CABI DIRECT2FARM

Water Smart Agriculture

In this third issue of the Direct2Farm newsletter, we would like to highlight some of the advantages of water management, which can help farmers to improve yields without putting already scarce water resources under further strain; truly water smart agriculture.

The emerging problem of water stress caused by water shortages or high soil salinity, combined with unexpected weather conditions due to climate change, such as drought & floods, have made the cautious use of water essential. Solutions to this problem include the cultivation of crops that require less water, and the promotion of water saving techniques.

Promoting the cultivation of millet crops like pearl millet, finger millet and foxtail millet, is beneficial when there is water scarcity or in drought prone areas, as these crops demand less from irrigation systems. It is equally possible to grow these dryland crops in other areas to conserve water as a preventative measure.

In addition to careful crop selection, various water saving techniques can also be used such as laser leveling, drip irrigation or micro-irrigation, bottle irrigation, Zai pit, Systems of Rice or Wheat Intensification (SRI, SWI) and wet-and-dry irrigation methods. These techniques can help to save 50-70% of the water used compared to conventional irrigation.

Thus, water smart agriculture can play a substantial role in conserving water and helping farmers to build resilience against the adverse impacts of climate change and water scarcity.

It is important to communicate the benefits of cultivating millet crops and information on water saving techniques to farmers so they can adopt these techniques into their conventional farming practices. Here, the Direct2Farm platform can be used to disseminate the information directly to the farmers and promote the concept of water smart agriculture by using mobile phones. The growing penetration of mobile phones in rural areas can help to generate wide-scale awareness on these topics.

mKisan Call Centre
successfully launched across 3 states

mKisan is a distinctive mobile-based extension service running across six states of India. This service provides inclusive information and advice on a wide range of relevant topics covering crops and livestock. Agriculture bulletins, comprising agro-meteorological advisory, information on market prices and pest alerts, are also being disseminated through this network.

The service is supported by the Bill & Melinda Gates Foundation under the mAgri program of GSMA. In a new development, mKisan has recently launched a call centre across three Hindi speaking states of central and eastern India, (Madhya Pradesh, Bihar and Uttar Pradesh). By dialing 556780 from their mobile phone, farmers can access the mKisan service and call centre in these three states. The call centre will help farmers to directly connect with subject matter experts to get answers to their farm-related queries.

As part of the call centre, a farmers' interface and an experts' interface have been created on an IVR (Interactive Voice Response) system. The interfaces allow users to select a subject matter (e.g. insect related problems), record a query, answer a query, listen to the solution to an answered query etc. Using this system, if an expert is not available, farmers can record their queries and the expert can provide answers to queries when they are logged-in through their mobile phone.

A usage report based on call centre data gathered in 20 days of July 2013 shows caller trends (see table below). The report is quite encouraging for the first month of operation.

The call centre will help to generate analytics on call patterns for crops & livestock and will highlight the kind of problems which are faced by farmers in the field. Both the number and types of query will be recorded and individual farmer queries will be analyzed to develop a picture of the everyday issues the farmers are dealing with.

Fig. 1: July 2013 call centre analytics on calls received by subject matter

IKSL content management

Dr GC Shrotriya is explaining about good content management to a content executive.

Fast growth in mobile use and innovation in ICT have revolutionized the communication sector. Mobile is now being leveraged to fulfill the information needs of millions of people in different walks of life. Mobiles have enabled agriculture extension systems to deliver recent technological advances to individual farmers. However, the task of providing critical, time sensitive, relevant information to rural listeners is not a simple one.

For the past 5 years, IFFCO Kisan Sanchar Limited (IKSL) has been empowering farmers to make better decisions through disseminating information. The information provided must be both valued and understood by the audience. Thus, the information has to be presented in a simple and interesting way, with actionable points included. It was considered most effective to provide information in the form of voice messages in the farmers' own language.

With the active collaboration of CABI–India, a system of assessing information needs was developed based on the cropping patterns and crop calendar of the area combined with feedback from the farmers.

The content management system for the service consists of the content source, a protocol for drafting suitable messages, content audits and a content repository in the form of factsheets and documented messages. Internally

IKSL have also developed an Integrated Information Management System (IIMS) which has documentation from all the content functions and generates various reports and management information.

The whole system of content management supports the Content Managers in disseminating content effectively and efficiently.

Dr GC Shrotriya, National Head (Value Added Services), IKSL, New Delhi. **E**: Shrotriya.iksl@iffco.in

Dr GC Shrotriya is demonstrating nutrient deficiency symptoms in maize crops with farmers.

Café Móvel Launches

The Café Móvel Service was formally launched on 22nd August 2013 by Padmashree MS Rao, IAS, Secretary, Department of Commerce, Ministry of Commerce & Industry, Government of India at Chickmagalur, Karnataka. The dignitaries present in the occasion were JS Deepak, IAS, Assistant Secretary, Department of Commerce, Ministry of Commerce & Industry, Government of India, Jawaid Akhtar, IAS, Chairman of the Coffee Board, the Deputy Commissioner of Chikmagalur district and other senior officials from the Coffee Board.

Café Móvel (meaning mobile coffee in Portuguese) is a mobile enabled extension service for the coffee farmers of India. The service is aimed at enhancing the efficiency and impact of the coffee extension service of the Indian Coffee Board, by innovative use of mobile technology. This service is designed, deployed and maintained by CABI, with help from the Coffee Board of India and with financial support from the International Coffee Organization and Common Fund for Commodities.

The Café Móvel service is based on IVR (Interactive Voice Response) technology, hybridized with text applications such as SMS and USSD. The key functionalities available in the IVR are:

1. Interactive Learning: through FAQ (Frequently Asked Question) on coffee production in India and alerts providing needs-based information such as weather, market price and pest prevalence. A unique feature of the "interactive learning" function is that, while listening to any message, the listener, can ask questions which are automatically sent to the provider of the message, thus creating a one-to-one interaction between the expert (message author) and farmer (listener).

2. Helpline: A 24x7 helpline is available through the IVR where farmers can contact the experts from the Coffee Board or record their queries. The system works without a physical call centre set up and instead of call centre agents; the system itself identifies the available experts and connects the caller to them automatically.

3. Personalized Q&A: the service provides the unique ability for users to share their discussions with experts with the other people in the Café Móvel community. This effectively takes the form of a recorded "talk show" transmitted over mobile phones. Thus the entire community benefits from the knowledge sharing.

4. Analytics: The service provides detailed analytics that can be used by the various interest groups such as researchers, policy makers and businesses. These analytics are made available through a simple web based application.

5. Quality Assurance: The entire content development and dissemination process in Café Móvel is a moderated process, with the workflow enabled through use of either a web application or simply a mobile phone. This ensures that the messages that go out are correct and relevant for the target audience.

mKisan, an emerging VAS ecosystem in rural areas

Up until recently India's rural areas have been somewhat neglected by mobile operators and service providers. But with urban areas reaching saturation point in terms of subscribers, the focus is turning towards the large potential rural market.

With over 60% of India's population and a growing demand for voice and increasingly, more complex value added services (VAS), operators and service providers are beginning to develop specific strategies to address this market. This move into the rural market is supported by government policy, with targets to reach 60% rural teledensity by 2017 and 100% by 2020. Over the past 4 years from 2009, rural mobile penetration has nearly doubled, rising from 21% to 39%*. There are still challenges to overcome for operators and service providers such as poor grid availability, difficult terrain, access limitations, fragmented market, no single language for communication and the

difficulty in reaching out to educate the customers. But now the rural segment has gained the attention of stakeholders like mobile network operators, handset manufacturers, VAS providers, and government, it seems inevitable that these challenges will be overcome and services will continue to roll out across rural areas, delivering new business opportunities and empowering the rural community.

Against this backdrop, mKisan has already started to reach rural areas through an IVR and SMS based service targeting farmers and allied communities in Uttar Pradesh, Bihar, Madhya Pradesh, Andhra Pradesh, Maharashtra and Karnataka. The service provides access to information on agriculture, livestock, mandi rates and agro-met. By providing highly localized content the service has already become highly valued by rural communities and is playing an important part in promoting rural empowerment.

Subscriber acquisition in the **mKisan** project

While there has been a steady growth in cumulative acquisition for the service (green line) and active subscribers (red line) up until May 2013, the churn (yellow line: loss of subscription because of non-renewal) sharply increased from the month of May, which has resulted in a sharp drop in the net subscription figure.

The average churn is about 69%, which is in line with the average for the telecom industry in India. However, in certain months it has been seen to drop significantly (see Feb & Apr). This is probably because these months are at the beginning of harvest season and end of harvest season, when post-harvest and market price information are of prime importance.

In May 2013, the Department of Telecommunication introduced the need for "double confirmation" from the subscriber in order to ensure that no VAS product can be force sold to the subscriber. However the technicalities of the double confirmation process are complex and may be one of the reasons that many subscribers could not renew their subscription in June, resulting in higher churn.

In view of this, Handygo is planning to increase promotion activities in the field, with special focus on educating the subscribers about the subscription and renewal process. We will closely monitor the results in the coming months.

*Source: Tele.net June 2013 "Growth Area: Rural Areas Offer new Opportunities for Expansion".

Farmers in Bihar, completing profile forms to subscribe to mKisan agro-advisory

Subscriber Acquisition by mKisan

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
Cum Acq	169287	403197	648190	823744	966948	1121558
Cum Churn	73684	166585	336684	413282	546092	777470
Active Subscribers	95603	236612	311515	410462	450256	344088

Fig. 2: mKisan subscriber trend over period January to June 2013

News in Brief

Workshop on Good Content Development Practices

IKSL and CABI jointly organized two workshops on Good Content Development Practices for the southern zone and western zone of India on 25th June and 2nd July 2013 respectively. The western zone includes the states of Gujarat, Madhya Pradesh and Maharashtra and the southern zone includes the states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. The content team, comprising Content Managers, Content Executives and the Subject Matter Experts participated in the workshop. CABI, as a content partner, organized the training on good content management practices in five different modules covering various techniques such as content sourcing, content authoring and documentation using a participatory approach.

Visit of Janny Vos (left) to IKSL and Kisan Call Centre

Janny Vos, CABI's Director of Strategic Partnerships, visited India in May and travelled to one of the regional offices of IKSL located in Chandigarh. The regional office covers the three north Indian states of Punjab, Haryana and Rajasthan. During her visit, Dr Vos spent time with both the Content Team and the Kisan Call Centre team, understanding how they work in delivering the agro-advisory service. She saw how content is developed and disseminated to the farmers according to their information needs, which can vary by season and crop. The content has to account for the wide variety of crops grown in the region, such as cereals & fruit, and must also be aligned with crop calendars. She also saw how the helpline service provides advice to farmers based both on previous experience and on the factsheets that have been developed by CABI under Direct2Farm. Finally, she learned about a special phone-in program that runs once a week and a quiz for farmers operated through the service. By the end of the visit Dr Vos was highly impressed with the scale and thoroughness of the implementation of the IKSL service.

mKisan received recognition in mbillionth Award South Asia

In a recent event, "mBillionth Award South Asia", the mKisan service received a "Certificate of Recognition", for serving farmers in the m-Inclusion category. This event was organized by The Internet & Mobile Association of India and was supported by the Department of Telecommunication, Government of India, and the award was presented jointly by the Digital Empowerment Foundation and Vodafone.

The award is given to initiatives across South Asia that make a significant contribution to reduce the digital divide and empower technology-excluded communities, such as those in rural areas and women, through mobile devices and content.

mKisan is a project supported by the Bill and Melinda Gates Foundation under the mAgri program of GSMA. In India, the project is running in six states, serving the information needs of farmers on crops, livestock and agro-met and mandi rates.

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