

Kisan Call Centre: A New Vista for Indian Agricultural Extension System

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Kisan Call Center: 1800-180-1551 (from any Landline or Mobile)/ 1551 (from BSNL Landline)

Abstract

Given its range of agro-ecological setting and producers, Indian Agriculture is faced with a great diversity of needs, opportunities and prospects. The well endowed irrigated areas which account for 37 percent of the country's cultivated land currently contribute about 55 percent of agricultural production, whereas, rain fed agriculture which covers 63 percent accounts for only 45 percent of agricultural production. In these less favorable areas, yields are not only low but also highly unstable and technology transfer gaps are much wider as compared to those in irrigated areas. If it is to respond successfully to these challenges, greater attention will have to be paid to information-based technologies. Strengthened means of dissemination will be needed to transmit this information to farmers. Both technology generation and transfer will have to focus more strongly than ever before on the themes of optimization in the management of their available resources by producers, sustainability, coping with diversity by adapting technology more specifically to agro-ecological or social circumstances and raising the economic efficiency of agriculture. To make information transfer more effective, greater use will need to be made of modern information technology and communication among researchers, extension workers and farmers.

Keywords: Information needs, Kisan call centres, Indian agriculture

The challenges before Indian Agriculture are immense. This sector needs to grow at a faster rate than in the past to allow for higher per capita income and consumption. It is an accepted fact that the sound agricultural development is essential for the overall

economic progress. About two thirds of workforce directly or indirectly dependent on agriculture. This sector generates about 28 percent of its GDP and over 15 percent of exports. Rising consumer prosperity and the search by farmers for higher incomes will simultaneously drive crop diversification. Export opportunities for agricultural products are also expected to continue to grow, provided India could meet the stability, quality and presentation standards demanded by foreign trade and consumers and maintain its comparative advantage as a relatively low cost producer. Given its range of agro-ecological setting and producers, Indian Agriculture is faced with a great diversity of needs, opportunities and prospects.

The well endowed irrigated areas which account for 37 percent of the country's cultivated land currently contribute about 55 percent of agricultural production, whereas, rain fed agriculture which covers 63 percent accounts for only 45 percent of agricultural production. In these less favorable areas, yields are not only low but also highly unstable and technology transfer gaps are much wider as compared to those in irrigated areas. If it is to respond successfully to these challenges, greater attention will have to be paid to information-based technologies. Strengthened means of dissemination will be needed to transmit this information to farmers.

Both technology generation and transfer will have to focus more strongly than ever before on the themes of optimization in the management of their available resources by producers, sustainability, coping with diversity by adapting technology more specifically to agro-ecological or social circumstances and raising the economic efficiency of agriculture. To make information transfer more effective, greater use will need to be made of modern information technology and communication among researchers, extension workers and farmers. Public extension system requires a paradigm shift from top-down, blanket dissemination of technological packages, towards providing producers with the knowledge and understanding with which they solve their own location - specific problems.

Continuous two-way interaction among the farmers and agricultural scientists is the most critical component of Agricultural Extension. At present, the issues have been addressed by the Extension Systems of State Departments of Agriculture, State Agricultural Universities (SAUs), KVKs, NGOs, Private Extension Services through various extension approaches in transfer of technology. Keeping these in view, a limitation in Transfer of Technology (TOT) model continues to remain a challenge for the public and private extension systems.

With the availability of telephone and Internet, it is now possible to bridge this gap to quite a large extent by using an appropriate mix of technologies. The Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India has launched Kisan Call Centers with a view to leverage the extensive, expensive and large public extension network.

The purpose of these call centre is to respond to issues raised by farmers, instantly, in the local language. The Directorate of Jute Development (DJD), Kolkata has been made the Nodal Office in respect of Bihar, Jharkhand, Orissa and West Bengal. The Kisan Call Centre (KCC), Kolkata assigned to handle calls from these States. Besides, KCC, Kolkata has also assigned to handle calls in respect of all North-Eastern States and SFAC, Guwahati has been made the Nodal Office to monitor the activities. During the March 2006, KCC Guwahati has been established and six North-Eastern States i.e. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram and Nagaland has been shifted to this call centre.

The Assam Agriculture University, Jorhat has been assigned the Nodal office for KCC Guwahati. Query related to agriculture and allied sectors are being addressed through this KCC in respect of these States. The DJD is continuously monitoring the activities of KCC, Kolkata in respect of assigned States, with concern circles of BSNL for smooth functioning of the Call Center. The DJD is also feeding the necessary back up to the Ministry for making the necessary programmes for further improvement of the Call Centers.

OPERATIONAL MECHANISM

A Kisan Call Center consists of a complex of telecommunication infrastructure, computer support and human resources organized to manage effectively and efficiently the queries raised by farmers instantly in the local language. Mainly, Subject Matter Specialists (SMSs) using telephone and computer, interact with farmers to understand the problem and answer the queries at a Call Centre.

This is a functional area within an organization like Research Stations, ATICs, KVKs Agricultural Colleges, or an outsourced, where separate facilities exist solely to answer inbound calls or make outbound telephone calls, to resolve the queries of pending calls. Usually it refers to a sophisticated voice operations center that provides a full range of inbound or outbound call handling services including customer support, direct assistance, multi-lingual customer support and other services.

This is a new dimension in Agriculture Extension Management, which takes account of, and makes full use of on-going information and communication revolution, by optimally utilizing the communication bandwidth to serve the farming community in remotest areas of the country by connecting them to best of the agricultural scientific community.

This is an important value multiplier for the existing extension mechanisms, which find it otherwise difficult (in terms of infrastructure and finances) to reach their desired clientele. This will enable establishment of close linkages and seamless communication mechanism among the key stakeholders in the extension system namely Agricultural Scientists, Extension Functionaries, Farmers and Marketing Agencies.

The Kisan Call Center is a synthesis of two hitherto separate technologies namely, the Information and Communication Technology (ICT) and the Agricultural Technology. Both have their specialized domains and work cultures. To optimally utilize the strengths of both these systems, it was proposed to take full advantage of professionally managed Call Centre mechanism and dovetail it with the specialized Subject Matter Specialists knowledge of Agricultural Scientists and Extension Officers, so as to facilitate its reach to the farming community.

It is accordingly proposed to make use of existing specialized infrastructure of Call Centers (which are normally industry-driven and serve to high-end and many a times, mission critical service sector) and make this communication backbone available to the Subject Matter Specialists of Agriculture, Horticulture, Animal Husbandry, Marketing and other related areas. The Kisan Call Center, consists of three levels namely Level-I (the basic Call Center interface, with high quality bandwidth and local language proficient Agriculture Graduate), Level-II (Subject Matter Specialists on concerned important crops and enterprises, connected through good bandwidth telecom and computer connectivity) and Level-III (the Management Group to ensure ultimate answering and resolution of all the farmers queries which are not resolved at Level-II, connected on off line mode).

Level of Operation of KCC

The Kisan Call Center, consists of three levels – namely **Level-I** (the basic Call Center interface, with high quality bandwidth and local language proficient Agriculture Graduate sitting at KCC, Kolkata), **Level-II** (Subject Matter Specialists on concerned important crops and enterprises, connected through incoming telephone line available at five locations in respect of West Bengal, four location in respect of Bihar, at three Locations in respect of Orissa and at two locations in respect of Jharkhand. **Level-III** (the Management Group to ensure ultimate answering and resolution of all the farmer's query which are not resolved at Level-II, connected on off line mode).

MODE OF OPERATION OF KCC

Infrastructure

The Kisan Call Center infrastructure is placed at three locations namely:

1. A professionally managed Call Center (Level- I)
2. A Response Center in each organization, where services of Subject Matter Specialists are made available (Level - II)
3. The Nodal Cell (Level - III)

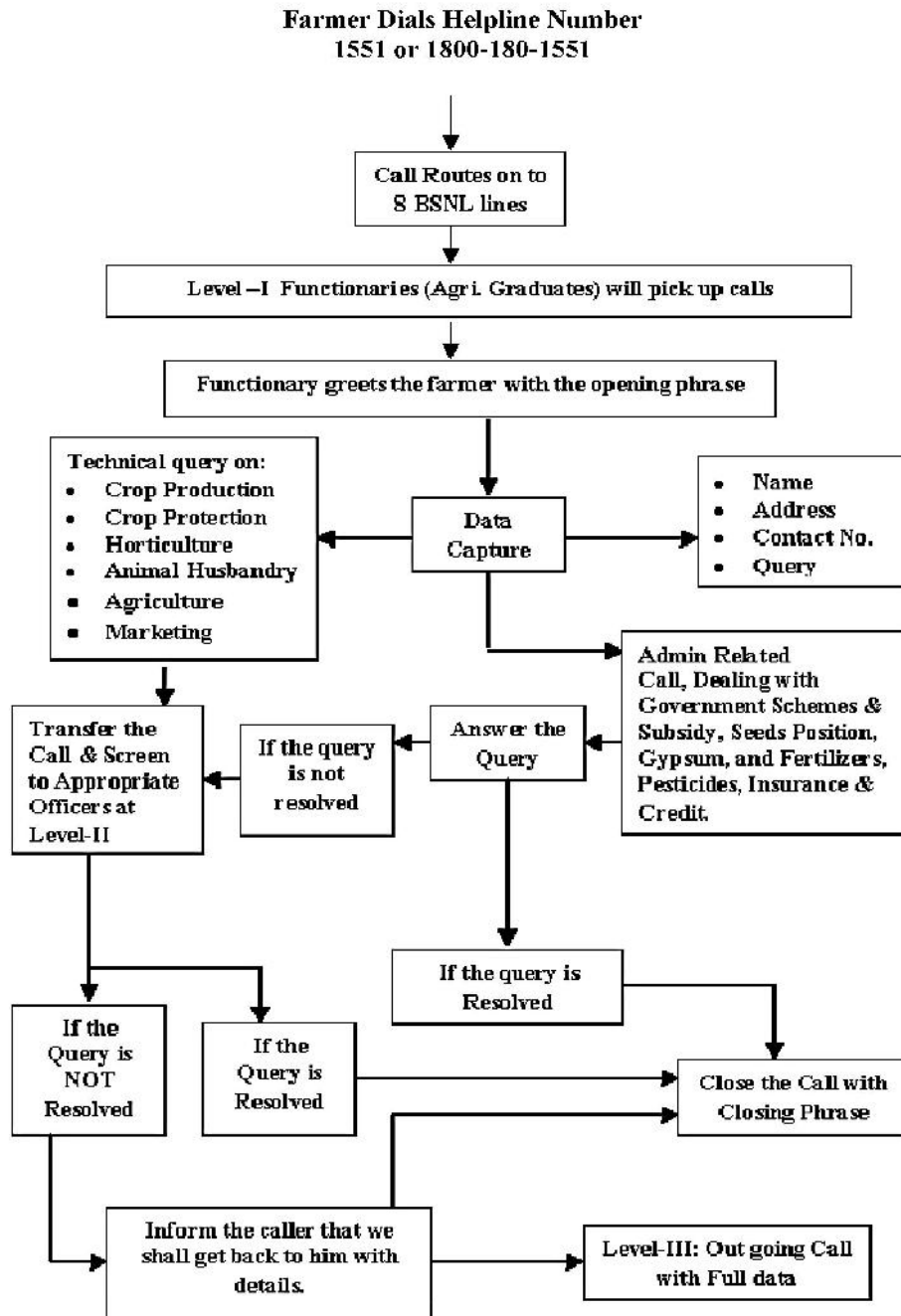


Fig. 1: Schematic Diagram of Operational Functioning of Kisan Call Centre

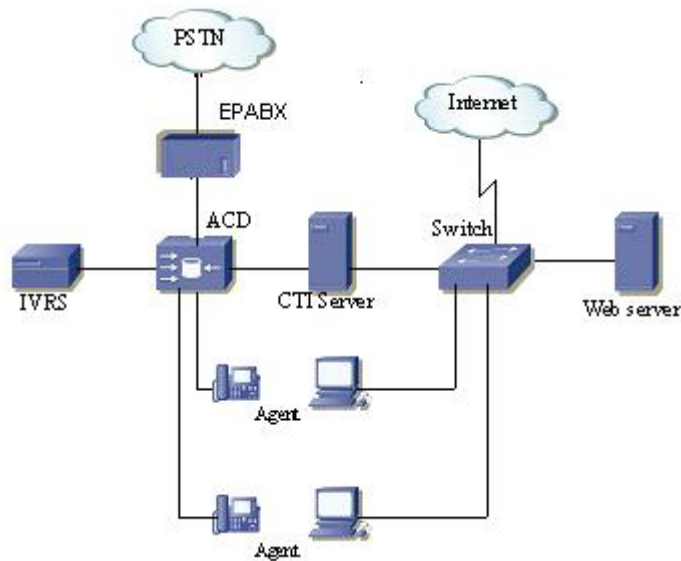


Fig. 2: Schematic Diagram of Required Infrastructure for Kisan Call Centre

Source: Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India - 2011.

Reference: 'RFP / KCC / DAC / 2011'; October, 2011.

Skills Required at Different Levels in Kisan Call Centres

- (a) **Facilitation Skills:** When a call received at the Level-I and Level-II, the receivers welcome the caller by Greetings and facilitate him in presenting the problem in a focused way by giving a lead to his query in the following way:
- Speak in Farmer's language
 - Use Easy words
 - Use short sentences
 - Give patient listening to understand the local conditions and Farmer's situation for the query he raises.
 - Diagnose the problem by probing the details.
 - Answering the query at the level of farmer's knowledge.
- (b) **Communication Skills:**
- Empathies with the farmer
 - Listen actively for content and feeling
 - Exhibit commitment and interest to convince the farmer
 - Avoid defensiveness in conversation.

- Use personal words in conversation
- Relate with local experiences, if possible.
- Avoid use of unnecessary and complex words and sentences.
- Smooth transition in voice.
- Speak politely.
- Close call with greetings.

(c) Computer Skills:

- Basic knowledge of key board and mouse.
- Basic knowledge of Internet.
- Sending and Receiving E-mails.

Monitoring and Review

For successful functioning of Kisan Call Centers, there is a need to monitor and review the various activities of the KCC by the Nodal Institution on regular basis. The Nodal Institution is responsible for documenting the daily activities of the Kisan Call Center at various levels on farmers' queries and their resolution, availability of Subject Matter Specialists, call dropouts and their transfer to Level-III and response to the farmers within 72 hours. The Nodal Institution will also organize fortnightly meetings with the Heads of Departments of Response Centers for first 6 months to ensure the proper identification and placement and changes if necessary of Level - II functionaries and resolution of the queries shared with Subject Matter Specialists and their documentation. Subsequently, these meetings will be held every month in Response Centers on rotation. The Department of Agriculture and Cooperation (DAC), Ministry of Agriculture (MOA), Govt. of India will review the functioning of all the Kisan Call Centers with the Heads of Nodal Institutions every month to start with for first six months and subsequently for every quarter in each of the Nodal Institution on rotation basis.

Documentation and Reporting

The Nodal Institution is responsible for documentation and reporting. The Officer In-charge of the Nodal Institution will gather the reports from the Kisan Call Center/ Response Centers and prepare a consolidated statement on farmers queries and answers, crop/enterprise-wise, along with the resolutions given at Level-III and report to the Department of Agriculture and Cooperation (DAC), Ministry of Agriculture (MOA), Govt. of India through e-mail on fortnightly basis.

All the proceedings of the Kisan Call Center will be documented by each of the Nodal Institution and shared with other Kisan Call Centers for preparing a database on crop / enterprise-wise and also to prepare Frequently Asked Questions (FAQs).

Source: TNAU Agritech Portal :: Kisan Call Center (1800-180-1551)

<http://agritech.tnau.ac.in/kisan/kisan.html>

Some Recent Trends in the Functioning of the Kisan Call Centres in India

Kissan Call Centers (KCC) established for the solutions of the different problems of farmers in India. These are established in the 25 different states. Farmers from different areas of the country ask questions about their problem and scientists of agriculture are available to solve the problems by giving answers of questions.

As many as 1.11 million called the agriculture ministry's Kisan call centre helpline in June, 2014 of which 450,000 went unanswered. Indian farmers, the majority of whom rely on monsoon rainfall to water their crops, are desperately trying to reach out for help even as the spectre of drought looms over several parts of the country. As many as 1.11 million farmers from across the country called the agriculture ministry's Kisan Call Centre (KCC) helpline in June, 2014. Over 450,000 of the calls went unanswered. The number of landed calls is expected to reach 1.6 million in July, 2014 of which the number of unanswered calls could swell to more than 60 percent. In May, 2014, 769,000 calls landed at the KCC, of which 170,000 or 22 percent calls were unanswered (**Source:** live Mint and the Wall Street Journal, 11th September, 2014.)

In May 2012, the number of landed calls stood at 400,000. The farmers calling up the toll-free KCC number were looking for information on the delayed monsoon and enquired about which crop varieties to use and where recommended seeds are available, among others. The nation's monsoon deficit was as high as 43 percent of the long-period average in June, 2014 and triggered fears of a country-wide drought. As of 24th July, 2014 the overall deficit narrowed to 24 percent, but the spread of monsoon remains uneven with 21 of the 36 meteorological divisions facing a rainfall deficit between 20 percent and 59 percent. Crop sowing for kharif, the country's main agricultural season, touched 53.3 million hectares on 24th July, 2014 nearly 30 percent lower than the area sown last year by this time.

"There is no better way for a government to engage with farmers—when one person makes a call, he is doing so with a lot of hope, often putting across the needs of his village and community. Such large chunk of calls going unanswered is a disservice to the farming community, especially at an hour of distress," said an official familiar with the project who spoke on the condition of anonymity. He also shared some of the aggregate numbers relating to KCC calls with Mint.

The calls received by KCC are categorized according to the nature of the query and place of origin. This ready source of information on the multitude of problems faced by farmers seeking information and solutions can guide policymakers and agricultural scientists. Since February 2012, the facility is managed by IKSL, a joint venture of Indian Farmers Fertilizer Cooperative Ltd (IFFCO), telecom giant Bharti Airtel Ltd and Star Global Resources Ltd.

Unless a farmer sees value in a service, he won't be calling back. Now, quality is driving demand. About 25 percent of unanswered calls are due to shortage of staff. The rest could be a case of repeated calling and irrelevant, or blank, calls - this is the opinion of the Directorate of IT and Extension Management at the Department of Agriculture and Cooperation, Govt. of India. Currently, 376 people are employed by 14 KCCs that cater to farmers from 26 states. They also opined that if a farmer cannot get through, the Call Centre Agents call back in lean hours in the evening. But according to their estimates, there is a gap in the ideal and actual numbers of Call Centre Agents and they also told that the plans are afoot to add 100 more seats in the call centres all over the India. The Department of Agriculture and Cooperation is also considering placing the information regarding farmer's queries in public domain.

"The spike in calls received by KCCs could be attributed to prevailing drought conditions. However, the rising number of calls gives us hope," said Avinash Kishore, an Associate Research Fellow at the International Food Policy Research Institute, Delhi. "India has a huge challenge in extension management. Marginal farmers who are scattered, barely literate and speak in different languages need to take agriculture to the next level. Physical extension models are costly and have not worked for India and KCCs could be a cost effective way to reach out to farmers." Besides, KCCs are minefields of big data analytics. "The data generated by thousands of queries everyday can be extremely useful in anticipating climate trends or say, the severity of pest attacks in any region. It's time we employ the best data mining techniques, our analytical and computing expertise to analyze realities and predict trends in Indian agriculture," said Kishore.

Information Needs of Indian Farmers and Kisan Call Centres

The information need of the farmers is different according to the state of developments of the concerned rural areas. Information need is also vary from village to village, for e.g. farmers of the wheat production area are required the information about market rate, transport facilities etc. Some studies are found. It is common that most of the farmers need information on various topics such as pest management, disease management (Saravan *et al.*, 2008). It is also prevailing situation in India where the majority of farmers did not access to information for their farming and related activities (Meitei and Devi, 2009). In India, it was also found out that the major constraints to information access for the farmers is poor availability, poor reliability, lack of awareness of information sources available among farmers and untimely provision of information (Babu *et al.*, 2011).

Indian farmers require a diverse range of information to support their farm enterprises. Information is needed not only on best practices and technologies for crop production, which the traditional public-sector extension system provided during the Green Revolution, but also information about postharvest aspects including processing,

marketing, storage, and handling. Farmers require information related to the following (Van den Ban, 1998):

- Most appropriate technological options
- Management of technologies, including optimal use of inputs
- Changing farm system options (mixed farming and diversification, animal husbandry, fisheries)
- Sourcing reputable input suppliers
- Collective action with other farmers
- Consumer and market demands for products
- Quality specifications for produce
- Time to buy inputs and sell produce
- Off-farm income-generation options
- Implications of changing policies (input subsidies, trade liberalization)
- Access to credit and loans
- Sustainable natural resource management and coping with climate change.

The information required will differ between categories of farmers and can be targeted to specific groups, based, for example, on landholding size or agro-climatic region (Rivera, 1996). In addition to needing different types of information and using different information sources, different farmers will have different search behaviors. Factors such as literacy or access to resources will have a large impact on information needs, searching behaviour, access, and use. Swanson (2008) described various target groups: rural and farm women, small and marginal subsistence farmers, medium-scale farmers, commercial farmers, and rural youth. In India, for example, the information needs of the 360 million farmers (expected to rise to 600 million by 2020) who operate under rain fed conditions and contribute 45 percent of production will be different from the needs of farmers in well-endowed irrigated areas (Farrington, Sulaiman, and Pal, 1997; Sulaiman and Holt, 2002).

In most rain fed areas, due to higher temporal and spatial variability in rainfall, nutrient-poor soils, and poor socioeconomic conditions, many farmers are not able to produce beyond the quantity needed for self-consumption. Additionally, livestock plays a greater role in these areas than crop production does, and rain fed regions also employ a greater number of women than irrigated areas do (Rangnekar, 1998). The information needs of resource-poor farmers and farmers operating under rain fed conditions differ substantially from those of farmers who are able to enter the market economy. There is little opportunity to utilize new technologies in rain fed areas because farmers lack the financial means, credit, and capacity to take risks, and consequently technology gaps are much wider in these areas compared to irrigated areas. Due to higher levels of poverty in rain fed agriculture areas, improved access to information is

essential to increase the productivity and profitability of these farmers (Planning Commission, 2006). In addition, integrating information with supporting services and inputs is important and will have a greater effect than providing information alone.

And here lies the importance of the Kisan Call Centres being established in India across the country. The Indian Agriculture is on the threshold of a second revolution. It is becoming increasingly clear that the next leap will come from the information and the knowledge intensity transfer to the agriculture sector, together with the other traditional inputs and interventions. The real challenge before the policy makers is to overcome the information asymmetry between farmer and farmer, village and village, region and region and the country as a whole versus other countries. Fortunately, the developments in the field of communication and information technology in India make it possible to attempt this task.

One of the draw-backs experienced in the current human resource based extension service has been that the monitoring authorities are not able to get a clear feedback on the quality of extension services being delivered in the villages. Further, the extension services delivered is knowledge and information based on felt needs and what has been given to them by the higher authorities. On the other hand a call centre based extension service will be delivering knowledge and information exactly as per the requirements of the farming community. This system would also help keep a record of what is being delivered to the farmers in terms of knowledge and information.

CONCLUSION

The challenges before Indian Agriculture are immense. This sector needs to grow at a faster rate than in the past to allow for higher per capita income and consumption. It is an accepted fact that the sound agricultural development is essential for the overall economic progress. About two thirds of workforce is dependent on agriculture directly or indirectly. This sector generates about 28 percent of its GDP and over 15 percent of exports. Rising consumer prosperity and the search by farmers for higher incomes will simultaneously drive crop diversification. Export opportunities for agricultural products are also expected to continue to grow, provided India could meet the stability, quality and presentation standards demanded by foreign trade and consumers and maintain its comparative advantage as a relatively low cost producer.

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Public extension system requires a paradigm shift from top-down, blanket dissemination of technological packages, towards providing producers with the knowledge and understanding with which they solve their own location — specific problems. Continuous two-way interaction among the farmers and agricultural scientists is the most critical component of Agricultural Extension.

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The Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India has launched Kisan Call Centers with a view to leverage the extensive telecom infrastructure in the country to deliver extension services to the farming community. The purpose of these Call Centers is mainly to respond to issues raised by farmers instantly in the local language, on continuous basis.

But it is not just technology and information that the Kisan Call Centres (KCCs) operators have to focus on. Customer relations, in other words a humane and empathetic farmer-sensitive approach, are required. And it is here that the call centre agents play a catalytic role. All the staff of a KCC is to be coached to be farmer-friendly. They are required to speak in the farmer's dialect and to be empathetic. Easy words, short sentences and a patient hearing to understand the local conditions and the farmer's problems are critical requirements for the KCC Project to succeed.

Last mile connectivity of Indian farmers with the research and scientific knowledge in the country remains a challenge. National Sample Survey Organization's 'Situation Assessment Survey of Farmers' published in 2005 found that nearly 60 percent of farm households had no access to information on modern technology, and those who did receive any information did so from other farmers, input dealers, or listening to the radio. Kisan Call Centres (KCCs) could well be the game-changer.

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