were also used in the weather and climate monitoring system, which has greatly improved the income, level of awareness and acceptance in many areas. Additionally, these new services need to be familiarized with the agriculture sector so that producers may receive the most up-to-date techniques for modernizing their farming practices and advancing rural areas. Staff members have provided the newest wireless multi-hop for several features to interact with each other and handle issues with agricultural and rural development by using ICTs without experiencing any discomfort [31,32].

Mass media plays a significant role in shaping various sectors of society and agriculture is no exception. The influence of mass media on agriculture is extreme, affecting everything from information dissemination to community building. This overview explores the multifaceted impact of mass media on the agricultural sector, highlighting its significance in modern farming practices. One of the primary functions of mass media is the dissemination of information. In agriculture, timely access to information is vital for farmers to make informed decisions. Mass media channels, including television, radio, newspapers and online platforms, provide farmers with essential updates on weather forecasts, market trends and agricultural practices. For instance, farmers can learn about the best planting times, pest control methods and crop management techniques through agricultural programs and news segments. This access to real-time information helps farmers optimize their operations and improve yields. Mass media serves as an educational tool, raising awareness about sustainable farming practices and environmental conservation. Documentaries, educational programs and articles can inform farmers about the importance of biodiversity, soil health and water conservation. By promoting sustainable practices, mass media encourages farmers to adopt methods that not only enhance productivity but also protect the environment. This educational aspect is important in encouraging a more responsible approach to agriculture, ensuring that farming practices are sustainable for future generations. The impact of mass media on agriculture is significant and multifaceted. By enhancing communication, education and community engagement, mass media plays a vital role in modernizing the agricultural sector. As technology continues to evolve, the influence of mass media in agriculture will likely expand, providing even more opportunities for farmers to thrive in an ever-changing landscape.

CONCLUSION

In conclusion, mass media is an indispensable tool for transforming agriculture by providing essential information, encouraging innovation and advocating for policy changes. The agriculture industry is greatly impacted by mass media, which gives farmers chances to enhance their farming methods. With the help of its real-time updates on market trends, weather predictions and agricultural methods, farmers are able to increase yields and streamline their operations. The media may also be used as a teaching tool to promote environmental preservation and sustainable agricultural methods. A responsible approach to agriculture is promoted *via* documentaries, educational programs and publications that educate farmers about biodiversity, soil health and water conservation. Mass media's impact on agriculture will probably grow as technology develops, giving farmers more chances to prosper in a constantly shifting environment. All things considered the mass media is extremely important in influencing many facets of society, including agriculture.

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