Adoptable ICT Strategies in India

Two Models of SMS Provide Valuable Lessons

By Aleksandar Pavlovic

India is one of the largest producers of fruits and vegetables in the world, yet the majority of its farmers are smallholders, and like smallholders in most low-income countries, they make a tenuous living. A lack of access—to seeds, fertilizers and machinery; information on good growing practices; and perhaps most importantly, market information—keeps them in poverty.

At the same time, India is at the forefront of the global trend of providing agricultural information to farmers through information and communication technology (ICT) like telephone, radio, internet, and most notably, cell phone short message service (SMS) and voicemail. Companies like Reuters Market Light, Nokia Life Tools, AgriFone and IFFCO Kissan Sanchar Ltd. have taken the lead in developing several models for reaching farmers with timely agricultural information.

Fertile Ground for ICT

Many of these products are still in the testing stage and have yet to be proven commercially viable. Their prospects are strong, however, as India's cell phone use is growing fast. According to the Telecom Regulatory Authority of India, there are over 826 million wireless subscribers in the country, including nearly 280 million in rural areas.

ACDI/VOCA has been involved in some of these efforts to improve farmer access to market opportunities and agricultural information. We began with an application called FreshConnect, which we believe has the potential to be a powerful application for retailers and the horticulture sector.

FreshConnect Designed to Boost Retail Sector

With funding from USAID and market research conducted by Accenture, ACDI/VOCA partnered with Infosys, India's second-largest IT company, to strengthen the emerging organized retail sector and link it to smallholder farmers. We used FreshConnect, a software product owned by Infosys that we developed as part of a larger USAID-funded program, to increase Indian farmers' incomes by organizing and integrating them into efficient supply chains. In this project, we promoted FreshConnect to retail chains, which pay license and maintenance fees.

Working with retail partners such as ITC, Foodland and Hyper City, ACDI/VOCA sought to use FreshConnect to:

- ensure that a scattered base of farmers could receive accurate information from retailers,
- provide extension information that was accurate, timely and related only to the products that the farmers were growing, and
- help establish long-term, transparent relationships between high-value buyers and smallholder farmers.

FreshConnect has the potential to help retail chains ensure that their extension workers deliver the right information to farmers and coordinate the supply of vegetables from different clusters of farmers, depending on the chains' daily or weekly needs.

This will ultimately strengthen the horticulture value chain, but in the short term, FreshConnect is not designed to directly reach large numbers of farmers. Instead, it was tailored to serve the needs of new private sector buyers who are venturing into organized sourcing and marketing of fresh produce.

Economic Slump Slows Progress

Infosys has worked on commercializing FreshConnect, but has faced delays. The protracted financial crisis and resulting decline in retail expansion

Continued on next page »

» Continued from previous page

have slowed its progress; it has made it harder to establish new relationships between retailers and farmers and increased farmers' risk-aversion.

As a supply chain management tool, it shows promise, but it requires investment from the retail sector in practical knowledge regarding the horticulture industry and its realities. The information flowing through FreshConnect is crop-specific, seasonal and dependent on weather conditions, and it must be maintained by specialists in horticulture and marketing in order to stay relevant. And to be marketable to retailers, FreshConnect must be flexible and inexpensive, with low maintenance fees.

The main drawback, from our perspective, is that retail chains do not have the capacity to include large numbers of farmers within their supply-chain system (it takes anywhere from five to 100 farmers to supply a retail chain store) and that FreshConnect targets the more progressive farmers who are already better able to respond to retailer requirements.

We decided that in order for an ICT tool to have a meaningful, widespread impact, it had to be integrated into a market system that already works closely with smallholder farmers, it needed to allow two-way communication with farmers and it had to have clear potential for scale. We shifted our focus to working on an application that would more directly address the needs of smallholder farmers.

Sunhara Builds on Farmers' Trust

Under the Sunhara India project, which is funded by the Bill & Melinda Gates Foundation, ASI (an ACDI/VOCA subsidiary) has channeled lessons learned from the FreshConnect model to develop a practical ICT application that farmers can easily adopt and use on a wide scale. Using ACDI/VOCA's signature value chain approach, the Sunhara project works through well-established relationships in agriculture value chains to provide information to farmers about efficient production and new technologies and inputs.

Sunhara has partnered with Khushali Krishi Kendra, an agribusiness with more than 80 ag-supply retail stores around Uttar Pradesh (one of the poorest states in India), to develop an SMS- and voice mail-based product to deliver local, up-to-date and accurate extension and market information to more than 150,000 farmers. Farmers traditionally depend on local retailers like Khushali for seeds, fertilizer, etc., as well as crop advice and in some cases, credit. These relationships are based on familiarity and trust, which makes it easier to introduce new technologies and practices.

Local Information Free to Farmers

Khushali was selected because it is a reputable company that is recognized and trusted within the farming community and known for its high-quality products and services. The partnership between Khushali and Sunhara represents a new approach to developing a sustainable and practical information-delivery system, and it offers attractive benefits to farmers:

- **It's free to farmers.** Farmers are not expected to pay for the service—it is funded by the input suppliers who use the Khushali distribution outlets. The service is an extension tool and added benefit for the farmers who are buying products from Khushali centers. This means the farmers take on no cost or risk in using ICT services, and the Khushali centers encourage the loyalty of their customers, who are more likely to return to their stores.

- **The messages are tailored.** The names, locations and, most importantly, preferred products and range of seasonal produce are collected from each farmer-customer. Based on this information, messages can be tailored to the farmers' needs and sent at their request, rather than overcrowding communication channels with messages that may not be relevant to every farmer.

- **The content is region- and product-specific.** The content of the messages (information on crops, weather, pests, products, prices, etc.) is developed locally and specific to regional conditions and products. The content can be adjusted easily, giving it a flexible design.

- **Communication goes both ways.** Not only is information sent to farmers, but they also have the option to call their local center with follow-up questions. This is very important to ICT adoption at the farmer level. Because this service is localized, farmers always can visit the nearest Khushali center and have their extension agents verify information, rather than be forwarded to a major call center in, say, Delhi. This is an important upgrade from other ICT services that provide information that is impersonal and sometimes inaccurate. By building on the established familiarity and trust of local relationships, farmers' confidence in the product and information is stronger.

A Replicable Model to Strengthen Agriculture

Building on previous learning from ACDI/VOCA's ICT-focused work, Sunhara is promoting a sustainable and easily commercialized model based on several basic marketing principles: Input suppliers are key market players who are willing to invest in farmers; service must be flexible, localized and specific to the audience; and finally, farmers must trust the information and its supplier before they will adopt the products.

With the right facilitation and proper intervention, this model can be successfully replicated around the world, benefiting farmers, strengthening value chains and building more vibrant agricultural production systems.

Aleksandar Pavlovic is managing director of the Sunhara India Project.