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RESEARCH ARTICLE

Unleashing the Power of Social Media for Effective Dairy Extension: A Case Study

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ABSTRACT

In this era of information technology, the ability to acquire and use information is regarded as national assets. Social media tools can be regarded as social communication technologies in which opportunities of farmers' feedback, interaction, and networking are much higher than other forms of extension information delivery. WhatsApp® is one of the most popular social media tools which offers many unique advantages and makes it a potent veterinary extension tool. The study was conducted in Palghar district of Maharashtra to study the effectiveness of WhatsApp® as an information delivery tool for dairy farmers. A total of 100 dairy farmers were selected randomly who were using WhatsApp® at the time of study. An experimental WhatsApp® group named "e-gopalak" was formed for the present study. The study revealed that 93.00 per cent dairy farmers agreed that dairy information available through WhatsApp® was trustworthy and accurate. 75.00 per cent of farmers were mostly satisfied with the 'Quality of information provided' followed by 'Query resolving facility of WhatsApp® (66.00%). Before intervention, 64.00 per cent respondents had low level of knowledge followed by 33.00 per cent with medium level of knowledge on dairy farming. Post intervention, 48.00 per cent respondents had medium level of knowledge followed by 22.00 per cent with high level of knowledge. 72.00 per cent of dairy farmers partially adopted scientific dairy farming practices shared through WhatsApp®.

***Key words**: Effectiveness; Dairy farmer; WhatsApp®; Social media; e extension; Mobile advisory service.*

Dairying is a very important developmental intervention in rural India for achieving agricultural growth with equity. Information and Communication Technology is ruling the world in all walks of life and access to mobile phones and internet facility is growing in India at a rapid rate in recent years (*Kabir,2015*). Social media tools can be regarded as social communication technologies in which opportunities of farmers' feedback, interaction, and networking are much higher than other forms of extension information delivery. The number of social media (Facebook and WhatsApp) using farmer clientele is likely to increase substantially in near future (*Thakur et.al, 2017*).

The major challenge in our country is the poor mechanisms and infrastructure for sharing and exchanging animal husbandry and agriculture knowledge generated from research at national and regional levels and disseminating it to the grass root level. Mobile internet penetration in rural India is high. In rural India, mobiles have become major ways to access the internet. The internet subscriber base in the Maharashtra is highest among all the states. Out of various social media tools available, the most popular one is WhatsApp®. WhatsApp® is one of the most popular social media tools which offers many unique advantages and makes it a potent veterinary extension tool. WhatsApp® messenger is a cross-platform mobile messaging app and it is a platform to share real-time information which allows user to exchange messages, audio, video, photographs. WhatsApp® can be good extension tool to reach out to farmers. Since social media is a recent phenomenon, not much systematic attempts to use it as an extension tool in reaching out

to the farmers have been made. The study generated empirical data on the effectiveness of WhatsApp as information delivery tool to reach out the farming community. Keeping this in view, the present study was conducted to study the effectiveness of WhatsApp® as an information delivery tool in animal husbandry and dairy sector.

METHODOLOGY

The present study was conducted in Palghar district of Maharashtra. Palghar district is having 8 blocks, out of which two blocks namely Palghar and Vasai were purposively selected. From each block, WhatsApp® using dairy farmers were identified who had at least two milch animals and were having experience of 2 to 3 years in dairying. 50 respondents from each block were selected randomly. Therefore, a total of 100 WhatsApp® using dairy farmers were selected for the study.

Formation of experimental WhatsApp® group : An experimental WhatsApp® group named "e-gopalak" was created in with 100 socially active dairy farmers to provide them with latest knowledge and skill in the field of dairying and allied sectors. The information was mainly provided in the form of WhatsApp® messages, audio-video files, PDF, images, newspaper articles etc. related to dairy healthcare and management practices for more than three months approximately (March-June).

The data was collected personally with the help of pre-tested structured interview schedule and analyzed with the help of mean, standard deviation, frequency, percentage, and t-test. The data included information about attitude of dairy farmers towards use of WhatsApp® as an information delivery tool.

RESULTS AND DISCUSSION

Effectiveness of WhatsApp® : Understandability of message is very important before actual adoption in the field. An experimental WhatsApp group named "e-gopalak" was created for the present study purpose. Experimental WhatsApp group was created by taking Prior Informed Consent (PIC) from the dairy farmers included in the group. On daily basis, two to four messages have been sent for approximately more than two months. Messages were mainly pertaining to dairy animal healthcare and management practices. In addition to that the weather forecasting information was also provided to farmer. The effectiveness of WhatsApp was measured through schedule developed for the study, which consisted of following dimensions viz. perceived usefulness of WhatsApp in dairy farming, perceived easiness of WhatsApp in dairy farming, utility of WhatsApp information, credibility of WhatsApp information, and the response of the respondents were obtained on three-point continuum i.e., agree, disagree and undecided with score 3, 2 and

Table 1. Effectiveness of WhatsApp® (N =100)

Statements	Highly No. (%)	Partially No. (%)	Not understandable No. (%)
Understanding of the message	87 (87.00)	13 (13.00)	0 (0.00)
Need based information	Needful	Somewhat Needful	Not Needful
	70 (70.00)	30 (30.00)	00 (0.00)
Time based information	Timely	Undecided	Not timely
	90 (90.00)	10 (10.00)	00 (0.00)
Applicability of message	Fully applicable	Partially applicable	Not applicable
	74 (74.00)	26 (26.00)	00 (0.00)
Save time & money	Agree	Disagree	Undecided
	84 (84.00)	12 (12.00)	04 (04.00)
Increase in social contact	Agree	Disagree	Undecided
	94 (94.00)	06 (06.00)	00 (0.00)
Increase in knowledge	Agree	Disagree	Undecided
	98 (98.00)	00 (0.00)	02 (02.00)
Increase in productivity, yield	Agree	Disagree	Undecided
	75 (75.00)	11 (11.00)	14 (14.00)
Adoption of scientific dairy farming practices	Fully adopted	Partially adopted	Not adopted
	23 (23.00)	72 (72.00)	05 (05.00)

1 assigned respectively. Frequency distribution was used to classify the respondents. Perception about the content of dairy information available through WhatsApp were recorded on three-point continuum scale i.e., strongly, moderate, and least with score 3, 2 and 1 assigned respectively. Frequency distribution was used to classify the respondents.

The data given in Table 1 indicates that 87.00 per cent of dairy farmers considered information through WhatsApp® messages were highly understandable. 70.00 per cent dairy farmers agreed that they received information relevant to their need of dairy farming. 90.00 per cent of the farmers believed that they got timely information about the dairy farming. Majority (70.00 per cent) of the respondents stated that information provided by WhatsApp® was fully applicable. 84.00 per cent dairy farmers agreed that WhatsApp® saves their time and money. WhatsApp® helps in increasing social contact was reported by 94.00 per cent of the dairy farmers, while only 6.00 per cent farmers disagreed with it. WhatsApp® messages helps in increasing the knowledge was agreed by 98.00 per cent respondents. Two third (75.00 per cent) of the dairy farmers agreed that by using WhatsApp® information productivity and yield from dairy animal has been increased. About 23.00 per cent of dairy farmers adopted scientific dairy farming practices through WhatsApp®, 72.00 per cent of dairy farmers partially adopted scientific dairy farming practices through WhatsApp®, while only a meagre (5.00 per cent) farmers have not adopted scientific dairy farming practices. Findings are in line with Thakur and *Chander (2017)* who reported that WhatsApp emerged as a most preferred choice of referring to a diverse set of livestock-related information.

Knowledge level of WhatsApp® using Dairy Farmers about Dairy Farm Practices : Knowledge was operationally defined as the extent of known information in terms of various aspects of dairy farming practices. The questions related to dairy farming were prepared after a thorough discussion with specialists and from standard literature. Total of 24 questions were selected for final schedule. A score of 1 was assigned for the correct answers and 0 for incorrect answers. The total scores were summed up to find out the knowledge level of the respondents. They were categorized into three groups as low, medium, and high knowledge level. The score range was 0-24 and based on mean and standard deviation, the farmers were grouped into low, medium, and high level of knowledge.

Table 2. Knowledge level of WhatsApp® using dairy farmers (N=100)

Category	Score	No. (%)	
		Pre test	Post test
Low	<8	64 (64.00)	30 (30.00)
Medium	8 to 16	33 (33.00)	48 (48.00)
High	>16	3 (3.00)	22 (22.00)
Mean ± SD		8.39±3.66 (13.08±5.39)	
't' value		12.78**	

** Significant at 1% level

Table 2 depicts that before intervention almost 64.00 per cent respondents had low level of knowledge followed by 33.00 per cent with medium level of knowledge on dairy farming. Average score was found to be 8.39. Post intervention, 48.00 per cent respondents had medium level of knowledge about dairy farming followed by 22.00 per cent with high level of knowledge. Average score was found to be 13.08. The mean difference between pre and post scores was found to 4.69 and the difference was significant at 1.00 per cent level of significance. The results are similar to *Patel et.al., (2020)* who reported that majority of the respondents indicate medium level impact of whatsapp messages regarding agricultural technologies. Findings are in line with *Mooventhan et al. (2017), Singh et al. (2015), Ponnusamy et al. (2016) and Meena et al., (2014)*

The dairy farmers of study area were inclined towards use of social media for dairy information. Therefore, experimental WhatsApp group named "e-gopalak" was created with 100 socially active dairy farmers to provide them with latest knowledge and skill in the field of dairying. The information was mainly provided in the form of WhatsApp messages, audio-video files, pdf, images, newspaper articles etc. related to dairy healthcare and management practices. Pre and post knowledge level was measured. There was substantial increase in the knowledge level of dairy farmers. The dairy farmers of Palghar and Vasai block of study area had neutral attitude before study and developed favourable attitude after study toward use of WhatsApp for obtaining information regarding dairy farming practices. The shift in attitude from neutral to favourable indicates the adoption of WhatsApp as an information delivery tool and proved to be cost-effective, reduces time and geographical barriers. The dairy farmers of study area revealed that by practically using information through WhatsApp at their own place considerably proved to be beneficial as it leads

to improved productivity of their dairy animals and reduces the farm losses. The dairy farmers were active to enquire through group regarding treatment of their sick animals and in return get information instantly on the group which proved to reduce time barrier. The young dairy farmers were more actively using social media and it is a positive indication towards achieving dream of digital India. The dairy farmers were also informed about the security concerns i.e. fraud, hacking, virus etc. apart from dairy information. The study provides empirical evidence that using social media especially WhatsApp strengthen weak extension linkages and is therefore, valuable in a country like India where farmer to extension worker ratio is too wide.

CONCLUSION

This research contributes to effectiveness of WhatsApp® group as an dairy information delivery tool in Palghar district of Maharashtra. The dairy farmers of study area were inclined towards use of social media for dairy information. Pre and Post knowledge level was measured and there was substantial increase in the post-knowledge level of dairy farmers. Since, WhatsApp® has been used by dairy farmers as an effective extension tool for obtaining information pertaining to dairy and allied sector. Therefore, social media tools especially WhatsApp® farmers and subject specialist groups should be formed to reduce the time and geographical barriers. Further, it will bring various subject specialists and farmers at one platform where information and feedback will be processed at the same time.

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