

Constraints in Access and Adoption of Agricultural Information through Digital media

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Abstract:

Digital media has immense potential to reach out to farmers with valuable agricultural information. However, there are complex factors that create barriers to effective dissemination of information and ideas. In the current information, digital media play a role of key medium for knowledge sharing between scientific research systems and farmers. Digital media make aware to the about various farm practices and latest technologies, but farmers face some difficulties while using digital media for agricultural information. The present paper discusses in depth the “Constraints in Access and Adoption of Agricultural Information through Digital media” using a survey research design to collect primary data through questionnaires distributed among respondents. The study highlights the importance of digital literacy, credible information sources, farmer-centric content, and interactive communities within social media platforms to enhance trust and practical adoption of innovation. Recommendations can be offered to promote more effective use of social media for agricultural knowledge sharing.

Keywords: Digital Media media, Agriculture, Access of Information, Constraints, Information dissemination

INTRODUCTION

In recent times, digital technology has become evident in almost all sectors, including agriculture. The use of Information and Communication Technology has increased labor efficiency and production in various industries. Agriculture, like other key economic sectors, is now widely using social media in many aspects. According to Daum (2020), social media has become a vital tool for farmers to manage information related to input parameters like water and labour.

Information access has been fundamental to driving progress in agriculture. With the widespread use of social media in recent years, platforms like Facebook, WhatsApp, Twitter, and dedicated agricultural applications have emerged as tools for the exchange of agricultural knowledge, practices, and market information (Weersink et al., 2018). Understanding the obstacles to the diffusion of agricultural knowledge through social media platforms is vital for empowering farmers and enhancing the role of technology in rural development. The advent of new media, particularly social media, has revolutionized the way agricultural information is disseminated and accessed.

Information and Communication Technologies (ICT) empower people by removing barriers of efficiency, place, and time. The growth of Internet technology has improved the understanding about innovative agricultural practices among farmers to rural areas. Digital media empower people, supports social growth, sustainable development, and improves farmers' lives. In agriculture, it helps tackle climate change and natural disasters. It ensures a stable water supply and food security. It is useful for managing hurricanes and droughts. It supports building local skills and sharing knowledge. Additionally, it combines traditional and modern farming methods. There is potential for technology to be used in rural areas to benefit farmers by accessing various resources and opportunities.

The main role of the extension service is to share knowledge, ideas, innovations, and technology related to farming with farmers and rural people. The International Food Policy Research Institute (IFPRI) highlights

the importance of agricultural extension in increasing productivity, ensuring food security, and promoting agriculture as a way to help poor communities grow economically (IFPRI, 2020).

BACKGROUND INFORMATION

Agriculture, as a key sector in the economy, faces many challenges including climate issues, food security, and the need for sustainable practices. The dissemination of information and knowledge is essential for empowering farmers and stakeholders to adopt practices that enhance productivity while ensuring sustainability. Farming is very important for India's economy and supports the lives of most people living in rural areas. Agricultural Extension Services that give important farming information, like how to grow crops better, use new technologies, get to markets, and farm sustainably, are key to improving how much food is produced and the well-being of farmers. In the past, these agricultural extension services were mostly given through government programs, NGOs, and direct contact. But now, social media is opening new paths for sharing the information. However, using social media to share farming advice comes with its own set of problems.

Social media stands as an important and interactive platform for connecting with a vast number of farmers and agricultural extension workers across the country, offering a dynamic space for the rapid exchange and scaffolding of information. Platforms such as Facebook, YouTube, Twitter, and various websites have become vital in bridging the gap between agricultural research (lab) and practical application (land), fostering a networked ecosystem where extension workers and farmers can interact seamlessly. As the backbone of India's economy, agriculture benefits immensely from the penetration of modern social media tools into rural households, enabling farmers to access agricultural knowledge right at their fingertips.

Appropriate communication mediums and strategies are required to bridge the defaults in communication (Shingi & Mody, 1976). Against this backdrop, the emergence of Social media in the agriculture sector is a transformative opportunity as it expands its reach in remote locations too (Deichmann et al., 2016).

Social media has emerged as a dynamic and influential tool for connecting countless farmers and agricultural extension officers, offering a platform for instant information exchange and support. In India, where agriculture plays a pivotal role in sustaining livelihoods, the accessibility of social media to farming households has revolutionized the way agricultural information is disseminated and utilized.

Social media has emerged as a potent tool in transforming agricultural communication, fostering a more connected and informed farming community. By addressing the challenges of digital literacy, language barriers, and content relevance, social media can play a pivotal role in advancing sustainable agricultural practices in India. This study highlights the significant potential of social media in facilitating the diffusion and adaptation of agricultural information, contributing to a more productive and resilient agricultural sector.

LITERATURE REVIEW

Agricultural Information and Knowledge Systems (AKIS) use new media to improve connections between research institutions, farmers, and agricultural extension services. This helps share information and technology more effectively, making these three sectors work together better. Research institutes set up small extension sections and committees and use mobile phones for easier communication. Social media helps bring new information and technologies to farming communities, improving their production, income, and living standards.

In Kerala, India, a study by Jensen (2007) showed that fishermen using mobile phones could reduce price differences, waste less, and keep prices consistent, benefiting both fishermen and traders. In Ghana, Kwadwo and Ayalew (2011) reported that a local company, Esoko, started Cocoa Link. This program gives cocoa farmers free information on farming practices, safety, disease prevention, and production through voice and SMS messages in their local language or English. In India, Reuters Market Light (RML) sends four SMS messages daily to farmers with updates on weather, crops, and market prices (Kwadwo and Ayalew, 2011). Mobile phones also help in other ways. For example, in Colombo, they help match production practices with export market needs (De Silva, 2008), and in Niger, grain traders use them to get price information from other markets (Aker, 2008).

A comprehensive review of existing literature reveals a growing recognition of the role of social media in agricultural extension. Studies have shown that platforms like Facebook and Twitter can significantly enhance farmers' access to information, market trends, and innovative farming techniques (Aker, J. C., & Mbiti, I. M., 2010; Klerkx, L., & Proctor, A., 2013).

RESEARCH METHODOLOGY

This study is based on survey method of research. A survey is mostly related to some specific individuals, organizations, firms, or the like. The totality of individuals, firms, organizations and other objects under study is called population. A survey which indicates every element of the population is known as a census. In this study, purposive sampling method has been used to select 170 farmers from Ayodhya region, Uttar Pradesh. The researcher has collected various issues related to extension using interview schedule from farmers using content from various social media, mainly Facebook, LinkedIn, Instagram, WhatsApp and Myspace etc. The listed items/issues were shown to various scholars of extension education, who read them and edited them for preparation of the interview schedule. This type of activity was done three times for the final interview schedule. This was practiced by conducting interviews with some respondents for pre-testing. Appropriate modifications were made as per the need of the study. Subsequently, data was collected through face-to-face interviews with the respondents. Statistical Package for Social Sciences (SPSS) was used to analyse the collected data. Many other techniques like frequency, percentage, pie chart, column diagram etc. were used to analyse the data for interpretation.

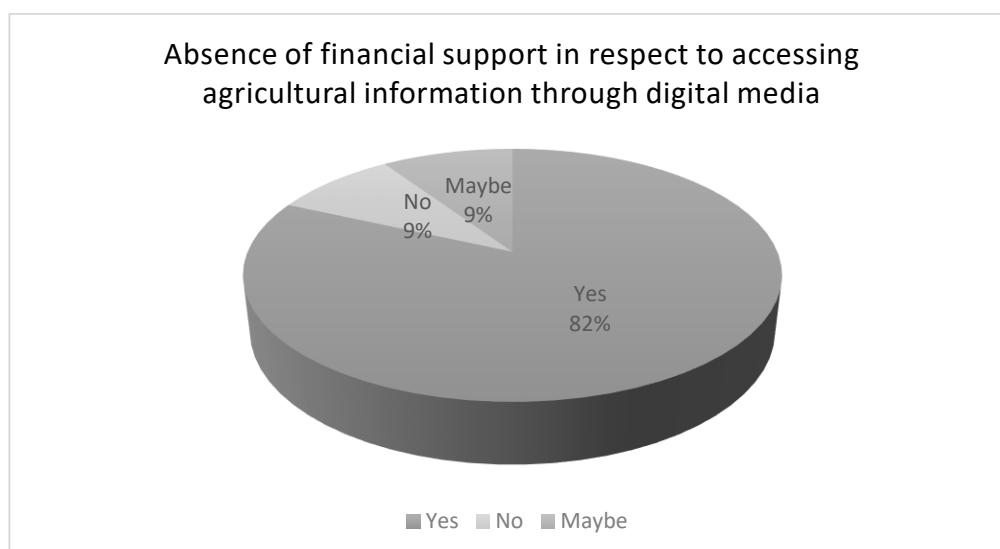
OBJECTIVES OF THE STUDIES

1. To Analyse the constraints that hinder farmers' adoption of agricultural information through social media.
2. To propose solutions to overcome the difficulties associated with employing social media for farming practices.

RESULTS AND DISCUSSIONS

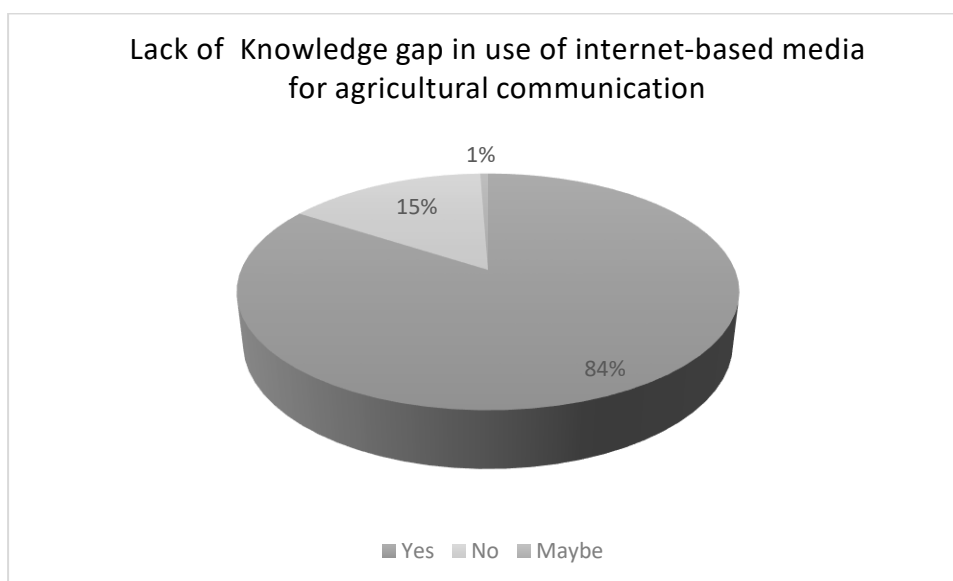
Constraints in Access of agricultural Information:

Era of new media, farmers often use social media to get new information for their farming, but due to various reasons they are unable to access the information. In the following pie chart, an attempt has been made to identify the obstacles in getting agriculture related information through social media.



In the above chart, social media is not able to reach out to farmers in getting financial assistance. The data shown shows that 82% of the farmers believe that there is a lack of financial assistance in relation to getting agricultural information through new digital media. 9% of the farmers do not have any kind of problem, whereas there are 9% farmers who have expressed only possibility regarding the lack of financial assistance in relation to getting agricultural information through new digital media.

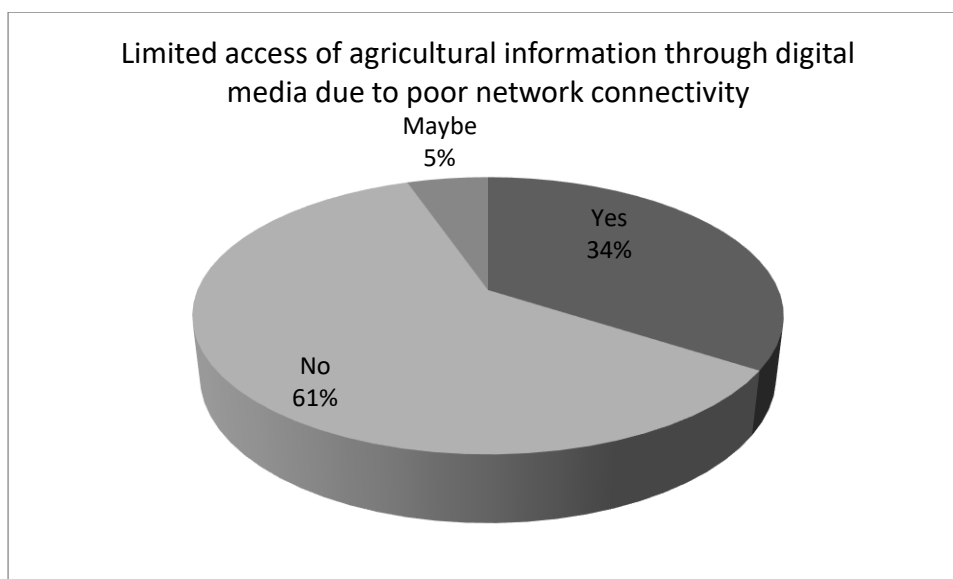
Hence, based on the facts, it can be said that most of the farmers believe that there is a lack of financial support in accessing agriculture related information through new digital media.



The above pie chart shows the lack of knowledge in using internet based media for agricultural communication. The data shows that 84% of farmers face problems due to lack of internet access. 15% of farmers do not face any problem in communication whereas only 1% of farmers have expressed only possibility due to lack of knowledge.

Hence, based on the facts it is clear that most of the farmers are not able to use new media for agricultural communication due to lack of knowledge.

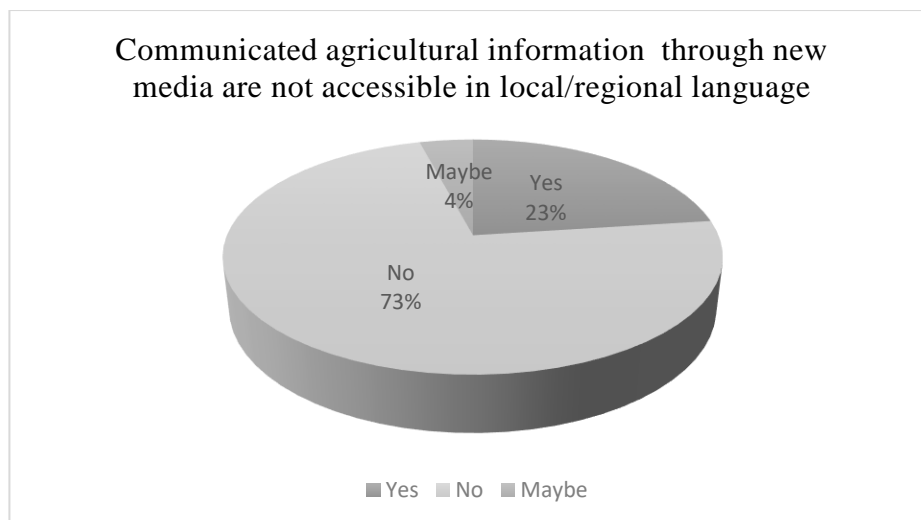
Accessibility to new media is further constrained by poor network connectivity in rural and remote regions. The inconsistency or complete absence of a stable internet connection makes it difficult for those in the agricultural sector to rely on new media for timely information and communication.



In the age of information revolution, every user has to face network problems. Farmers are also not an exception to this. The facts shown in the above chart show that 34% of the farmers face network problems. 61% of the farmers have no network problem, while 5% of the farmers have to face network problems sometimes.

So it is clear that only 34% of the farmers have network problems while maximum 61% of the farmers do not have network problems.

The effectiveness of new media is also compromised when the content is not available in local or regional languages. This lack of linguistic inclusivity can render communicated messages through new media platforms ineffective, as they fail to reach a wider audience that primarily communicates in their native dialects. An attempt has been made to show the language problem through the following chart.

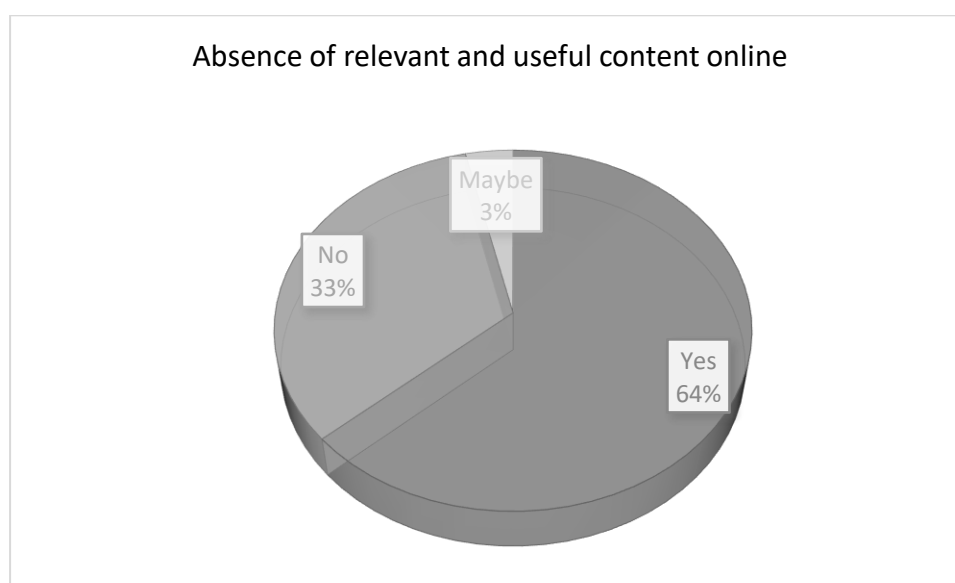


Facts shown in the above chart that 73% of the farmers believe that agricultural information communicated through new media is not available in local/regional language, whereas 23% of the farmers do not have any problem with the regional language, whereas 4% of the farmers have only expressed their possibilities regarding the language problem.

Therefore, it can be said that most of the farmers face problems in establishing communication through new media due to non-availability of content in regional language.

Constrain in Adoption of agricultural information communicated through new media

Despite the transformative potential of social media for agricultural practices, its adoption among the farming community remains inconsistent. Various factors contribute to this digital divide, impacting the effectiveness of social media as a tool for agricultural extension. The data shown in the chart below highlights the barriers to optimisation of agricultural information which is analysed below the chart.



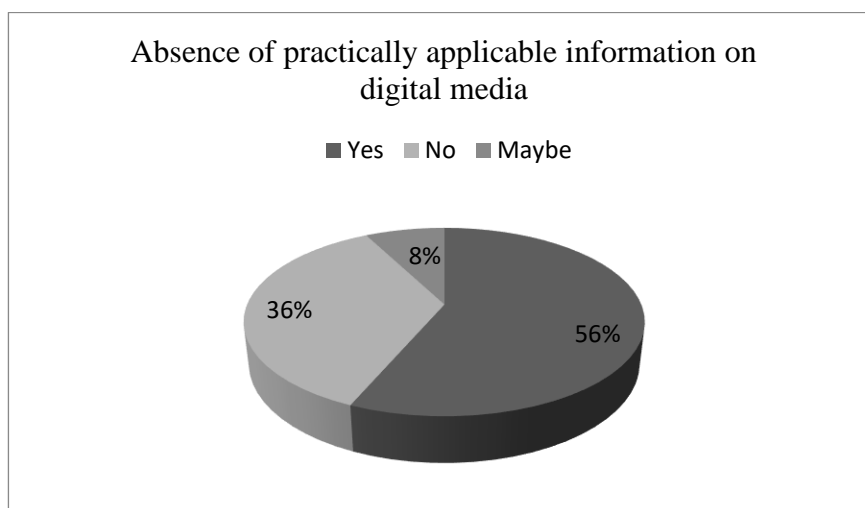
In the above chart, information has been obtained from farmers about the lack of relevant and useful online content related to agriculture. 64% farmers believe that in the age of media, there is a lack of online content,

while 33% farmers say that content is not enough for them and the remaining 3% farmers are still in a confused state.

So, on the basis of facts, it can be said that maximum 64% farmers lack useful online content.

The digital landscape often lacks content that is pertinent and beneficial for those in the field of agriculture. There's a pressing need for online resources that are directly applicable to the daily operations and challenges faced by farmers and agricultural professionals.

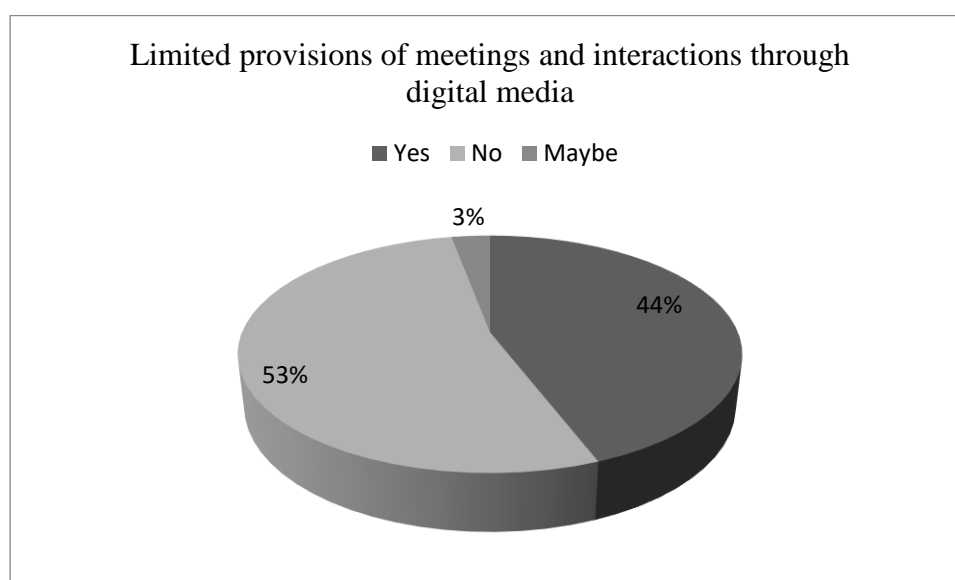
The chart below shows the lack of practically applicable information on the new media.



It is clear from the above facts that 56% of the respondents believe that there is a lack of information on social media or new media, while 36% of the respondents have an opposite opinion. Whereas 8% of the respondents have only expressed the possibility.

Thus, a maximum of 56% of the respondents accept the lack of practically applicable information on new media.

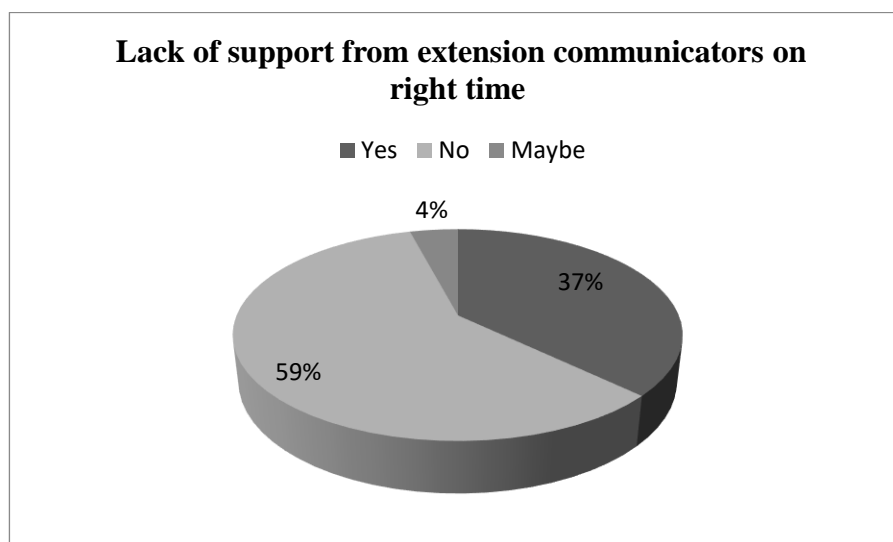
Through the following chart an attempt has been made to understand the possibility of meetings and discussions among the farming community through the new media.



The data shown in the above chart shows that 53% of the respondents answered negatively about the limited provision of meetings and interactions through new media, while 44% of the respondents answered “yes” to this question. 3% of the respondents still made assumptions based on possibilities.

Digital media platforms are not fully leveraging their potential to facilitate meetings and interactions among agricultural professionals. There's a gap in platforms that can host discussions, exchange of ideas, and support networks that are vital for community growth and problem-solving within the sector.

If the agrarian community receives the right information on time, the possibility of increasing their production capacity increases. With the help of timely information, farmers can increase the production of their crops by using fertilizers, seeds and pesticides. Keeping this in mind, information about this has been obtained from the farmers in the chart given below.



The data shown in the above chart shows that 56% of the farmers do not believe that there is lack of timely support from extension communicators while 37% of the farmers still believe that there is a lack. The remaining 4% of the farmers believe that it is maybe.

So on the basis of facts it can be said that maximum 56% respondents do not believe in the lack of support from extension communicators at the right time.

RESULTS

Preliminary findings suggest that social media platforms significantly enhance the dissemination of agricultural information, with a notable increase in awareness and adoption of sustainable practices among farmers who actively engage with these platforms.

Early findings show that farmers are interested in using social media to get farming information, but problems like not knowing how to use technology, not having good internet, and not finding the content relevant hold back its usefulness. There are also big differences in how much social media is used across different areas and by different groups of people, depending on things like age, education, and income.

CONCLUSION

Digital media has a lot of potential to improve how farming advice is shared in India. But, overcoming the identified challenges is essential to fully use this potential. Future research should look for new ways to solve these problems, including using advanced technology to check the quality of agricultural content and creating platforms that allow for direct conversations between farmers and experts. This research highlights the transformative potential of digital media in agricultural communication by facilitating the rapid spread of information, encouraging the adoption of sustainable practices, and fostering a community of informed stakeholders committed to sustainable agriculture.

Declaration: I declare that the research paper submitted here is based on the primary data. This is completely my original paper. If any quotation is taken, there is a reference to that author with due respect.

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