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Digital connectivity in agriculture: Profile and patterns of social media use among farmers

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Abstract

Social media has emerged as a transformative digital force, facilitating two-way communication and the exchange of user-generated multimedia content. In the agricultural sector, these tools provide a dynamic platform for information dissemination and connectivity among farmers. This study was conducted during 2023-2024 to examine the attitude towards social media and its utilization among farmers in the Guntur district of Andhra Pradesh. Employing an *ex-post facto* research design, the study utilized a multi-stage random sampling technique. Three mandals were selected from Guntur district, from which twelve villages were identified. Ten farmers using mobile phones for agricultural purposes were purposively selected from each village, resulting in a total sample size of 120 respondents. Data were collected via structured interview schedules and analysed using statistical tools, including frequency and percentage. The profile analysis revealed that (48.33%) of respondents belonged to the middle-age group (31-50 years). A significant portion were educated to high school level (33.33%), possessed high farming experience (44.17%) and held small landholdings (37.50%). Agriculture was the sole occupation for (55.83%) of the participants. The majority of farmers exhibited medium levels of social participation, mass media exposure, extension contact, information-seeking behavior, innovativeness, risk orientation, and scientific orientation.

Keywords: Social media, agriculture, digital literacy

Introduction

Social media has evolved from the basic human practice of interpersonal communication. As the need for quicker and more efficient exchange of information increased, continuous advancements in communication technologies led to the development of new digital platforms that facilitate interaction and information sharing. Social media is one such innovation that has gained widespread acceptance worldwide, enabling individuals to connect with others and exchange information through multiple online applications and platforms.

Social media is recognized as the most advanced form of communication technology, integrating features of mass communication with interactive two-way communication. The content shared on these platforms is largely user-generated, allowing individuals to actively participate in content creation and dissemination. These platforms function as interactive networks supported by information

and communication technologies (ICTs), made possible through the internet and modern telecommunication devices. Among all forms of communication technologies, social media has recorded the fastest rate of adoption. While radio took approximately 38 years and television about 13 years to reach 50 million users, the internet achieved this milestone in three years. In contrast, social media platforms such as Facebook reached 50 million users within a year, and Twitter achieved the same in just nine months. At present, social media is widely used by individuals across all age groups and sectors, significantly transforming conventional communication practices. Its popularity is largely attributed to its low cost, rapid dissemination capacity, and advancements in information technology. Globally, the number of social media users reached about 3.81 billion in 2020, with YouTube, Facebook, and WhatsApp emerging as the leading platforms in India. India has experienced rapid growth in internet usage, with a 40%

increase compared to the global average growth of 9%, making it one of the fastest-growing digital markets worldwide. Social media penetration in India stood at 14%, while user growth during 2016-2017 was around 40% (55 million), ranking second highest globally. These trends indicate a growing integration of social media into everyday life, including within the agricultural sector.

In agriculture, social media has emerged as an important tool for connecting farmers with experts, researchers, extension personnel, and fellow farmers across large geographical areas. It enhances communication, facilitates the flow of information, and strengthens agricultural innovation systems. Social media also improves the effectiveness of extension and advisory services by enabling timely and interactive dissemination of agricultural information.

In Andhra Pradesh, agricultural information is disseminated through social media by agricultural research institutes, state agricultural universities, government departments, mass media agencies, non-governmental organizations, and individual content creators. Numerous agriculture-related videos are available on YouTube in the Telugu language, and WhatsApp groups are commonly used at the field level for sharing information, discussing issues, and interacting with experts. These platforms have become an integral part of farmers' information-seeking behaviour by providing continuous access to relevant agricultural knowledge.

Materials and Methods

This study was conducted during 2023-2024 to examine the attitude towards social media and its utilization among farmers in the Guntur district of Andhra Pradesh. Employing an *ex-post facto* research design, the study utilized a multi-stage random sampling technique. Three mandals were selected from Guntur district, from which twelve villages were identified. Ten farmers using mobile phones for agricultural purposes were purposively selected from each village, resulting in a total sample size of 120 respondents.

The data from the respondents was collected with the help of an interview schedule. The data collected was analysed and interpretations were drawn based on results. The statistical techniques frequency, percentage, mean, and inclusive class interval method were followed to analyse data, and accordingly, respondents were classified into different groups.

Results and Discussion

The data was collected from the respondents on the selected profile characteristics were analysed, interpreted, and accordingly the following results and conclusion were drawn.

Age

The age of the farmer was measured as the number of completed years attained by them at the time of the interview. A perusal of Table 1 indicated that nearly half (48.33%) of the farmers were belonged to the middle age group, followed by old age (32.50%) and young age (19.17%).

Table 1: Distribution of farmers according to their age (n = 120)

S. No.	Age	Frequency	Percentage
1.	Young age (Up to 30 years)	23	19.17
2.	Middle age (31 to 50 years)	58	48.33
3.	Old age (Above 50 years)	39	32.50
	Total	120	100.00

The probable reason might be that young people migrate to nearby towns and cities for education and employment, leaving behind older and middle-aged individuals who depend on agriculture in the village. The result was in accordance with Naik, Tupsoundare, Singh and Jena *et al.*, who reported that the majority of the farmers belonged to the middle age group.

Education

It has been operationalized as the process that brings desirable changes in behaviour, knowledge, skill, attitude and action. It was observed from Table 2 that one-third (33.33%) of the farmers had high school education, followed by graduation (16.67%), intermediate (15.84%), secondary school (15.83%), primary school (10.83%), post-graduation (5%) and illiterates (2.50%).

Table 2: Distribution of farmers according to their education (n = 120)

S. No.	Education	Frequency	Percentage
1.	Illiterate	3	2.50
2.	Primary school	13	10.83
3.	Secondary school	19	15.83
4.	High school	40	33.33
5.	Intermediate	19	15.84
6.	Graduate	20	16.67
7.	Post-graduate	6	5.00
	Total	120	100.00

From the above data, it can be concluded that most of the farmers had education of secondary and above up to post-graduation and they practised farming after completion of their secondary education. The result of the study was in line with the findings of Pal and Singh.

Farming experience

It has been operationalized as the practical experience gained by the farmers in agricultural activities. It is evident from Table 3 that less than half (44.17%) of the farmers had high farming experience, followed by medium (38.33%) and low (17.50%) farming experience.

Table 3: Distribution of farmers according to their farming experience (n = 120)

S. No.	Farming experience	Frequency	Percentage
1.	Low farming experience (Up to 10 years)	21	17.50
2.	Medium farming experience (11 to 20 years)	46	38.33
3.	High farming experience (21 and above)	53	44.17
	Total	120	100.00

The probable reason for high to medium farming experience was that the majority of the farmers belonged to the middle and old age group so younger ones were not choosing farming as profession and it was continued by their parents and majority of the farmers had above and higher secondary level of education, with farming as their ancestral occupation. The present study was in line with the findings of Pal and Aldosari *et al.*

Land holding

It was the actual land owned by the family in acres. A perusal of Table 4 revealed that, more than one-third (37.50%) of the farmers had small land holding, followed by marginal (26.67%), semi medium (23.33%), medium (10%) and big (2.50%) land holdings.

Table 4: Distribution of farmers according to their land holding (n = 120)

S. No.	Land holding	Frequency	Percentage
1.	Marginal farmer (Up to 2.50 acres)	32	26.67
2.	Small farmer (2.51 to 5.00 acres)	45	37.50
3.	Semi-medium farmer (5.01 to 10.00 acres)	28	23.33
4.	Medium farmer (10.01 to 25.00 acres)	12	10.00
5.	Big farmer (More than 25.00 acres)	3	2.50
	Total	120	100.00

The reason might be due to conversion of agricultural lands into industries, real estates and ever-increasing population and also due to fragmentation of landholdings from one generation to other. The result was in accordance with the findings of Tupsoundare and Bhosale and Kadam.

Occupation

It has been operationalized as the act or work performed by the farmers to earn money. The data presented in Table 5 illustrated that more than half (55.83%) of the farmers engaged in only farming as an occupation, followed by 17.50% of the farmers were practising farming along with business, 12.50% of the farmers were practising farming in combination with livestock, 6.67% of the farmers engaged in farming with job, whereas 5% of the farmers engaged in farming with daily wage work and only 2.50% of the farmers were practising farming along with livestock and daily wage work.

Table 5: Distribution of farmers according to their occupation (n = 120)

S. No.	Types of occupation	Frequency	Percentage
1.	Farming only	67	55.83
2.	Farming + Daily wage work	6	5.00
3.	Farming + Livestock	15	12.50
4.	Farming + Livestock + Daily wage work	3	2.50
5.	Farming + Business	21	17.50
6.	Farming + Job	8	6.67
	Total	120	100.00

It was evident from the result that most of the farmers rely not only on farming but engaged in livestock and business

along with farming. The probable reason could be that the most of the farmers belonged to the middle and old age group and most of the farmers in the study area had secondary and above level of education and they could find employment in nearby cities. The present study was in line with the study of Kailash (2017) ^[8].

Annual income

It has been operationalized as the income generated from various sources in one year by the farmer at the time of the investigation. Data regarding the annual income of the farmers have been tabulated and presented in Table 6 that nearly three-fourth (73.33%) of the farmers had high annual income, followed by medium (17.50%) and low (9.17%) annual income.

Table 6: Distribution of farmers according to their annual income (n = 120)

S. No.	Annual income	Frequency	Percentage
1.	Low (Up to Rs.1,00,000)	11	9.17
2.	Medium (Rs.1,00,001 to Rs.2,00,000)	21	17.50
3.	High (Above Rs.2,00,001)	88	73.33
	Total	120	100.00

From the above data, it could be concluded that most of the farmers had high annual income (above Rs.2,00,001). It can also be noted that the economic condition of the farmers had improved and the farmers in the study area were engaged in other occupations along with farming and were not solely dependent on farming as a source of income. The result of the present study in corroborate.

Social participation

It has been operationalized as the degree of involvement of the farmers in terms of their membership or organization position in nine types of organization's. From Table 7 inferred that nearly three-fifth (59.17%) of the farmers had medium social participation, followed by low (25%) and high (15.83%) social participation.

Table 7: Distribution of farmers according to their social participation (n = 120)

S. No.	Social participation	Frequency	Percentage
1.	Low (<19.12)	30	25.00
2.	Medium (19.13 to 24.78)	71	59.17
3.	High (>24.78)	19	15.83
	Total	120	100.00
	Mean = 21.95	S.D = 2.83	

This trend may be because the farmer remained busy in their farming activities and less involved in social organisations. They were sparing much for farming activities rather than social activities. Some of the farmers had high social participation due to their involvement at village level institutions. Hence, it is desirable to encourage farmers to become members in social organizations through the development of voluntary organisations. The results of the present study in corroborate.

Table 8: Item wise analysis of farmers according to their social participation (n = 120)

S. No.	Particulars	Social participation					
		Regular		Occasional		Never	
		F	%	F	%	F	%
1.	Gram Panchayat	30	25.00	68	56.67	22	18.33
2.	WUA members	0	0.00	0	0.00	120	100.00
3.	PACS members	4	3.33	2	1.67	114	95.00
4.	FPO members	12	10.00	14	11.67	94	78.33
5.	Educational organisations	8	6.67	2	1.67	110	91.66
6.	Milk Producer society	9	7.50	3	2.50	108	90.00
7.	RBK AAB member	11	9.17	1	0.83	108	90.00
8.	FIG/CIG	0	0.00	1	0.83	119	99.17
9.	RMG	39	32.50	11	9.17	70	58.33

From the Table 8 concluded that 32.50% of the farmers had regular participation in RMG, followed by Gram Panchayat (25%), FPO members (10%), RBK AAB member (9.17%), Milk Producer Society (7.50%), Educational organizations (6.67) and PACS members (3.33%).

It also concluded that 56.67% of the farmers had occasional participation in Gram Panchayat, followed by FPO members (11.67%), RMG (9.17), Milk producer Society (2.50%), equal proportion of PACS members and Educational Organizations with 1.67% each, equal proportion of RBK AAB member and FIG/CIG 0.83% each.

Cent% of the farmers never had participation in WUA, followed by FIG/CIG (99.17%), PACS members (95%), Educational organizations (91.66%), equal proportion of Milk Producer Society and RBK AAB member with 90% each, FPO members (78.33%), RMG (58.33%) and Gram Panchayat (18.33%).

Mass media exposure

It has been operationalized as communication that reach and influence large number of people within a short time. It was observed from Table 9 that slightly less than two-third (64.17%) of the farmers had medium mass media exposure, followed by high (18.33%) and low (17.50%) mass media exposure.

Table 9: Distribution of farmers according to their mass media exposure (n = 120)

S. No.	Mass media exposure	Frequency	Percentage
1.	Low (<22.30)	21	17.50
2.	Medium (22.31 to 31.90)	77	64.17
3.	High (>31.90)	22	18.33
	Total	120	100.00
	Mean = 27.10	S.D = 4.80	

From the above results, it could be inferred that most of the farmers belonged to medium mass media utilization category. The most predominant mass media among farmers were mobile phones and television. The result indicated that mass media exposure of the farmers should be considered as an important factor for motivating them to access various information sources for improvement of their farming practices. The result of the present study was in corroborated.

Extension contact

It has been operationalized as the degree to which the farmers-maintained contact with the extension agencies or

personnel from formal or informal sources. It was observed from Table 10 inferred that slightly less than two-third (64.17%) of the farmers had medium extension contact, followed by low (19.17%) and high (16.66%) extension contact.

Table 10: Distribution of farmers according to their extension contact (n = 120)

S. No.	Extension contact	Frequency	Percentage
1.	Low (<9.84)	23	19.17
2.	Medium (9.85 to 13.66)	77	64.17
3.	High (>13.66)	20	16.66
	Total	120	100.00
	Mean = 11.75	S.D = 1.91	

The result implied that most of the farmers in the study area had good contacts with various extension professionals working in the area and also having interest in participate in the extension activities to gather latest information and to learn about usage of Social Media applications, it would be beneficial for them to get access to various information sources and meet their information needs. The results of the present study.

Information seeking behaviour

It has been operationalized as different formal and informal information sources other than Social Media sites and applications being used by the farmers for seeking information. The results shown in the Table 11. indicated that, less than two-third (61.67%) of the farmers had medium level of information seeking behaviour, followed by low (25%) and high (13.33%) level of information seeking behaviour.

Table 11: Distribution of farmers according to their information seeking behaviour (n = 120)

S. No.	Information seeking behaviour	Frequency	Percentage
1.	Low (<13.73)	30	25.00
2.	Medium (13.74 to 18.20)	74	61.67
3.	High (>18.20)	16	13.33
	Total	120	100.00
	Mean = 15.97	S.D = 2.24	

The result implied that, most of the farmers had medium information seeking behavior, this phenomenon would be due to their greater exposure to mass media. The results of the present study were in accordance.

Innovativeness

It has been operationalized as the degree to which an individual adopts new ideas relatively earlier than others in their social system. From the Table 12 indicated that slightly more than three fourth (75.84%) of the farmers had medium innovativeness, followed by high (13.33%) and low (10.83%) innovativeness.

Table 12: Distribution of farmers according to their innovativeness (n = 120)

S. No.	Innovativeness	Frequency	Percentage
1.	Low (<14.57)	13	10.83
2.	Medium (14.58 to 19.51)	91	75.84
3.	High (>19.51)	16	13.33
	Total	120	100.00
	Mean = 17.04	S.D = 2.47	

The observed trend might be due to the fact that, most of the farmers had high extension contact with extension scientists and other extension workers for getting the information about new form technology. By this majority of the farmers were quite earlier in adopting the innovations than the other farmers in a social system. The results of the present study were in corroborate.

Risk orientation

It has been operationalized as the willingness of farmers to adopt and use of Social Media for agricultural information despite potential uncertainties. A glance at the Table 13 revealed that less than half (45.83%) of the farmers had medium risk orientation, followed by high (28.34%) and low (25.83%) risk orientation.

Table 13: Distribution of farmers according to their risk orientation (n = 120)

S. No.	Risk orientation	Frequency	Percentage
1.	Low (<17.03)	31	25.83
2.	Medium (17.04 to 19.57)	55	45.83
3.	High (>19.57)	34	28.34
	Total	120	100.00
	Mean = 18.30	S.D = 1.27	

This might be due to the reason that, most of the farmers had small land holdings and their condition were mediocre. Medium level of extension contact and involvement in subsidiary occupation by most of the farmers also might had prevented them from taking much risk in farming. The results of the present study were in corroborate.

Scientific orientation

It has been operationalized as the belief in a scientific approach to solving the problems in farming among the farmers. It was evident from the Table 14 that slightly less than three forth (74.17%) of the farmers had medium scientific orientation, followed by low (17.50%) and high (8.33%) scientific orientation.

Table 14: Distribution of farmers according to their scientific orientation (n = 120)

S. No.	Scientific orientation	Frequency	Percentage
1.	Low (<13.05)	21	17.50
2.	Medium (13.06 to 19.30)	89	74.17
3.	High (>19.30)	10	8.33
	Total	120	100.00
	Mean = 16.18	S.D = 3.13	

This might be due to their application of new farm ideas in a systematic manner with high extension contact and farmers interest in using new technologies. In other words, it could be said that, farmers with high level of positivism towards the use of new and scientifically proven technologies need to adopt the latest farming methods.

Economic motivation

It has been operationalized as occupational success in terms of profit maximization and the relative value an individual places on economic ends. It could be inferred from Table 15 that the slightly less than two-third (64.17%) of the farmers had medium economic motivation, followed by high (21.66%) and low (14.17%) economic motivation.

Table 15: Distribution of farmers according to their economic motivation (n = 120)

S. No.	Economic motivation	Frequency	Percentage
1.	Low (<24.68)	17	14.17
2.	Medium (24.69 to 28.59)	77	64.17
3.	High (>28.59)	26	21.66
	Total	120	100.00
	Mean = 26.63	S.D = 1.96	

The reason for the above finding might be due to the fact that, most of farmers had small land holdings with high school education and mostly engaged in agriculture for livelihood. Farmers having high economic motivation were willing to take anticipated risk in their field operations. Whereas poor economic condition may be due to poor economic motivation of farmers and less exposure to modern agricultural technologies and less extension contact. High score on economic motivation could be achieved by improvement in their education level, financial incentives from cooperatives and banks co-operation and through proper guidance from their neighbour farmers. This finding is more or less in conformity.

References

1. Abdullahi KA, Oladele OI, Yusuf OJ. Use of mobile phone applications by farmers in North West Nigeria. *Journal of Agricultural Extension*. 2019;23(3):182-195.
2. Adate SA. Perception and participation of rural youth in agricultural activities in post covid situation. Dapoli, India: Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth; 2023.
3. Akhilesh PK, Vijayabhinandana B, Jyothi V, Rao VS. Constraints in conserving the biodiversity of rice in Wayanad district of Kerala. Guntur, Andhra Pradesh: Acharya N. G. Ranga Agricultural University; 2022.
4. Bharati P. A study on utilization pattern of communication channels by the farmers of Sehore block of Sehore district, Madhya Pradesh. Gwalior, Madhya Pradesh: Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalyaya; 2015.
5. Chavhan, Natthu P. Impact of mobile based agro advisory services by state department of agriculture in Marathwada region. Parbhani: Vasantrao Naik Marathwada Krishi Vidyapeeth; 2019.
6. Das A, Saha S, Layek J, Babu S, Saxena R, Ramkrushna GI. Agricultural technologies. In: *Trajectory of 75 years of Indian Agriculture after*

- Independence. Singapore: Springer Nature Singapore; 2023. p. 57-78.
7. Madhubabu K. A study on training intervention of extension education institute on the capacity building of functionaries of developments. Hyderabad, India: Acharya N.G. Ranga Agricultural University; 2008.
 8. Kailash. A study on use of mobile phone technology (Smart Phone) by the farmers of Nagaur district in Rajasthan. Varanasi: Banaras Hindu University; 2016.
 9. Padmaja B. Usage and opinion of farmers towards Soil Health Card. Dharwad, Karnataka, India: University of Agricultural Sciences; 2018.
 10. Saikia P, Das MD, Deka MB. Use of Information and Communication Technology by farmers to access agricultural information in Jorhat district of Assam, India. Asian Journal of Agricultural Extension, Economics and Sociology. 2016;13(3):1-6.