Agricultural research and ICTs **February 2013**

The right information at the right time

Building a multidisciplinary platform that links science with technology.

Dileepkumar Guntuku

For a more food-secure world, it is imperative that millions of resource-poor small farms in developing countries significantly raise their agricultural productivity, are more resilient to shocks and seize opportunities to increase their incomes. To do so, farmers need to be able to access and effectively use the right information at the right time.

Public-funded agricultural extension, which played a key role in bringing research into practice during the green revolution, is often inadequate in terms of infrastructure and human resources to meet the needs of smallholder farmers. The development of ICTs now is helping extension become more efficient and farmer-friendly, with real-time advice.

Yet, despite many successful ICT pilot initiatives, reaching out to these farmers with the right information at the right time is still largely an unmet challenge.

To meet the challenge of providing smallholders in India and sub-Saharan Africa with information, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) has opened a Centre of Excellence (COE) in ICT innovations for agriculture. The COE has developed many information systems, linking research, extension and markets. In south India, for example, ICRISAT provides internet-equipped village knowledge centres with up-to-date information on best farming practices, including climate adaptation methods, crop rotation, diversification and pest management for crops such as millet or sorghum. These platforms have helped around 46,000 farmers, including women, who live in 21 revenue villages in the Addakal Mandal in the Mahabubnagar district located in one of the poorest regions of south-central India become more food secure and resilient to drought.

ICRISAT distributes GIS derived micro-level drought vulnerability maps at the beginning of the planning season so that farmers can adjust their plans. These maps are popularly known as drought maps among the rural communities in Addakal. A drought map tells how much drought to expect in any village of Addakal in the coming year given a predicted annual rainfall.

Together with the Indian Institute of Technology, ICRISAT has also set up a knowledge-sharing platform enabling mediated voice communication, via mobile phones, between agriculture experts and farmers. The project is currently serving nearly 20,000 farmers in south India who regularly receive timely crop advisories from farmer knowledge centres (Krishi Vignan Kendras). Plans are currently underway to replicate and expand this voice message model across Asia and Africa.

Providing free web-based access to research is another priority for international research and development centres. Housing more than 5,700 research documents, including journal articles, conference papers, theses and monographs, an Open Access Repository launched by ICRISAT provides an easy interface for researchers, practitioners and web-connected farmers to use, build on and share research conducted at ICRISAT. Since its creation in May 2011 more than 144,000 documents have been downloaded by people from more than 70 countries, with around 6,000 unique users visiting the Repository every month.

ICRISAT uses the web-based KSI Connect platform to spotlight the most interesting research projects, the most cutting-edge research and the most fascinating stories at ICRISAT to both an in-house and a global audience. This platform also allows experts across the globe to share their project experiences and cutting-edge research activities contributing to global food security. With KSI Connect, all agricultural stakeholders now have direct access to the most knowledgeable technical experts and the latest scientific innovations in agriculture, without ever having to participate in onsite training or seminar programmes that interrupt their daily activities and travel schedules. Since its launch in July 2012 more than 100 videos have been hosted on this platform and the KSI Connect website receives more than 3,000 users every month.

The rise of new ICT devices such as tablets and smart phones will certainly create new opportunities for user-friendly information tools for better agricultural advice services and inform farmers about quality inputs and market access. They will also create job opportunities for info-entrepreneurs that can create crucial added value for farmers. Current research will provide insight into how a sustainable ‘backbone communication network’ can be developed to improve the quality and convenience of information (crop, market, weather and user’s choice) dissemination to smallholder farmers and transparency within the value chains. To significantly scale up this ‘knowledge to the poor’ revolution, research, development and private sector organisations have to work together to develop new ICT innovations.

Links:

30 January 2013

This webpage is not available