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After coping with tough times  
India Inc is  
**BACK ON THE GROWTH TRACK**

# A noble prescription

The recently launched mobile-enabled information services can bridge the existing gap in the agri-system

**A**fter years of good monsoon in succession, agriculture output is severely under pressure this year, as rains have eluded a large portion of the crop-growing areas in the country. About 35 per cent of the districts across India have been declared drought-hit or deficient in terms of rainfall. In fact, the prime minister has said that there is need for another green revolution to ramp up the overall production of the agriculture sector which, for the past couple of years, has been showing a rather weak growth rate at around 2.5 per cent.

The adverse biotic condition has also brought to the fore many systemic gaps, the bridging of which can go a long way in not only offsetting the adverse impact of natural vagaries, but also boosting the country's overall agriculture productivity and output. At present, only 40 per cent of farm area in the country is irrigated.

For long, the nation's paramount concern has been the existence of a weak agriculture extension system that has almost cramped the facilitation of transfer of technology and other vital crop-related information to farmers, who often struggle to access quality inputs such as seeds, pesticides and fertilisers. A national survey of farmers has found that only 40 per cent of farmer households have access to information about modern agriculture techniques and inputs. The most common source of information for farmers is other progressive farmers, followed by input dealers. The relevance of information available is another big issue. For example, in case of weather forecasts, these are typically broad-based, state-level forecasts, which are too general to ensure effective planning and action.

"Undoubtedly, there are plenty of limitations in the present extension system and there is need for a concerted attempt, which calls for improved participation from govern-



Mehra: strengthening the network

ment as well as private agencies," says A.K. Basu, agriculture scientist.

As traditional ways and means are reaching saturation levels, recent efforts by players such as Reuters, Nokia, Indian Farmers Fertilisers Cooperatives Ltd (IFFCO) and others to disseminate agriculture-related information to farmers through mobile network can bring about a revolutionary transformation in the entire agriculture system. These companies are trying to reach out to the farming community with crucial information regarding inputs, weather, plant protection, new technologies and crop management practices by way of their mobile-enabled information services.

"The increasing penetration of mobile networks in rural areas presents a massive opportunity to make useful information easily and widely available to farmers and enable the existing system to work in a more efficient manner," says A. Barik, director, Directorate of Cotton Development. This organisation has been engaged in various technology transfer pro-

grammes for cotton farmers in the country.

"Dissemination of information through mobile has got huge potential, as it can break the massive information asymmetry that exists in the agriculture system, particularly in case of small farmers," says Surabhi Mittal, senior fellow (specialising in agricultural economics), Indian Council for Research on International Economic Relations (ICRIER), which, in its recent report on impact of mobiles on agricultural productivity, evaluates the nature of that impact in terms of easy access to customised content, mobility and time savings or convenience.

In October 2007, Reuters entered this space with the launch of its mobile-enabled information service, Reuters Market Light (RML) for Indian farmers. RML's customised services are currently text messaged to farmers three times a day:

- 8 am: specific weather update (temperature, humidity and rainfall), applicable to within a radius of 50 km from the farm location;
- 12 noon: customised crop advisory information as per the farmer's current crop; and
- 4 pm: price information for his produce/crop in local *mandis* (markets).

RML's research-based user-friendly services have invoked an encouraging response among farmers in Maharashtra, Punjab and Haryana, where the service is operational at present. RML has already attracted over one lakh farmers spread over 10,000 villages. The service covers over 150 crop types and over 500 markets. On an average, farmers pay Rs200 for a three-month subscription.

"RML's services are quite personalised," says Vijay Sindhe, an RML subscriber and a farmer engaged in floriculture and horticulture in Talegaon, Pune. "Farmers are provided with taluka-specific weather forecasts and prices prevailing in the local markets. This has helped us considerably in decision-making in terms of various farm practices, as also selling our produces at best prices. In fact, our earnings in the past one year have gone up by 10-15 per cent due to the net impact of increased productivity and reduction in losses," he adds.

Encouraged by the response, Reuters plans to spread its services to five more states – Gujarat, Madhya Pradesh, Rajasthan, Karnataka and West Bengal – in the next 3-6 months. It aims to enhance its reach to around 10 lakh farmers in the next two years. RML is also looking to tie up with more mobile operators, as also agencies, for distribution and content.

“Our biggest challenge is distribution and content upgradation, as we move forward,” says Amit Mehra, MD, RML, which offers its services through multiple mobile operators. The company is in discussions with various private and government agencies, as also agri input producers, to strengthen its existing network. It is also joining hands with corporates, agro processing industries, organised retail chains and commodity exchanges.

### Multiple partnerships

After the successful completion of its pilot project in Maharashtra in May this year, Nokia announced the commercial launch of its mobile-based agriculture services – Nokia Life Tools – in June 2009. Along with Maharashtra, where it has entered into a tie-up with Maharashtra State Agriculture Marketing Board (MSAMB) for price-related information from the state’s 291 *mandis*, the mobile major is spreading its wings in 18 more states. On the content front, Nokia has a collaboration with Reuters, which was the exclusive provider of information for the company during its pilot project.



Natesh: timely and relevant information

This apart, Nokia is developing an ecosystem of partners across government and private agencies, as also NGOs, to source relevant information for the agriculture community. “We have formed multiple partnerships in various areas of our operations,” says Natesh B.V., head, emerging markets services, Nokia. “These include Syngenta for crop protection advisory, Delhi-based Skymet for weather forecast, and National Agro Foundation, an NGO, for crop advisory.”

The mobile major has also set up an agri knowledge desk at Bangalore, where a team of around 40 professionals assimilate information from various sources and process it for further

dissemination among farmers. For a monthly subscription of Rs60, a farmer gets the regional market prices of 2-3 crops chosen by him. He also benefits from daily weather update, which is specific to an area within a radius of 100 km, as also crop-related advisories/tips and other agriculture news. Along with content, the company is focussing on its presentation to make it more effective and user-friendly.

“Nokia Life Tools is an icon-led, graphically-rich mobile application, which provides timely and relevant information customised to the user’s location and personal preferences directly on their mobile phones,” states Natesh. “It has the capability to display two languages simultaneously on the same screen.” Since farmers are not very literate, “we have tried to make our services as user-friendly as possible, via an effective combination of multimedia and text messages, as also offering our messages in 11 Indian languages,” adds the Nokia official.

These messages, though currently compatible with the company’s two models – Nokia 2323 Classic and Nokia 2330 Classic – will be expanded to other devices in due course. Moreover, the company plans to collaborate with multiple mobile operators to expand the present base of its services, which are currently available for the subscribers of Idea Cellular.

In fact, IFFCO was the pioneer in this field and through its IFFCO Kisan Sanchar Ltd (IKSL: a joint venture with Bharti Airtel) launched its mobile-

## Easy access

While mobile phones are surely making their presence felt in the agriculture sector, some of the other initiatives based on information technology have also gone a long way in helping farmers. ITC’s e-Choupal, that operates several models of the rural Internet kiosk programme since its launch in June 2000, has brought the power of expert knowledge to even the smallest individuals in rural India. The model has been specifically designed to tackle the challenges posed by the unique features of Indian agriculture, characterised by fragmented farms, weak infrastructure and the involvement

of numerous intermediaries. It also unshackles the potential of the Indian farmer who has been trapped in a vicious cycle of low risk-taking ability, low productivity, low value addition and low margins.

The PCs and Internet access at these centres enable farmers to obtain information on *mandi* prices, good farming practices and place orders for agricultural inputs like seeds and fertilisers. This helps farmers to improve the quality of their produce and also realise a better price. Each ITC kiosk that has access to the Internet is run by a *sanchalak* – a trained farmer. ITC’s e-Choupal network with over 6,000 kiosks currently covers more than 40,000

villages in India and has benefited over four million farmers so far.

Buoyed by this response, the Department of Agriculture & Co-operation under the Union agriculture ministry launched Kisan Call Centres on 21 January 2004 across the country to deliver extension services to the farming community. At present, there are call centres for every state, which are expected to handle traffic from any part of the country. Queries related to agriculture and allied sectors are being addressed through these call centres, which can be accessed by farmers all over the country on a common toll-free number – 1551.

based services in April 2007 in Uttar Pradesh with two farmers' co-operative societies. Today, it has created a network of 27,000 societies in 17 states, excluding Northeastern states and Jammu & Kashmir. "We are aiming to develop our network of farmers to around 50,000 societies by the end of next year," says S.K. Tyagi, VP, IFFCO.

IKSL offers specially designed agriculture-related information for farmers under its unique VAS (value-added service) platform that sends five free voice messages – on *mandi* prices, farming techniques, weather forecast, dairy farming and animal husbandry – among others, on a daily basis. Under this scheme, farmers subscribe to a value-added Kisan Green Card, which is linked to normal Airtel connection.



Farmers using mobile-enabled services have reported improved yield

"We are the only company which offers voice-based services for farmers, who are often more comfortable with such messages," adds Tyagi. "We don't charge them any fee for the same." IKSL has also set up a helpline, comprising a panel of 100 experts from different fields, to answer the specific queries of farmers.

While Nokia is the latest entrant and has to travel some distance before it is able to create an impression, RML and IKSL have been there for some time and managed to evoke encouraging response from the farming community. IFFCO, in case of its mobile-based information service, is well-placed to benefit from its strong geographical presence and relationship with farmers. On the other hand, Reuters,

backed by its sophisticated research base and information delivery system, is well-equipped to meet the specific information requirements of farmers.

#### Personalised services

"What makes us different from others is our personalised and professional services to farmers, who often find it difficult to select their own requirements from general information," says Mehra of RML.

"Overall, we found a significant difference in subscribers' perception of these two information services. The RML service was reported as having information better tailored to the subscriber, as well as greater ease of access. On the other hand, the IKSL service was generally found to be

cultivation practices," states the report. "Farmers who acted on cultivation information reported that they benefited from replacing traditional common sense practices with modern cultivation techniques," it adds.

"Such information has a major impact on the overall farm output in areas where biotic and abiotic conditions are not so favourable for cultivation. Timely intervention through the right kind of prescriptions can help increase yields by 10-25 per cent. We must use our strength in IT and telecom to good effect in agriculture that contributes around 20 per cent to our GDP," says Basu, who believes that the present gap in the system is so big that there is space for multiple players to offer agri-related services to farmers.

Sensing this huge potential, other companies are gearing up to enter this field with their services. Krishak Bharati Co-operative Ltd (KRIBHCO) is said to be in discussions with Reliance Communications and other mobile operators, to launch its information services for farmers. The agriculture department of Maharashtra is in the final stage of launching message services for farmers in the state. The department has reportedly chosen Pune-based Microline India Pvt Ltd, an expert in bulk SMS services, for providing infrastructure and technology. The company will receive finalised text messages from the department, which will be sent to farmers across the state.

Backed by fast-growing mobile penetration, these companies are well-placed to explore the opportunities available in the Indian agricultural space. Participation by multiple players in future will go a long way in improving the quality of these services. While relevance of content and its timely delivery will be the key to long-term success, the low literacy levels among farmers will decide the choice of delivery method. Meeting the requirements of the vast geographical spread, with diversified crop portfolio, will be a big challenge for these operators. Moreover, the real impact of such information services will depend upon the availability of adequate infrastructure support in the agriculture sector.

more hit or miss in the value it delivered and was often described as lacking in relevance to farmers' needs," states a recent ICRIER report.

Moreover, RML's user-friendly approach – information in local languages and that too, in text formats – has made it more acceptable to farmers, who often miss voice mails in case of a service provider like IFFCO. However, IKSL benefits due to IFFCO's extensive reach and partnership base within the farming community. The ICRIER report has also found that farmers using these mobile-enabled services successfully have averted potential losses by reacting quickly to weather and disease information. "Besides, they reported improved yield by adopting new seed varieties and