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Assessing the Utilization of Social Media Platforms by Farmers for Agricultural Practices in Cuddalore District of Tamil Nadu

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Abstract

Agriculture plays a crucial role in ensuring food security, sustainable development and poverty alleviation in developing nations. Despite being one of the largest agricultural producers, India faces low productivity due to a knowledge deficit among farmers as highlighted by the NPC (2006) report. With an extension agent-to-farmer ratio of 1:2879, traditional agricultural extension services struggle to reach all farmers. The rapid expansion of Information and Communication Technologies (ICTs) has created opportunities for digital solutions in agricultural extension. Social media in particular has emerged as a key tool for bridging the information gap between farmers and extension professionals. A study was conducted in Cuddalore District to analyze the utilization pattern of social media among farmers. Three blocks-Panruti, Kurinjipadi and Bhuvanagiri-were selected, covering nine villages with a sample size of 120 respondents. The findings revealed that most respondents belonged to the 36-45 age group and accessed agricultural information primarily through smartphones. WhatsApp was universally used with multimedia being the preferred format for communication. Farmers ranked WhatsApp as the most preferred platform for agricultural discussions and information sharing. A significant positive relationship was observed between family income, attitude towards ICT, innovativeness and perception of good agricultural practices with the extent of social media usage. However, poor network connectivity and low internet speed were the major constraints faced by farmers. The study highlights the growing role of social media in agricultural extension and its potential in enhancing knowledge dissemination among farmers.

Keywords: Social media; Farmers; Agricultural extension; ICT; Information dissemination

Introduction

Social media has emerged as a powerful tool for communication, information dissemination, and knowledge sharing across various sectors, including agriculture. Farmers, once reliant on traditional sources like extension services, print media, and peer networks are now increasingly adopting social media platforms to access real-time agricultural information. The rapid growth of internet accessibility, affordable smartphones and digital literacy has enabled farmers to engage with social media for various agricultural purposes, including market updates, weather forecasts, pest and disease management, and innovative farming techniques.

Social media platforms such as Facebook, WhatsApp, YouTube, Twitter, and Telegram have transformed the way farmers acquire and exchange knowledge. They provide a space for virtual communities where farmers can discuss challenges, seek expert advice and share their farming experiences. Studies indicate that a significant proportion of farmers use social media to stay updated on government schemes, agricultural policies, and financial support programs.

Moreover, the interactive nature of these platforms encourages participatory learning, peer-to-peer discussions and networking among farmers, agricultural experts and agribusiness professionals. The utilization pattern of social media among farmers varies based on factors such as age, education level, digital literacy and access to technology. While younger farmers are more active on social networking sites and video-sharing platforms, older farmers often rely on instant messaging applications for agricultural updates. Additionally, the use of social media differs across regions, depending on internet penetration and infrastructural development.

This article explores the patterns of social media usage among farmers, the purposes for which they utilize these platforms, and the impact of social media on agricultural decision-making. Understanding these utilization patterns will help policymakers, extension workers and agribusiness stakeholders design more effective digital interventions to enhance agricultural productivity and rural development.

Materials and methods

This study examines the utilization pattern of social media platforms among farmers in Cuddalore District, focusing on their preferences, motivations and information-seeking behaviours. A descriptive research design with an ex post facto approach is adopted to analyze farmers' engagement with social media for agricultural purposes. The study utilizes both primary and secondary data collection methods. Primary data is gathered through a semi-structured questionnaire and personal interviews administered to 120 farmers, while secondary data is sourced from government reports and existing literature.

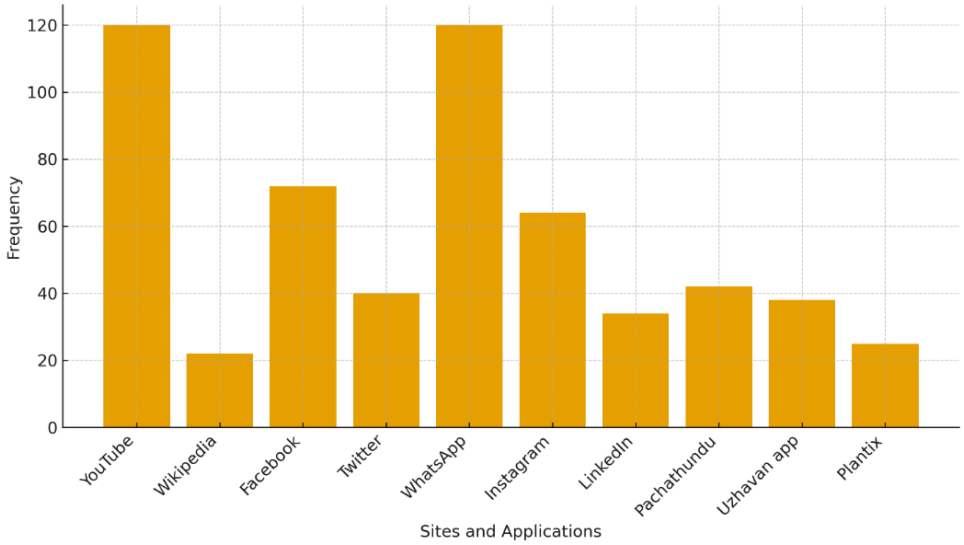

Fig. 1. *Frequency Distribution of Social Media and Agricultural Application Utilization by Farmers in Cuddalore District*

Table 1. Distribution of respondents according to their social media usage (n=120)

S. No.	Sites and Applications	Frequency	Percentage
1.	YouTube	120	100.00
2.	Wikipedia	22	18.33
3.	Facebook	72	60.00
4.	Twitter	40	33.30
5.	WhatsApp	120	100.00
6.	Instagram	64	53.30
7.	LinkedIn	34	28.33
8.	Pachathundu	42	35.00
9.	Uzhavan app	38	31.66
10.	Plantix	25	20.83

The semi-structured questionnaire included close-ended, open-ended and Likert-scale items covering socio-demographic characteristics, patterns of social media usage, preferred platforms, purposes of use and constraints experienced. Various socio-demographic factors, such as age, education, farm size, cropping patterns and family structure, along with the extent of social media usage are measured using established scoring procedures. The data is analysed using percentage analysis and frequency distribution to assess social media usage levels among farmers. The study aims to provide insights into farmers social media adoption patterns and recommend strategies for enhancing digital engagement in the agricultural sector.

Results and Discussion

The following profiles represent the utilization pattern of social media, as reported by farmers during the survey. The data reveals varying levels of engagement in social media platforms for agricultural purposes. The results are displayed in the Table 1.

Conclusion

The analysis of social media utilization patterns among farmers in Cuddalore District highlights a significant reliance on certain platforms for information and communication. The findings indicate that YouTube and WhatsApp are the most widely used platforms, with 100% adoption among the respondents, reflecting their effectiveness in delivering agricultural content. Facebook (60%) and Instagram (53.3%) also see substantial usage, suggesting that visual and interactive content plays a crucial role in farmers' engagement. However, platforms like Wikipedia (18.33%), LinkedIn (28.33%), Uzhavan app (31.66%) and Plantix (20.83%) have comparatively lower adoption rates. This indicates a need for awareness campaigns and training programs to enhance the usage of specialized agricultural apps that provide real-time weather updates, pest management solutions, and expert advice. Overall, the study emphasizes the necessity of leveraging popular social media channels while also promoting the adoption of less-utilized yet highly beneficial platforms. By tailoring content and outreach strategies, agricultural extension services can optimize social media for knowledge dissemination and decision-making support among farmers.

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Author Contributions

KP and MN conceived the concept, wrote and approved the manuscript.

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Availability of data and materials

Not applicable.

Competing interest

The authors declare no competing interests.

Ethics approval

This study was conducted in adherence to ethical research practices. Informed consent was obtained from all participants, ensuring their voluntary participation and the confidentiality of their responses. The research respected the cultural and social sensitivities of the farmers in Cuddalore district and complied with institutional and governmental ethical guidelines. All efforts were made to maintain transparency and integrity throughout the research process, ensuring that participants' rights and privacy were protected at all times.

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