Panauti Journal
Volume 3, 2025
DOI: https://doi.org/10.3126/panauti.v3i01.83977 ISSN: 2990-7888 (Print) 2990-7896 (Online)

Role of Social Media in Agricultural Knowledge Dissemination: Perspectives from Tharu Farmers Residing in Tikapur Kailai, Nepal

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Abstract

Social media integration into agricultural operations has emerged as a transformative force in agricultural development, with Nepalese farmers increasingly adopting these platforms. This study assesses the role of social media in agricultural knowledge dissemination among Tharu farmers in Tikapur (Block 32), Kailali District, Sudurpashchim Province, Nepal, using a descriptive and explanatory research design with cross-sectional survey methods. Data were collected from 50 participating farmers via self-administered semi-structured questionnaires to evaluate adoption rates, platform preferences, and perceived utility. Analysis through MS Excel revealed varied digital engagement: while most respondents regularly use social media, Facebook, YouTube, and WhatsApp dominate the digital landscape, with Twitter and LinkedIn showing minimal uptake. Farmers expressed mixed perceptions, ranging from optimism to skepticism, about social media's impact on agricultural practices. Findings indicate that farmers primarily use these platforms for information sharing and problem-solving rather than commercial applications, highlighting untapped economic potential. To maximize benefits, the study recommends that local governments implement digital literacy programs, develop localized agricultural content in native languages, improve rural digital infrastructure, and foster public-private partnerships to create farmer-friendly marketplaces—all while integrating these initiatives with traditional knowledge systems to empower smallholder farmers. The study implies that policies enhancing digital literacy, localized content, and infrastructure are key to leveraging social media for Tharu farmers' agricultural development.

Keywords: Tharu farmers, communication, digital extension, social media

Manuscript Received	Final Revision	Accepted
20 June, 2025	28 August, 2025	30 August, 2025

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1. Introduction

In recent years, the swift proliferation of social media has transformed global communication, networking, and information-sharing dynamics. Initially regarded as an urban-centric phenomenon, its infiltration into rural regions—especially within agricultural communities—has gained notable significance (Barber et al., 2019). This transition offers a distinct opportunity to analyze the impact of digital platforms on conventional agricultural methods and rural economies. Farmers globally are utilizing social media to share knowledge, deliberate on best practices (Gupta & Jain, 2018), and obtain real-time market information as digital connectivity expands (Khan et al., 2019).

Social media comprises various interactive online platforms that enable the creation, sharing, and curation of user-generated content (Davis, 2016). Platforms like Facebook, YouTube, WhatsApp, and Instagram function as essential mediums for communication, collaboration, and commerce. In 2023, roughly 4.7 billion individuals—almost 60% of the worldwide population—engage with social media, predominantly utilizing messaging and social networking platforms (Dollarhide, 2024). These platforms differ in structure, user demographics, and functionality, yet they all aim to promote digital interaction (Bite et al., 2017).

In agriculture, social media functions as a potent instrument for networking, marketing, and the dissemination of knowledge. Agricultural producers can engage with colleagues, extension services, and purchasers, transcending geographical limitations and improving market accessibility (Varner, 2018). Research underscores its significance in enhancing brand awareness, customer engagement, and revenue generation within the agribusiness sector (Uitz, 2012). Nonetheless, obstacles including restricted internet access, deficiencies in digital literacy, and apprehensions regarding information reliability impede extensive adoption (Acheampong & Kofi, 2019; Al-Shaikh, 2023).

In Nepal, social media usage has seen substantial growth. There were approximately 13.5 million active social media users, accounting for about 43.5% of the total population. This significant penetration underscores the increasing relevance of digital platforms in various sectors, including agriculture (Gyawali, 2022). Despite its global reach, the impact of social media on marginalized farming communities, such as the Tharu people of Block 32, Tikapur, Nepal, remains understudied. While digital platforms offer potential benefits—such as improved agricultural techniques and market linkages—their actual utilization and perceived value among Tharu farmers are unclear. Socioeconomic factors, technological barriers, and cultural preferences may influence adoption rates, necessitating further research.

This study aims to assess the role of social media in shaping agricultural knowledge dissemination within the Tharu community of Tikapur, Kailali. By analyzing usage

patterns, perceived benefits, and adoption challenges, the research aims to bridge existing knowledge gaps and inform policy interventions. The findings could guide agricultural extension programs, digital literacy initiatives, and rural development strategies tailored to the needs of Tharu farmers. Ultimately, this study seeks to empower the community by exploring how social media can enhance productivity, sustainability, and market integration in a rapidly evolving digital landscape.

2. Methodology

The research was carried out in Samitipur, Block 32 of Tikapur, situated in the Kailali district of Nepal's Far Western Province. Block 32 is situated at 28.5368° North latitude and 81.1181° East longitude, with an elevation of 156.04 meters above mean sea level, and is defined by a tropical climate. A descriptive and explanatory research design was utilized, accompanied by a cross-sectional survey strategy. The study's target population comprised the Tharu farming community in Samitipur. A total of 50 farmers were chosen through simple random sampling to examine their perceptions of the influence of social media on agriculture.

Data were gathered utilizing semi-structured questionnaires. A Likert scale was utilized to assess variables including the frequency of social media usage and its perceived influence on agricultural practices. This scale is extensively utilized for assessing attitudes, perceptions, and opinions on particular subjects. The gathered data were encoded, inputted, and analyzed utilizing Microsoft Excel. Excel was selected for its user-friendliness and capacity to conduct fundamental data analysis, encompassing chart generation, data input, and shape modification. Descriptive statistics, including frequencies, percentages, and visual representations (charts and diagrams), were employed to analyze the socio-demographic and agricultural characteristics of the respondents, encompassing age, gender, educational attainment, land holdings, and additional factors.

To analyze and prioritize the purposes for which farmers use social media, the study further applied a forced ranking scale. This method enabled the quantification of farmers' preferences by calculating an index value of importance using the following formula.

$$Iimp = \sum si * fi / N$$

Iimp = Index value of importance

$\sum$ = Summation

S i = Scale value of i th intensity

f i = Frequency of i th response

N = Total number of respondents

The following section presents findings under the headings: *Tharu Community and the Use of Social Media*, *Characteristics of the Farmers*, *Social Media Profile and Frequency of Social Media App Used*, *Perception of Farmers Regarding the Effectiveness of Social Media in Agriculture Use*, *Uses of Social Media*, and *Social Media Use on Information Accessibility and Knowledge Acquisition*.

3. Findings

3.1 Tharu Community and the Use of Social Media

The word *shavir*, meaning a Theravada Buddhist, is most likely the source of the word थारु (*thāru*). Located in central Nepal's Terai region, the Tharu people believe they are native to the land and descended from Gautama Buddha. In western Nepal, the Rana Tharu people identify with the Thar Desert and believe they are descended from the Rajputs who moved into the forests in the sixteenth century (Chaudhary, 2024).

According to Nepal Tourism Board (2025), the Tharu are the majority ethnic group of the Terai. They extend westward into the foothills of Kumaon and throughout the plains of Nepal. Most likely, the Tharu were the first people to inhabit the Terai. The Rana Tharu people of western Terai claim Rajput origin, despite generally having Mongoloid features and a dark-brown complexion. The 2023 National Population and Housing Census (NPHC) reports that there are 1,807,124 people belonging to the Tharu community, making up 6.2% of the total population of Nepal. Among them, 31,821 Tharu people live in Tikapur Municipality, accounting for roughly 41.82% of its population (National Statistics Office, 2023). The Tharu community, mainly residing in Tikapur Municipality No. 1, Samitipur, in rural landscapes, represents an important population structure in the country's agricultural sector.

Known for their rich cultural heritage and deep-rooted connection with the land, Tharu farmers play a vital role in maintaining agricultural production and food security in the region. Amid the evolving digital landscape, Tharu farmers are increasingly using social media platforms to obtain agricultural information, share knowledge, and communicate with peers.

3.2 Characteristics of the Farmers

The demographic attributes of the surveyed farmers, encompassing age categories, gender distribution, religious affiliation, and educational attainment, are summarized in Table 1. This demographic profile provides critical contextual insights regarding the study population, emphasizing significant social and cultural factors that could influence technology adoption trends in agricultural communities. These variables function as essential baseline indicators for evaluating farmers' perceptions of and utilization patterns regarding social media platforms in their agricultural practices.

Table1: Characteristics of the Respondents

Category	Response	Frequency	Percentage
Age	20-30	10	20.00
	30-40	16	32.00
	40-50	13	26.00
	>50	11	22.00
Gender	Male	22	44.00
	Female	28	56.00
Religion	Hinduism	44	88.00
	Christianity	6	12.00
Education attainment	Illiterate	8	16.00
	Primary	9	18.00
	Secondary	13	26.00
	Intermediate	15	30.00
	Bachelors	4	8.00
	Masters	1	2.00
Total		50	100.00

Table 1 depicts the demographic distribution of the respondents. The data indicate that middle-aged individuals (30–50 years) represent the largest segment of the sample, signifying their preeminent presence in the study. Younger respondents (ages 20–30) constitute a smaller proportion. The percentage of respondents aged over 50 is almost equivalent to that of the 20–30 age group, indicating a relatively balanced distribution between these two age categories.

Women comprise 56% of the sample, indicating a majority, whereas men account for 44%, reflecting slightly lower male participation. A significant majority—88% of participants—identified as Hindu, while merely 12% identified as Christian, indicating limited religious diversity within the sample. The educational attainment of respondents exhibited variability. A majority, 56%, attained a secondary to intermediate level of education. A minority—34%—were either illiterate or possessed only rudimentary literacy skills. Significantly, only 10% of respondents possessed a bachelor's or master's degree, reflecting a relatively low level of higher education within the community.

Thus, surveyed farmers were predominantly middle-aged, female, and Hindu, with most having attained secondary to intermediate education. Higher education levels were rare, and a notable proportion of respondents had low or no formal education, which may pose challenges for the adoption of technological developments in the community.

3.3 Social Media Profile and Frequency of Social Media App Used

The respondents' presence on social media platforms and the frequency of app usage provide insights into their digital engagement patterns and potential for adopting technology-based practices. Table 2 illustrates distinct preferences in social media platform usage among the farmers.

Facebook (Rank I) was identified as the most utilized platform, followed by YouTube (Rank II), TikTok (Rank III), WhatsApp (Rank IV), Twitter (Rank V), and LinkedIn (Rank VI). This ranking reflects a pronounced inclination towards visual and interactive platforms like Facebook and YouTube, which are presumably valued for their accessibility, content diversity, and user-friendliness. Conversely, professional networking platforms such as LinkedIn exhibited negligible engagement among respondents, indicating a lack of relevance or awareness in rural agricultural settings. These usage patterns offer valuable insights for formulating agricultural extension strategies that correspond with the digital behaviors and preferences of farmers—particularly by leveraging popular platforms for efficient content distribution and interaction.

Table 2 Frequency of Social Media App Used

Social Media App	1	2	3	4	5	6	Total	Rank
Facebook	25	4	2	1	0	0	32	I
YouTube	3	13	12	3	1	0	32	II
TikTok	2	10	9	7	3	1	32	III
WhatsApp	1	3	4	13	10	1	32	IV
Twitter	1	1	2	5	15	8	32	V
LinkedIn	0	1	3	3	3	22	32	VI

Table 2 indicates that 32 respondents (64%) reported possessing a social media profile. A notable minority—36% of the sample—reported that they did not utilize any social media platform. Among social media users, Facebook was the predominant platform, followed by YouTube. TikTok was ranked third, and WhatsApp was designated as the

fourth most utilized application. Conversely, Twitter and LinkedIn were the least employed platforms, with only a handful of respondents indicating any usage. Most farmers maintain social media profiles, predominantly using Facebook and YouTube, which is encouraging for leveraging these platforms in agricultural outreach and technology adoption.

3.4 Perception of Farmers Regarding the Effectiveness of Social Media in Agriculture Use

The farmers' perceptions of social media effectiveness in agriculture have been categorized across five levels: Highly Effective, Effective, Moderately Effective, Ineffective, and Unknown (Table 3). The distribution reveals divergent views, with some farmers recognizing the agricultural value of social media, while others remain skeptical or uncertain about its utility. These varying perspectives underscore the complex adoption dynamics of digital tools in farming communities, where perceived effectiveness significantly influences technology uptake.

Table 3 Perception of farmers regarding the effectiveness of Social Media in Agriculture Use

Indices	Highly Effective	Effective	Moderately Effective	Ineffective	Unknown
Response Frequency	5	10	10	7	18

Table 3 illustrates a varied spectrum of perceptions among respondents concerning the efficacy of social media in agricultural practices. Twenty-five respondents, categorized as Highly Effective, Effective, and Moderately Effective, conveyed a favorable perception, asserting that they believe social media contributes positively to agriculture. Conversely, seven respondents deemed social media ineffective, indicating that they perceive minimal or no influence of digital platforms on their agricultural practices.

A significant segment of the sample—18 respondents—was classified as Unknown, signifying insufficient experience or uncertainty regarding the role of social media in agriculture. The findings indicate a diverse perspective within the agricultural community: while many acknowledge the potential of social media in farming, others are either skeptical or lack awareness.

3.5 Uses of Social Media

The farmers' primary uses of social media in agriculture include information seeking (I) and sharing (II), which dominate, while commercial uses such as buying/selling (IV) and branding (VI) are less common. The results highlight social media's stronger role in knowledge exchange than in agricultural marketing (Table 4).

Regarding farmers' goals and preferences for using digital platforms in agricultural activities, the ranking of characteristics pertaining to social media use in agriculture provides valuable insights into their priorities and engagement patterns.

Table 4 Ranking on Use of Social Media

Categories	Rank
Information Seeking	I
Sharing Information	II
Solution Seeking	III
Selling/buying Agri-commodity	IV
Knowing Market Rates	V
Branding of Agri-commodity	VI

Table 4 shows that at the top of the list, "Information Seeking" reflects the importance farmers place on using social media to find pertinent agricultural information. "Sharing Information," which comes next, emphasizes the value of knowledge sharing and peer learning within the agricultural community. The fact that "Solution Seeking" ranks third indicates farmers' reliance on social media to solve problems and address issues related to agriculture.

"Buying/Selling Agri-commodities" recognizes the potential of social media for transactions, but it lags behind the functions outlined above, highlighting the predominance of problem-solving and information exchange. "Branding of Agri-commodities" and "Market Rates" are ranked lower.

3.6 Social Media Use on Information Accessibility and Knowledge Acquisition

The prevalent use of social media, especially platforms like Facebook and YouTube, is encouraging for enhancing information accessibility and knowledge acquisition among farmers in the community. The divergent perspectives among farmers regarding social media's role in agricultural information dissemination are analyzed below in Figure 1.

Figure1 Farmers' perception of Social Media use on Information Accessibility

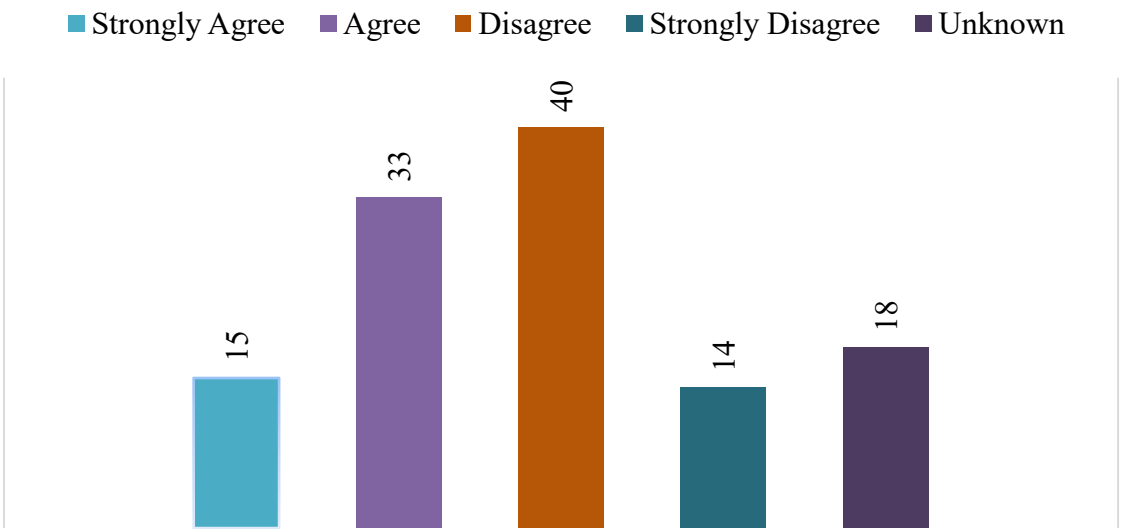

Figure 1 reveals that most respondents disagreed with the assertion that social media facilitates information accessibility and knowledge acquisition in agriculture. This indicates a degree of skepticism or discontent regarding the efficacy of digital platforms in providing pertinent agricultural information. A significant number of respondents concurred, indicating an acknowledgment of the potential advantages of social media in improving access to agricultural knowledge and best practices.

A notable proportion of participants categorized themselves as "Strongly Disagree," indicating a distinctly unfavorable view of social media's influence in this area. This group may be affected by factors such as digital illiteracy, concerns regarding misinformation, or a deficiency of pertinent content in local languages. A segment of respondents selected the "Unknown" category, signifying ambiguity, indecision, or inadequate familiarity with social media as an agricultural instrument.

4. Discussions of Findings

The function of social media in the dissemination of agricultural information is characterized by both potential and ongoing challenges. This research emphasizes that although "information seeking" was identified as the primary use of social media by respondents, numerous farmers continue to doubt its overall effectiveness. This disparity between potential and perceived value reflects larger systemic obstacles. A significant portion of participants opposed or strongly opposed the idea that social media facilitates agricultural knowledge acquisition, reflecting apprehensions regarding digital illiteracy, skepticism toward online content, and the lack of information in local

languages. The findings align with Kumara & Jahanara (2024), who indicated that although the utility of social media is acknowledged theoretically, practical constraints—particularly concerning trustworthiness and usability—impede its effectiveness.

Notwithstanding these reservations, a portion of respondents indicated moderate to high satisfaction levels with social media platforms, consistent with the findings of Sandeep et al. (2022). Their research highlighted that platforms with visually appealing and user-friendly interfaces are more likely to cultivate favorable attitudes among farmers. This underscores the essential importance of design and accessibility in influencing users' perceptions of value.

The functional hierarchy of social media platforms offers insights into user behavior and preferences. Facebook and YouTube lead the rankings due to their multimedia functionalities and extensive reach in rural areas. These platforms allow farmers to access a variety of content—videos, live demonstrations, and vernacular discussions—that facilitate decision-making. Conversely, WhatsApp, despite its lower ranking for formal information retrieval, is essential for community-level peer exchanges, especially via trust-based group interactions. Research in India and Nepal confirms WhatsApp's effectiveness in facilitating informal, yet pertinent, knowledge transfer at the grassroots level (Balaji & Kavaskar, 2024; Bohara & Gurung, 2025).

Socio-economic and demographic factors additionally influence the efficacy of social media in agriculture. Madhushekar et al. (2024) identified strong positive correlations between social media usage and variables including educational attainment, scientific orientation, income, and prior exposure to digital platforms. Comparable patterns manifest in Nepal: younger, technologically adept farmers possessing at least a secondary education are more inclined to employ mobile applications and social media for agricultural guidance and market insights (Tiwari et al., 2024). In contrast, older farmers and those with limited education exhibit reduced adoption rates, as demonstrated in a study in Rishing Rural Municipality, where many farmers possessed mobile phones but used them solely for basic communication rather than accessing agro-advisory content (Bohara & Gurung, 2025).

Thus, the findings indicate that while social media holds significant potential for agricultural information dissemination, its effectiveness within the Tharu community is constrained by factors such as digital illiteracy, language barriers, and trust issues. Platforms like Facebook and YouTube are preferred among Tharu farmers for formal knowledge acquisition, whereas WhatsApp remains vital for informal peer-to-peer exchanges. Overall, socio-economic and demographic factors, particularly age and education, strongly influence farmers' adoption and use of social media for agricultural purposes.

5. Conclusion and Policy Implications

This study concludes that farmers primarily engage with social media platforms for basic agricultural purposes, such as information sharing and problem-solving, rather than for commercial applications, indicating untapped potential for economic empowerment through digital tools. The preference for certain platforms reflects farmers' value for user-friendly interfaces and practical, multimedia content that aligns with their daily agricultural needs. However, varying perceptions about social media's effectiveness highlight challenges in ensuring reliable information flow and building trust in digital solutions. The continued digital exclusion of some community members underscores persistent barriers that must be addressed.

To maximize the benefits of social media in agricultural practices, local government authorities must enhance digital literacy, develop locally relevant agricultural content, improve digital infrastructure, and create pathways for farmers to transition from information consumers to active participants in digital marketplaces. Extension services and policymakers should focus on integrating these digital tools with traditional farming knowledge systems to create sustainable, farmer-centric solutions.

Overall, the study highlights the transformative potential of social media in agriculture when implemented through culturally appropriate, needs-based strategies. Future efforts should focus on developing inclusive digital ecosystems that support both the technological and socio-economic needs of smallholder farmers, ultimately contributing to more resilient and connected agricultural communities.

References

Acheampong, K., & Kofi, N. O. (2019). Digital divide: Internet access, digital literacy and attitudes towards ICTs among university students in Ghana. *Library Philosophy and Practice, 1781*.

Al-Shaikh, M. S., Ahmed Issa Al-Gharagher, & Khalid Ali Alshohaib. (2023). Social media and its role in marketing agricultural products (A field study on small farmers in the Jordan Valley Area). *Studies in Systems, Decision and Control, 488*, 425–435. https://doi.org/10.1007/978-3-031-39158-3_41

Balaji, G., & Kavaskar, M. (2024). An analysis of farmer's perception towards WhatsApp as a farm technology dissemination tool. *Journal of Experimental Agriculture International, 46*(9), 330–335. https://doi.org/10.9734/jeai/2024/v46i92829

Barber, A. M., Jain, M. K., Liu, S., Ochieng, P. E., & Karanja, D. D. (2019). Mobile phone technology adoption for agricultural information services in Kenya: Results of a cluster randomized controlled trial. *Agricultural Economics, 50*(5), 559–570.

Bite, P., Balkrishna, B., Deshmukh, A., Bite, B., & Balkrishna. (2017). A study on role of social media in agriculture marketing and its scope. *Global Journal of Management and Business Research: E Marketing, 17*(1). https://globaljournals.org/GJMBR_Volume17/5-A-Study-on-Role-of-Social-Media.pdf

Bohara, A., & Gurung, Y. B. (2025). Digital literacy of rural farmers in western hills of Nepal: A case of Rishing Rural Municipality. *Asian Journal of Population Sciences, 4*(1), 45–59. https://doi.org/10.3126/ajps.v4i1.73904

Chaudhary, M. (2024, April 22). Tharu people. *Wikipedia*. https://en.wikipedia.org/wiki/Tharu_people

Davis, J. L. (2016). Social media. In *The international encyclopedia of political communication* (pp. 1–8). https://doi.org/10.1002/9781118541555.wbiepc004

Dollarhide, M. (2024, February 23). Social media: Definition, effects, and list of top apps. *Investopedia*. https://www.investopedia.com/terms/s/social-media.asp

Gupta, N., & Jain, M. K. (2018). Role of social media in agricultural extension: A case study of Uttarakhand, India. *International Journal of Information Management, 38*(1), 328–332.

Gyawali, K. P. (2022). Role of social media in commercial vegetable farming for rural development. *Saptagandaki Journal, 13*(1), 101–115. https://doi.org/10.3126/sj.v13i1.54949

Khan, G. F., Khan, H., Khan, M. A., & Ateeq, T. (2019). Adoption of social media marketing by agribusiness firms in Pakistan: A qualitative study. *Journal of Applied Communications, 103*(2), 40–50.

Kumara, R. (2024). Attitude towards the role of social media in disseminating agriculture information in East Champaran district of Bihar. *International Journal of Agriculture Extension and Social Development, 7*(9), 652–656. https://doi.org/10.33545/26180723.2024.v7.i9i.1117

Madhushekar, B. R., Rani, V. S., Padmaveni, C., Reddy, M. M., & Kumar, B. A. (2023). Analysis of farmer's perception and usage of social media in agriculture. *International Journal of Bio-Resource and Stress Management, 14*(12), 1646–1653. https://doi.org/10.23910/1.2023.4972a

Madhushekar, B. R., Rani, V. S., Padmaveni, C., Reddy, M. M., & Kumar, B. A. (2024). Effectiveness of agricultural information disseminated through mobile apps and social media. *International Journal of Bio-Resource and Stress Management*. https://doi.org/10.23910/1.2024.4990

National Statistics Office. (2023). *National population and housing census 2021: National report (Reprint)*. Government of Nepal. https://censusnepal.cbs.gov.np/results/files/result-folder/National%20Report_English.pdf

Nepal Tourism Board (2025). Tharu culture. Ntb.gov.np. https://ntb.gov.np/tharu-culture

Sandeep, G. P., Prashanth, P., Sreenivasulu, M. R., & Madavilata, A. (2022). Effectiveness of agricultural information disseminated through social media. *Indian Journal of Extension Education*, 186–190. https://doi.org/10.48165/ijee.2022.58244

Tiwari, B., Dumre, A., & Jaishi, M. (2024). Are farmers using mobile application for agro-advisory services: Evidence from Devchuli Municipality, Nawalparasi East. *Big Data in Agriculture, 6*(2), 147–151. https://doi.org/10.26480/bda.02.2024.147.151

Varner, J. (2018). Agriculture and social media. https://extension.msstate.edu/sites/default/files/publications/information-sheets/is1946.pdf

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