

## CASE STUDY

### A Study on Effectiveness of WhatsApp Messages Regarding Improved Agricultural Production Technology Disseminated by KVK, Dewas, MP

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#### ABSTRACT

New agricultural technologies are generated by research institutes, universities, private companies, and the farmers themselves. The role of research and advisory services are to give highly accurate, specific and unbiased technical and management information, and advice in direct response to the needs of their clients. Due to poor linkages between research and advisory services, the adoption of new agricultural technologies by farmers is often very slow and research is not focusing on the actual needs of farmers. As social networking (WhatsApp) continues to grow and attract more users, it is important to research the possible and perceived opportunities, benefits, and risks of using this technology. Hence, keeping this in mind proposed the on-going study with 120 farmers (WhatsApp beneficiaries) of Dewas district. It is revealed from the study that the higher number of the WhatsApp beneficiaries found sometimes effective regarding overall WhatsApp messages followed by never effective and always effective of overall WhatsApp message in agricultural development.

**Key words:** Disseminated, effectiveness, improved agricultural production technology, knowledge level

#### INTRODUCTION

The widespread availability and convergence of communication technologies, digital networks and telecommunication, etc., in India, in recent years, have led to unprecedented capacity for dissemination of knowledge and information to the rural community. However, rural population in our country still have difficulties in accessing crucial information in the forms they can understand to make timely decisions for better farming. In the past few years, innovative ideas came into existence. Indian farming community is at present facing multitude of problems to maximize crop productivity. The use of information is wide and multifarious. However, a very wide gap exists between the research level and actual practices. Therefore, in the backdrop of the issues discussed above, the present investigation has been planned

to examine the effectiveness and communication technology (WhatsApp) in transfer of agricultural technology as an effective tool for agricultural development. The study was conducted with the following objective.

#### Objective

The objective of this study was to study the knowledge upgradation by WhatsApp messages disseminated by KVK, Dewas.

#### REVIEW LITERATURE

Jayade,<sup>[1]</sup> it is concluded that farmers need information on six stages of crops through the agricultural cycle: (i) Crop planning, (ii) buying seeds, (iii) planting, (iv) growing, (v) harvesting, packing, and storing, and (vi) selling. The application of information and communication technology (ICT) in agriculture is increasingly important to find the solutions for all six stages of

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agriculture.

Patel<sup>[2]</sup> reported that the study leads to the understanding that the phenomena with regard to the utilization pattern of communication channels among the farmers community would be related higher number of farmers 50.00% found to least user of overall communication channel followed by 27.00% farmers used it occasionally and 23.00% farmers used it regularly at overall level. Patidar<sup>[3]</sup> reported that the higher percentage 38.33% of the online communication service users had sometimes extent of use regarding online communication services followed by 36.67% online communication service users had always extent of use and 25.00% had never extent of use.

## MATERIALS AND METHODS

For achieving the above-mentioned objectives, the present study was conducted in Dewas, Tonk Khurd, Bagli, Khategaon, Kannod, and Sonkach block of Dewas district of Madhya Pradesh on the basis of online beneficiaries in the district. A representative sample of 120 farmers (WhatsApp beneficiaries) was drawn from 10 purposively selected villages having WhatsApp beneficiaries. Survey method of enquiry was used for data collection. The data were collected through a well-structured and pre-tested interview schedule. The researcher was personally meet to the respondents and explained to them about the purpose of the study.

The knowledge level of farmers from WhatsApp services refers to the awareness of the various technologies by the WhatsApp user. A set of 10 information need area was considered and respondents were asked 3 point continuum as “Perfect

knowledge,” “Partial knowledge,” and “Least knowledge” with weights 3, 2, and 1, respectively. Total score obtained was calculated by summing the obtained score of individual information, which was used to know the level of knowledge.

$$\text{Knowledge index} = \frac{\text{Actual Score}}{\text{Maximum Score}} \times 100$$

On the basis of index, the level of knowledge of the respondents was classified into the following three categories with the help of score.

## RESULTS AND DISCUSSION

### Knowledge upgradation of farmers by WhatsApp messages disseminated by KVK experts

Level of knowledge is the awareness about and understanding of the farmers toward the information. In the present study, the level of knowledge of the farmers toward WhatsApp messages disseminated by KVKs, Dewas, is measured as how frequently they are using the tools and how efficiently they understand it. Data in respect of the level of knowledge upgradation of WhatsApp messages in improved agricultural production technologies were collected and presented in Table 1.

Knowledge upgradation from WhatsApp messages in agriculture development 10 components of technological information was considered under the study for which the farmers collected the information discussed as below in two different conditions, before use of message and after use of messages.

The data compiled in Table 2 show that in “before condition” the higher percentage 43.33% of the

**Table 1:** Knowledge upgradation of farmers from WhatsApp messages through KVK for improved agricultural practices

Knowledge upgradation	Before (2015–2016)			After (2016–2017)		
	Low	Medium	High	Low	Medium	High
Messages are received according to your requirement	32 (26.70)	51 (42.50)	37 (30.80)	27 (22.50)	38 (31.70)	55 (45.80)
In the message, you get the information of advanced agricultural practices	39 (32.50)	58 (48.30)	23 (19.20)	31 (25.80)	38 (31.70)	51 (42.50)
All messages increase your knowledge	40 (33.33)	50 (30.00)	30 (25.00)	20 (16.70)	35 (29.20)	65 (54.10)
WhatsApp messages are the most accessible technique in the enlightening of agricultural technology	39 (32.50)	45 (37.50)	36 (30.00)	33 (27.50)	38 (31.70)	49 (40.80)
The content you get is also told to other people	40 (33.33)	42 (35.00)	38 (31.70)	33 (27.50)	39 (32.50)	48 (40.00)
Subject matter is according to need.	41 (34.20)	44 (36.70)	35 (29.20)	35 (29.20)	39 (32.50)	46 (38.30)
Crop production-related messages are useful	38 (31.70)	60 (50.00)	22 (18.30)	36 (30.00)	40 (33.33)	44 (36.70)
Seed and fertilizer-related messages are useful	45 (37.50)	49 (40.80)	26 (21.70)	36 (30.00)	44 (36.70)	40 (33.33)
Medicine, pesticides, and weedicide-related messages are useful	35 (29.20)	66 (55.00)	19 (15.80)	26 (21.70)	36 (30.00)	58 (48.30)
Harvesting and storage-related messages are useful	38 (31.70)	55 (45.80)	27 (22.50)	26 (21.70)	30 (25.00)	64 (53.30)

**Table 2:** Overall knowledge upgradation of farmers by WhatsApp messages disseminated by KVKs for improved agricultural production technology

Variable	Categories	Before	After
Knowledge upgradation	Low	39 (32.50)	30 (25.00)
	Medium	52 (43.33)	38 (31.66)
	High	29 (24.17)	52 (43.34)
	Total	120	120

farmers had medium knowledge regarding overall improved agricultural production technology in agricultural development followed by 32.50% farmers had low knowledge and 24.17% had higher knowledge regarding overall improved agricultural production technology.

### **Effectiveness of WhatsApp messages regarding improved agricultural technology**

It is revealed from the study that the higher number of the WhatsApp beneficiaries found sometimes effective regarding overall WhatsApp messages followed by never effective and always effective of overall WhatsApp message in agricultural development.

### **Effectiveness of WhatsApp**

#### ***It increases the scope and coverage of agricultural extension***

WhatsApp as an extension tool does not have such limitations. It has already a huge user base globally as well as in developing countries. Within few seconds, one can disseminate information to a large number of intended and unintended recipients beyond limitations of time and geographical boundaries. Opportunities for further feedback and clarifications are high through this tool. Thus, WhatsApp has the potential to enhance the coverage and scope of extension.

#### ***It is an easy and convenient way of communicating with the farmers***

The current forms of extension education methods (face to face, mass media, etc.) require a substantial amount of time and complexity of efforts to communicate with the farmers. Mass media methods demand high infrastructure requirements, content preparation, refinement, and delivery to produce the desired effect. Similarly, modern ICT-based advisory services require greater infrastructural availability on the part of provider and user. On the

other hand, WhatsApp seems to be a relatively easier and simpler ICT tool for farmers. This does not require much of ICT skills. It can be easily operated through mobile internet compared to other web-based portals, which are primarily computer based. This is important given the fact that farming requires long hours of diligence and work. Similarly, office hours of work are limited to extension educators. WhatsApp offers a communication approach that can be quite flexible, as at any time and any place, interaction is possible. Beyond normal discussions, sufficient snippets of information dissemination can also be delivered through WhatsApp.

#### ***It is information enriched medium of information delivery***

In other methods of information delivery such as verbal methods, including interactive voice response-based mobile call center services, chances of loss of the vital information are high. Information may be incompletely understood, retained, and forgotten during face to face and mass media (Television, Radio) extension methods. In WhatsApp, the information storage, archival and transfer to hard data storage devices such as a computer is also possible. Further, information can be delivered in multiple ways such as audios, texts, visuals, and audio-visuals. The understanding of the message, therefore, would be relatively high, through this medium.

#### ***It is more participative and demand-driven extension tool***

The current extension of education activities is largely one way of information delivery. Training lectures, mobile-based agro-advisory services offer fewer opportunities to farmers to respond and ask queries. The farmers may remain hesitant to clarify his doubts, and many of his queries may remain unanswered. WhatsApp has the potential to reduce these limitations. Even hesitant and shy farmers can participate through encouragement and support. User feedback is easier to receive and it is prompt. One can communicate instantaneously through multiple ways in one to one, one to many, and many to many ways.

#### ***WhatsApp is more advantageous than Kisan Call Centers***

The Government of India uses mobile Kisan portal in which farmer queries are addressed through

the inflow of calls in Kisan Call Centers. These centers along with short message service-based services offer a good piece of information to the farmers. However, there are certain limitations of this mechanism. The resource persons rely only on the voice mode of query sought by the farmer. Many times he has little time to reflect or refer to locale-specific aspects of information sought by the farmer. As a result, many of the farmers report that the information offered through these centers are sometimes very general in nature. After the query has been once replied, there remains no direct mechanism to ascertain the extent of utilization and adoption of information by the farmer. These limitations can be overcome through the use of WhatsApp. The queries can be posted in the type of pictures and audio-visual format. This arrangement can improve diagnosis and advice to the farmers. Further, farmers can post a query at any time and at any place irrespective of background ambience noises and other disturbances. The resource person has ample time to think and refers to the query in detail. The assessment of farmer's query is better through this platform. Thus, the possibility of relevant and accurate information delivery remains much higher through this platform. Furthermore, there are greater chances of peer discussions and learning, which are impossible through mobile advisory services. Furthermore, important answered queries and discussions can be archived for future reference.

## CONCLUSION

### Knowledge upgradation by WhatsApp messages

- The study showed that in “before condition of knowledge” the higher percentage 43.33% of the farmers had partial knowledge regarding overall improved agricultural production technology in

agricultural development followed by 32.50% farmers had least knowledge and 24.17% had perfect knowledge regarding overall improved agricultural production technology.

- The study showed that “after condition of knowledge” the higher percentage 43.34% of the farmers had perfect knowledge regarding overall improved agricultural production technology in agricultural development followed by 31.66% farmers had partial knowledge and 25.00% had least knowledge regarding overall improved agricultural production technology.

### Effectiveness of WhatsApp messages regarding improved agricultural technology

- The study showed that higher percentage 45.00% of the WhatsApp beneficiaries found sometimes effective regarding overall WhatsApp messages followed by 31.66% WhatsApp beneficiaries found never effective and 23.34% found always effective of overall WhatsApp message in agricultural development.

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