RESEARCH ARTICLE

Utilization of Social Media for Accessing Scientific Information by Livestock Farmers in Karnataka State

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Abstract

The agricultural and livestock research, education, and extension are important components for increasing production and meeting the demands of the growing population with sustainability. In this context, knowledge or information is very critical for improving the production under the present extension delivery system in India. Several studies have highlighted emerging ICTs which have the potential to reach the mass population at a limited time despite traditional media. One such emerging ICT is Social Media, which is utilized by most of the stakeholders, including farmers around the globe. Hence, for documenting its application for livestock information needs among the livestock farmers, an ex-post-facto exploratory study was conducted in Southern Karnataka using 108 purposively selected farmers, which comprised of 36 farmers each belonging to dairy, poultry and sheep and goat husbandry with pre-tested structured interview schedule. Majority of the farmers in each category were aware about social media and possessed social media accounts with highest number of WhatsApp accounts being possessed by the farmers. Social media was utilized for obtaining information about latest livestock production and management practices in all the categories. From these findings, it could be elucidated that the respondents predominantly perceived that social media had higher benefits in attaining livestock related information and adoption of digital knowledge into practice.

Keywords: Extension education, ICT, Livestock farmers, Livestock management, Social media.

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Introduction

Predominant population of India is practicing agriculture as main occupation with animal husbandry as subsidiary occupation. Considering current situation, the demand for food derived from livestock is rapidly increasing around the globe and it has led to greater changes in the livestock production supported by major technological innovations and structural modifications (Tamizhkumaran and Radhakrishnan, 2016). This sector has been changing at an unprecedented pace over the past few decades and always requires information across the world for sustainable growth and development.

The agriculture and livestock research, education and extension are significant factors for promotion of production and efficiency with booming developments and progression. But, due to lack of adequate human resource in extension system, it is posing difficulties for systemic transfer of knowledge from lab to land with prevailing very low 1:1162 ratio of extension workers (Gulati *et al*., 2018). Moreover, the proportion of households receiving any kind of information about animal husbandry is as low as 8 per cent (NSSO, 2014). The right information at right place at right time is the need of the hour for larger population under the changing contexts of production, technology and marketing (Kalusopa, 2005).

However, nowadays the Information and communication technologies (ICTs) are greatly influencing these information sources and dissemination. With the introduction of internet and social media tools like Facebook, WhatsApp, Twitter, YouTube, LinkedIn etc., have become greater ways of sharing information (Bhattacharjee and Saravanan, 2016). The degree of social media penetration is obviously growing faster than

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imagination in all sectors including livestock sector. Owing to these facts, the present study was conducted to explore the utilization of social media among the livestock farmers of Karnataka for obtaining scientific information about livestock production and management practices.

Materials and Methods

This ex-post facto exploratory study was conducted in nine districts of Southern Karnataka with 108 farmers (36 Dairy, 36 Poultry and 36 Sheep and Goat), which comprises each of four farmers belonging to dairy, poultry and sheep and goat sector. The specific livestock farmers who possessed more than five livestock units i.e., minimum 5 dairy animals, 30 sheep and goats, and 1000 poultry birds were purposively selected because of their higher materialistic possession and information needs for profitable farming. The selected farmers were personally interviewed with pre-tested structured interview schedule to collect data pertaining to their technology orientation like mobile and internet utilization; different social media account possession such as WhatsApp, YouTube and Facebook, sources of information and rationale for adopting social media for livestock farming. The collected data were analyzed and tabulated to depict technology orientation, utilization of social media for information access and rationale for using social media for dairy, poultry, and sheep and goat farmers in the study.

Results and Discussion

From Table 1, it is evident that more than two-third of respective categories of livestock farmers owned smart mobile phones and more than half utilized internet connectivity in their smartphones. This might be due to increased availability of the cheaper smart mobile handsets in the market with various features required for communication and entertainment, leading to an increase in utilization among the farmers (Jain and Sanghi, 2016). In facilitation, by the end of March 2019, India had about 1.18 billion teleconnections with rural teledensity of 57.50% and urban teledensity of 159.66%. This depicts the developments in the telecommunication field and the efforts of the Government of India for digitalization which affords cheaper mobile data and increased broadband services leading to elevated smartphone usage (The Economic Times, 2019). With regard to awareness, Table 1 depicts that the majority (85.18%) of the respondents were aware of social media. However, the awareness among small ruminant farmers (75%) was quite less since the majority of small ruminants were owned by marginal and landless farmers (Thakur and Chander, 2016). Also, more than half of the dairy farmers (58.33%), poultry farmers (66.67%) and sheep and goat farmers (50%) possessed social media account which accords with the reports of Balkrishna and Deshmukh (2017) who reported that around 56% of farmers had social media account. This significantly indicates the diffusion of mobile technology and internet facility throughout the country which has greatly influenced social media awareness and account holding.

The information from Table 1 also reflects that, WhatsApp account was possessed by about 55% of the respondents and YouTube by 41% of the respondents. Besides this, a Facebook account was used by nearly one-fourth of livestock farmers and none of the farmers in the study area used social media tools such as Twitter, LinkedIn, blogs and SlideShare. It

Table 1: Technology orientation and utilizing social media for information access (n = 108)

		Dairy farmers ($n_1 = 36$)	*Poultry farmers ($n_2 = 36$)*	*Sheep and goat farmers ($n_3 = 36$)*	*Overall (n = 108)*
Sl. No.	*Category*	*Frequency (%)*	*Frequency (%)*	*Frequency (%)*	*Frequency (%)*
Technology orientation					
1.	Utilization of smartphone	24 (66.67)	30 (83.33)	24 (66.67)	78 (72.22)
2.	Internet connectivity	22 (61.11)	24 (66.67)	20 (55.56)	66 (61.11)
3.	Social media awareness	33 (91.67)	32 (88.89)	27 (75.00)	92 (85.18)
4.	Possession of social media account	21 (58.33)	24 (66.67)	18 (50)	63 (58.33)
Social media accounts possession					
1.	WhatsApp	19 (52.77)	23 (63.88)	17 (47.22)	59 (54.62)
2.	Facebook	9 (25.0)	10 (27.77)	10 (27.77)	29 (26.85)
3.	YouTube	14 (38.88)	17 (47.22)	13 (36.11)	44 (40.74)
4.	Instagram	2 (5.55)	3 (8.33)	1 (2.77)	6 (5.55)
5.	No account possession	15 (41.66)	12 (33.33)	18 (50.00)	45 (41.67)
Social media for accessing information					
1.	WhatsApp	12 (33.33)	21 (58.33)	8 (11.11)	41 (37.96)
2.	Facebook	6 (16.66)	6 (16.66)	5 (13.88)	17 (15.74)
3.	YouTube	13 (36.66)	17 (47.22)	10 (27.77)	40 (37.03)
4.	Instagram	1 (2.77)	0(0.00)	0(0.00)	1 (0.92)
5.	No social media information access	15 (41.66)	12 (33.33)	18 (50.00)	45 (41.67)

Table 2: Rationale for using social media by social media account holding farmers

		Dairy farmers ($n_1 = 21$)		*Poultry farmers ($n_2 = 24$)*		*Sheep and goat farmers ($n_3 = 18$)*		*Overall (n = 63)*	
Sl. No.	*Statements*	*F*	*%*	*F*	*%*	*F*	*%*	*F*	*%*
1.	Communication with other stakeholders (Progressive farmers, veterinary officers, extension officers, consumers, etc.)	19	90.48	19	79.17	13	72.22	51	80.95
2.	Seeking information about the latest dairy/poultry/sheep and goat production and management systems	18	85.71	19	79.17	15	83.33	52	82.54
3.	Sharing dairy/poultry/sheep and goat related information with farmers	14	66.67	15	62.50	12	66.67	41	65.08
4.	Telemedicine	6	28.57	13	54.17	3	16.67	22	34.92
5.	Information on housing/ feeding/ breeding	16	76.19	14	58.33	13	72.22	43	68.25
6.	Information on health and disease management	13	61.90	16	66.67	13	72.22	42	66.67
7.	Benefits of social media over other ICT tools	12	57.14	15	62.50	13	72.22	40	63.49
8.	Adoption of new technologies or practices	11	52.38	10	41.67	12	66.67	33	52.38
9.	Finding solutions to problems	9	42.86	11	45.83	5	27.78	25	39.68
10.	Linking up with other stakeholders	4	19.05	5	20.83	4	22.22	13	20.63

F – Frequency

could be noticed that majority had one or two social media accounts and among which WhatsApp was most widely used. Social messaging applications like WhatsApp provided user friendly communication needs such as sharing messages, photos, videos, documents, voice and video calls, which are similar to basic message service providers and special features for the creation of common interest groups. Further, YouTube, which streams animal husbandry practices through videos, was advocated by a good number of farmers. This suggests that user-friendly applications that require less skill and minimum education are best adopted by farmers. These findings are in line with the reports of Kaggere (2015) who reported that there had been 100% increase in the past years in rural social media users in India.

From Table 1, it could be appreciated that among different social media tools adopted by livestock farmers majority had utilized WhatsApp (37.96%) as a source for information on livestock production and management followed by YouTube (37.03%) and Facebook (15.74%). Moreover, around 58.33% of the livestock farmers in total utilized social media for accessing various livestock information needs. Since whatsapp is being a popular application in smart phones, many farmers are exploring the opportunity to fulfill their information needs. The majority of the respondents also utilized YouTube as it contains both audio and video formats of a large amount of agriculture and livestock-related information, which implies "seeing is believing" though it is virtual. The results were partially in line with the reports of Valsamidis *et al.* (2013), Chaba (2015), and Thakur and Chander (2016), who reported that the majority of the respondents used WhatsApp to gain information. It was also noted that among the respondents, poultry farmers used WhatsApp and YouTube extensively and this accredit the need for information with the present demands in the market and changing government policies.

The farmers in the study were asked to indicate their rationale for utilizing social media for livestock production and management. From Table 2, it can be noticed that overall 82.54% of the farmers (85.71% dairy, 79.17% poultry 83.33% and sheep and goat farmers) primarily used social media for obtaining latest information on livestock production and management systems followed by communication with different stakeholders (80.95%), obtaining information related to housing, feeding, breeding etc., (68.25%), and information on health and disease management (66.67%) since scientific information is much needed for profitable farming (Thakur and Chander, 2017). More than 62% of the respondents (66.67% dairy, 62.5% poultry, and 66.67% sheep and goat farmers) also shared livestock-related information with farmers which indicate the potential of social media to disseminate information, generate groups and promote discussion among group members (Bhattacharjee and Saravanan, 2016).

Saliently, around 52.38% of livestock farmers (52.38% dairy, 41.67% poultry, and 66.67% sheep and goat farmers) as well advocated social media for adoption of technologies of animal husbandry and 39.68% to find out solutions to the problems of farming (42.86% dairy, 45.83% poultry and 27.78% sheep and goat farmers). Since social media provides opportunities for carrying out communication and gain knowledge without being cosmopolite, many farmers had explored this utility. It is evident from Table 2 that the majority (>55%) of the respondents perceived that social media had higher benefits than other ICT tools in livestock farming, which might be due to the universal and instant nature of social media. From all these results, it was clear that the majority of the respondents used social media not solely for communication purposes but also for livestock production and management (Balkrishna and Deshmukh, 2017). Further, this also suggested that there was greater call for information

from farmer's perspective to run the farm with profits and also urge in them to connect with the stakeholders of the livestock sector.

Conclusions

The need for current and relevant information through social media has become essential for improving agriculture and livestock production. The WhatsApp, YouTube and Facebook were the most commonly used social media tools by majority of the livestock farmers to gain scientific information on various aspects of livestock production. Therefore, these findings project that, respondents predominantly perceived that social media tools had higher benefits in attaining livestock related information and utilization of virtual knowledge into practice. Further, these results also encourage the adoption of farmer friendly social media tools for association between farmers and dissemination of information ultimately leading to improvement in livestock production and sustainability.

References

Balkrishna, B.B. and Deshmukh, A. (2017). A study on role of social media in agriculture marketing and its scope. *G. J. of Mgmt. and Bus. Res: E Mark.,* **17**(1).

Bhattacharjee, S. and Saravanan, R. (2016). Social media: Shaping the future of agricultural extension and advisory services. *Global Forum of Rural Advisory Services (GFRAS) interest group on ICT4RAS discussion paper,* GFRAS: Lindau, Switzerland 9.

Chaba, A.A. (2015). Punjab farmers turn to whatsapp group for farming solutions. http://indianexpress.com/article/india/punjab-andharyana/punjab-farmers-turn-Whatsapp group-for farming-solutions/ (Published on July 3, 2015; Accessed on March 25, 2020).

Gulati, A., Sharma, P., Samantara, A. and Terway, P. (2018). Agriculture extension system in India: Review of current status, trends and the way forward. *Indian Council for Research on International Economic Relations.*

Jain, N. and Sanghi, K. (2016). The rising connected consumer in rural India. *The Boston Consulting Group*, Research Report, Mumbai, India.

Kaggere, N. (2015). Whatsapp! WhatsAt? Siddu stunned by 69-yr-old farmer. Available at https://bangaloremirror.indiatimes.com/bangalore/cover-story/chief-minister-Siddaramaiah-WhatsApppre-budget-meeting-maize-cotton-onion-green-chillies-Google-Earth-Krishna-Byre-Gowda/articleshow/46361423.cms?. Published on February 25, 2015; Accessed on March 29, 2020.

Kalusopa, T. (2005). The challenges of utilizing information and communication technologies (ICT's) for the small-scale farmer in Zambian. *Lib. Hi Tech.*, **23**(3): 414-424.

NSSO (National Sample Survey Office). (2014). Key indicators of situation of agricultural households in India, NSS 70th Round, Ministry of Statistics and Programme Implementation, Ministry of Statistics and Programme Implementation, GOI, New Delhi.

Tamizhkumaran, J. and Radhakrishnan, R., 2016. Livelihoods of dairy farmers at stake in Puducherry. *Ind. J. of Agri. Res.,* **2(**1): 633-638.

Thakur, D. and Chander, M. (2016). Sharing livestock related information through Whatsapp among livestock owners: An appraisal. *Ruminant Sci.,* **5(**2): 267-270.

Thakur, D. and Chander, M. (2017). Use of social media for livestock advisory services: The case of WhatsApp in Himachal Pradesh, India. *Ind. J. of Ani. Sci.,* **87**(8): 1034–1037.

The Economic Times. (2019). https://economictimes.indiatimes.com/tech/internet/internet-users-in-india-to-reach-627-million-in-2019-report (Accessed on March 25, 2020).

Valsamidis, S., Theodosiou, T., Kazanidis, I. and Nikolaidis, M. (2013). A framework for opinion mining in blogs for agriculture. *Procedia Tech.,* **8:** 264-274.