



# Effectiveness of Mobile Based SMS in Transfer of Agricultural Technology

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## ABSTRACT

Effective communication strategy is the need of the hour to enable research results to reach the farmers' fields without much time lag. Krishi Vigyan Kendra, Amadalavalasa has started sending mobile based SMS through WAY2SMS to the KVK registered farmers to transfer the agricultural technology since June 2010. Ex post facto research design was followed for the study. Randomly 60 farmers were selected as respondents for the study by simple random sampling method. 90 per cent of the farmers perceived that the mobile based SMS were useful to disseminate the agricultural technology with cheaper cost even to remote areas. Around 77 per cent of the farmers watching the messages immediately after receiving the messages. The mobile service authorities need to take extra care to streamline the system so as to prepare relevant content for maximum utility by the end users.

**Key Words:** SMS, Technology dissemination, Language.

## INTRODUCTION

The Indian agriculture is today face to face with three challenges: to improve the economic condition of farmers, to improve agriculture productivity to feed ever-increasing population and maintenance of environment. Agricultural extension, which is essentially a message delivery system, has a major role to play in agricultural development. It serves as a source of advice and assistance for farmers to help them improving their production and marketing (Adams, 1988). The task of extension education is accomplished by different extension methods/media, which may come under individual, group and mass contacts (Sharma *et al*, 2012).

Effective communication strategy is need of the hour to enable research results to reach the farmers' fields without much time lag. Hence, it is obvious to use modern ways of communication besides traditional methods of communication. Krishi Vigyana Kendra (KVK), Amadalavalasa has started sending mobile based SMS through WAY2SMS

to the registered farmers to transfer of agricultural technology since June, 2010. Hence, the study was conducted with the objective of studying the effectiveness of mobile based SMS in transfer of agricultural technology.

## MATERIALS AND METHODS

Ex post facto research design was followed for the study. Regarding sample selection, out of nine, six divisions were selected randomly and two mandals from each selected division and one village from each mandal were selected randomly. Five farmers from each village were selected randomly, thus total 60 farmers were selected as respondents for the study by simple random sampling method. Structured interview schedule was developed consisting of 9 items to measure effectiveness of mobile based SMS sent by KVK, Amadalavalasa for the year 2022. Each respondent was asked to indicate their response for the each item. Based on the responses, frequency and percentage was calculated for each item.

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**Table1. Effectiveness of mobile based advisories through way2sms. (N=60)**

Sr. No.	Item	Frequency	Percentage
1.	Watching messages immediately after receiving	46	76.67
2.	Receiving messages at right time	46	76.67
3.	Receiving messages as per the technological needs of the farmers	42	70.00
4.	Messages are in understandable language	30	50.00
5.	Received SMS are useful	34	56.66
6.	Received SMS are adoptable	34	56.66
7.	Calling back to the office mobile to clarify doubts and for further information	18	30.00
8.	Useful as TOT method	48	80.00
9.	Useful to disseminate the agricultural technology with cheaper cost even to remote areas	54	90.00

### RESULTS AND DISCUSSION

The data (Table 1) showed that around 77 per cent of the farmers watching the messages immediately after receiving the messages. This might be due to that farmer are habituated to use modern ways of communication and usage of android phones increased tremendously. Receiving messages at right time might be due to SMS prepared based on the problems identified during field diagnostic visit and because of precision in the internet, cell phone technology.

The SMS selected for sending to the registered farmers were as per their technological needs. Hence, more concentration should be given on demand and need of the farmer rather than the technology. Messages were in understandable language and very simple, meaningful, logical and written in English Telugu in understandable way. Message focused on solution to one particular problem in agriculture.

It was revealed that received SMS were useful because messages were pragmatic, applicable to them as they were developed from field experience and real time agro advisory was given.

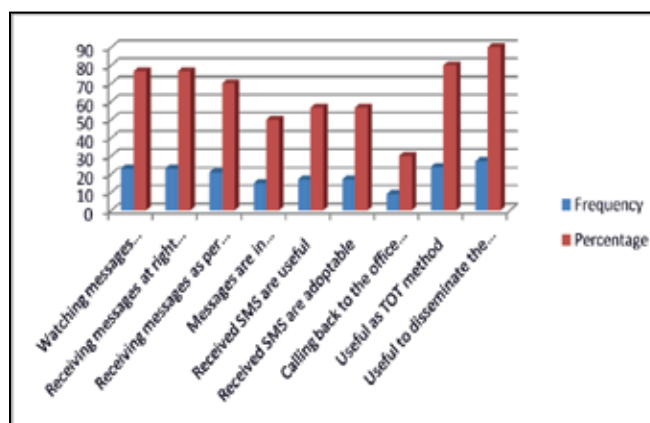
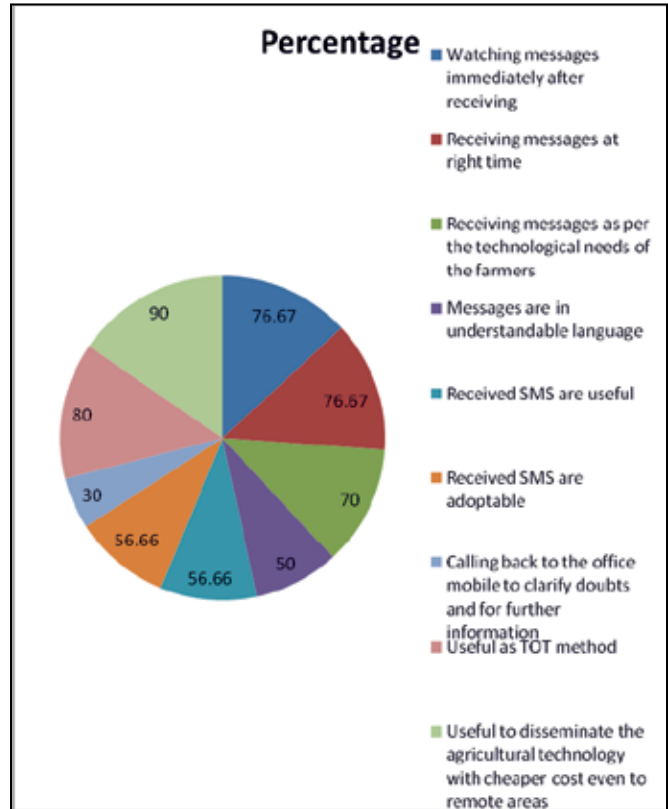
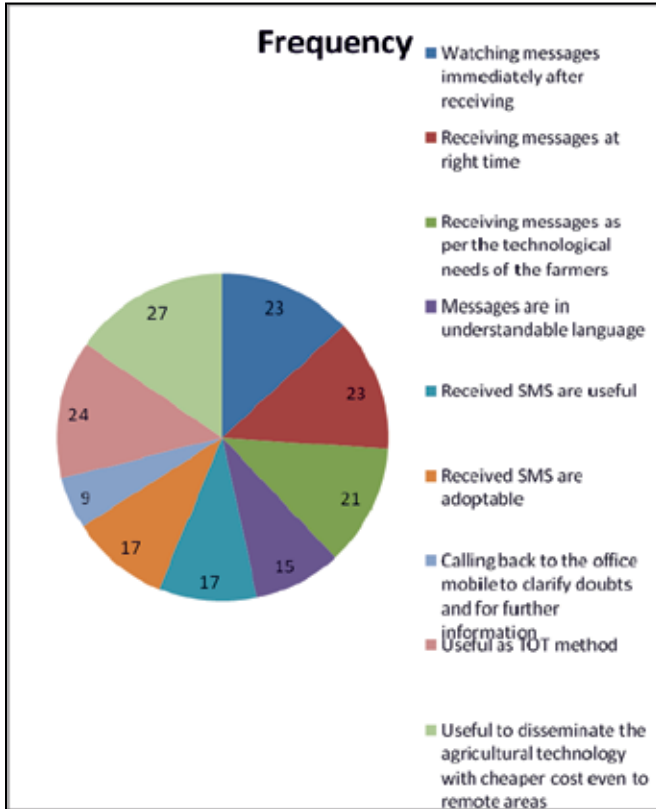


Fig.1. Effectiveness of mobile based advisories through way2sms

The given messages were adoptable as they have attributes like relative advantage, observability, compatibility and predictability. As the messages were precisely edited and given based on practical utility, hence the received messages are adoptable. Farmers were able to get more clarifications after calling back immediately and how to do the job also will be easy after calling back to the expert.

The reach and affordability of broadband internet is also improving dramatically. Internet connectivity around the world has grown exponentially since

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2000 by over 480 per cent (Internet world statistics 2011). Mobile phones are in the vanguard of ICTs in Agriculture.

Farmer access to information through mobile phone was varied by age, gender and farmer category. This digital divide reflects the prevalent social realities in access to extension, which have been in part attributed to differences in literacy, socio-cultural factors, ownership or control of mobile phones, and technological skills (Mbo'o-Tchouawou and Colverson, 2014). These differences, in particular, education attainment, sex, and age of respondent, to a great extent affected the level of understanding of the messages received. This flags some potential challenges in equitably reaching farmers, in particular women, elderly and resource-constrained farmers with mobile extension delivery mechanisms. There was evidence that farmers were willing to take action and adopt new practices based on the information they received through mobile services.

The study showed a great reliance of farmers on farmer-to-farmer exchange for agricultural information (Drafor, 2016; Kiptot and Franzel, 2015). Farmer-to-farmer exchange and information sharing is a good proxy for its perceived value. It is also an indicator of how far information is likely to spread within any given farming community, giving an estimate of the potential 'reach' for the service in broad terms, although this would need further and more detailed investigation.

Amanish *et al* (2022) also conducted a similar study and found that, almost third-fourth of the respondents regularly used messages delivered by mobile-based agricultural advisory services about sowing time (73.34%) and weather (71.67%). While, in case of overall utilization, majority of the respondents were moderately (72.50%) utilized the mobile based agro-advisory services. Sandhu *et al* (2012) reported that majority of the farmers found agricultural information in the form of SMS through mobile phone as useful (69.3%), comprehensible (74.7%) and timely (64.7%).

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Similar study was carried out by Khan *et al* (2020) in sehore district of Madhya Pradesh with an aim to know the effectiveness of Mobile Agro-Advisory Services in Extension Delivery System and showed that 44.55 per cent had medium effectiveness of mobile based agro-advisory services.

### CONCLUSION

Local language customization and remote transaction services need to be strengthened. Commercial enterprises such as processors, input suppliers and exporters should be motivated to invest in ICT because they often lead to increased efficiency and revenue as well as extension to client base like isolated farmers. Hence, efforts should be made to disseminate complete and precise information on all aspects of crop and related information for harnessing the possibilities of utilizing the information, the mobile service authorities need to take extra care to streamline the system so as to prepare relevant content for maximum utility by the end users. Hence more concentration should be given on demand and need of the farmer rather than the technology. Leaders are needed for the long haul as interventions that require new infrastructure or policy and institutional reforms take years to complete. Voice messages may be preferable than text messages for covering illiterate farmers. KVKs and other extension functionaries can make new platforms to reach the unreached through mobile advisory.

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Received on 23/1/2023

Accepted on 22/4/2023