



# Perception of Farmers towards M-Kisan Initiative

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

India is an agrarian country and risk and uncertainties are omnipresent in the field of agriculture. The farmer's exposure to risk and uncertainty is often provoked by lack of information about required inputs and crop management practices etc. This information gap has adverse impact on production as well as the income of farmers. As use of ICT has strongly influenced every socio-economic aspect to become the most significant motivation of the socio-economic development and poverty reduction, Government of India launched m-Kisan portal to deliver updated information to the farmers through SMS. It is an initiative by the Indian government to provide agricultural services and information to farmers through mobile phones. The mKisan platform allows farmers to receive updates on agricultural practices, weather forecasts, market prices, pest control, and other farming-related advice via SMS, voice messages, and mobile apps. The present study tries to identify the utility perception of the m-kisan users. Data were collected from 120 respondents, from four villages of three different talukas of Bhavnagar district through personal interview schedule during 2022 and

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then after data were compiled, tabulated and analysed to get proper answer for the specific objectives of the study. Slightly more than half (51.67%) of the respondents had medium utility perception.

*Keywords: m-Kisan; utility; perception; farmers; ICT.*

## 1. INTRODUCTION

Agriculture has become an out and out dynamic sector, with ever-changing technologies & practices. For successful management of the farms, farmers need to keep themselves abreast of the changes going on the farm i.e. in terms of new methods and technology as well as around the farm i.e. external factors like prices, markets, weather etc. Farmers' livelihood depends substantially on the decisions they make, which in turn is guided by the information available to them.

India has witnessed a transformation in the information delivery system in the last two decades or so with the invasion of information and communication technologies (ICTs) in all walks of life. In traditional set up, Indian farmers have been following indigenous production methods & would rely upon limited sources of information regarding agriculture like fellow farmers, friends, relatives, input dealers and later on radio television and some print material. But since mid-80's as the economy got liberalized, along with government agencies, cooperatives, NGOs and even private players have become involved in disseminating agricultural information. It has become a major source of acquiring and exchanging of knowledge and has made inroads into the technically under-privileged rural and agriculture sector. Farmers were tapping different knowledge-based sources to improve their pre-production, production and post-production activities. The present information needs are demand driven rather than supply driven as in traditional approach. So, the need is to improve the accessibility of farmers to information and its relevance in the agricultural development. Pervasive and extensive use of the ICT is an important tool of agricultural extension. Under the National e-Governance Plan – Agriculture (NeGP-A), various modes of delivery of e-enabled services have been envisaged. These include internet, touch screen kiosks, agriclinics, private kiosks, mass media, Common Service Centres, Kisan Call Centres, and integrated platforms in the departmental offices coupled with physical outreach of extension personnel equipped with pico-projectors and hand-held

devices. However, mobile telephony (with or without internet) is the most potent and omnipresent tool of agricultural extension. In many developing countries more than 80 per cent of the population have access to mobile phones.

“Among modern ICT modes, mobile phone has been most recent and widely accepted mode of delivering information” [1]. Jensen [2] “demonstrated that the ICT helped fishers along the coastline in Kerala, India learn about prices at different locations and decide where to sell their products profitably. As a result, price volatility and variation dropped; producer prices rose and at the same time consumer prices dropped”. Aker [3] “studied the impact of the mobile phone rollout on grain markets in Niger and show that mobile phone service has reduced grain price dispersion across markets by a minimum of 6.4 percent and reduced intra-annual price variation by 10 per cent”. “Dissemination of Mobile Message Services (MMS) contributed for increased knowledge about farming technologies and information related to weather and agriculture related government schemes disseminated through MMS were more useful for farmers” [4].

“m-Kisan was conceptualized; designed and developed by the Department of Agriculture & Cooperation. SMS Portal was inaugurated by the Hon'ble President of India on July 16, 2013 . About 5.3 crore farmers are linked with mKisan Portal for sending SMS messages on various aspects of agriculture, horticulture and animal husbandry, weather forecast, and pest and disease control” [5]. “These figures are rising ever since. Messages sent through this portal are specific to farmers' specific needs & relevance at a particular point of time. Information deliveries occur through push and pull SMS services. SMS Portal has unique features like database to sift farmers down to Block level & to select specific agricultural commodities/ animal/ bird/ fish, rating/correction of messages by the supervisory officers, searchable database of previous advisories, phone number-wise status report on a dashboard, drillable & graphical dashboard, query review interface with email piping etc. The

m-Kisan disseminates a wide range of personalized information; the critical difference from others is that experts can respond to farmers' queries. Despite the rapid spread and potential of ICTs to facilitate farmer's access to information, many of the initiatives face common challenges, such as issues of sustainability, affordability, ease of use, accessibility, scalability and availability of relevant and localised content in an appropriate language" [6]. Kumar et al. [7] reported that "three top most apps known to the extension functionaries included Cropinsurance, MKisan and AgriMarket, whereas the top three apps recommended to farmers included Crop-insurance, MKisan, AgriMarket and Farm-opedia. Considering the time, effort and money spent behind this initiative, it is important to know the utility perception, constraints faced by the farmers in using m-Kisan. Hence this study was formulated to study the utility perception of farmers towards m-Kisan".

## 2. MATERIALS AND METHODS

The study was conducted on the user farmers availing the service of m-kisan in Bhavnagar district of Gujarat. This district consists of ten talukas viz. Bhavnagar, Ghogha, Sihor, Umralla, Vallbhipur, Talaja, Mahuva, Gariyadhar, Palitana, and Jesar. Out of these, three talukas Bhavnagar, Talaja and Mahuva were selected on the basis of a greater number of users available. Selection of respondents was done randomly, but talukas were selected based on m kisan subscribers roughly speculated based on the size of the village and taluka. From each taluka, 40 respondents were selected, thus a sample size of 120 respondents were interviewed by random sampling technique selection to satisfy

the purpose of the study. Present study was confined to ex-post facto research design as the independent variables are already operated in study area. Interview schedule was prepared in light of the objectives of the study. Interview schedule prepared was pre-tested with 30 user farmers from non-sample area and required alterations were incorporated in the final draft of an instrument for data collection. The data collected were coded, processed, tabulated, classified and analysed. Frequency and percentage analysis were used for the study.

## 3. RESULTS AND DISCUSSION

Farmers obtain information from one or another source mainly for two purposes. Either to solve the existing problem or to improve the current situation. In such scenario, proper perception of message is terribly important so that the content of the message can be utilized for one or another purpose. Keeping this view in mind, the utility perception of m kisan users was recorded as shown in the below table.

From Table 1, it can be noted that about 31.33 per cent of the m-Kisan users strongly agreed that the registration process of m-Kisan is easy. More than half (65.00 per cent) of the m-Kisan users disagreed to strongly disagreed that m-Kisan users are progressive farmers. It can be seen that 50.83 per cent of the respondents agreed to strongly agreed to the statement that m-Kisan farmers adopt improved recommendations related to farming quickly. The study also points out that slightly more than half (51.67 per cent) of m-Kisan farmers perceived that m Kisan aids in solving farmers scientific

**Table 1. m-Kisan users according to the utility perception**

No.	Statement	SDA	DA	UD	A	SA
		In Percentage				
1	The registration process of m-Kisan is easy.	10.33	17.50	19.17	21.17	<b>31.33</b>
2	m-Kisan users are progressive farmers.	16.67	<b>48.33</b>	13.33	19.17	2.5
3	m-Kisan farmers adopt improved recommendations related to farming quickly.	10.00	27.5	11.67	<b>46.67</b>	4.16
4	m-Kisan aids in solving farmers scientific problems.	14.16	10.50	14.17	<b>51.67</b>	9.50
5	m-Kisan messages are received as and when required.	25.67	<b>36.67</b>	12.50	15.16	10.00
6	m-Kisan messages can be perceived and understood easily.	15.83	14.83	16.67	<b>41.67</b>	21.00
7	I recommend other farmers to join m-Kisan	15.00	13.33	13.33	15.84	<b>42.50</b>
8	m-Kisan helps farmer to fetch more production leading to more economic benefits.	14.16	25.67	05.00	35.84	19.33

(SDA- Strongly Agree, A-Agree, UN-Undecided, DA-Disagree and SDA-Strongly Disagree)

**Table 2. Overall utility perception of mKisan users**

Sr. No.	Overall Utility Perception	Frequency	Percentage
1	Low	24	20.00
2	Medium	75	62.50
3	High	21	17.50
<b>Total</b>		<b>120</b>	<b>100.00</b>

problems. This finding is in line with the findings of Kennedy [8] and Govind et al. [9]. About 62.34 per cent of the m-Kisan users disagreed to strongly disagreed to the statement that m-Kisan messages are received as and when required. It can be observed that 62.67 per cent of the m-Kisan users agreed to strongly agreed that m-Kisan messages can be perceived and understood easily. This might be due to the fact that m-Kisan contains sequential presentation of message or information in simple sentences and in local dialect. This finding is in line with the findings of Aker and Mbiti [10] and Govind et al. [9]. It is interesting to note that 58.34 per cent of the respondents agreed to strongly agreed to recommend other farmers to join m-Kisan. About 55.17 per cent agreed to strongly agreed that m-Kisan helps farmer to fetch more production leading to more economic benefits. This finding is in line with the findings of Rizvi [11] and Govind et al. [9].

Table 2 it can be concluded that above 62.5% of the total respondents had medium utility perception, followed by 20% having low utility perception and only 17.5% having high utility perception of m-Kisan. Hence it can be concluded that the overall utility perception of m-kisan users towards m-Kisan is medium. The possible reason behind the medium utility perception can be the uncoordinated content of the message, poor time of the message and no feedback mechanism.

#### 4. CONCLUSION

Medium to low level of utility perception of m-Kisan was observed among majority of the respondents. Further, the findings suggest that messages sent were easy and understandable, m-Kisan aids in solving scientific problems. But the messages were not received as and when required. Hence, efforts should be made to disseminate timely and precise information on all aspects of agriculture and allied activities to further increase the utility perception.

#### DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models

(ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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