

70% of the world's poorest people live in rural areas and many depend on small scale agriculture for their livelihoods; more than 90% of Africa's agricultural production comes from small scale farms. To address rural poverty, a widespread international consensus has developed in support of initiatives to increase the productivity of small-scale farmers and improve supply chain connections to markets. Critically underpinning the success of these initiatives is the small scale farmer's need for information.

Farmers face a complex set of information needs that includes access to information on prices, credit, marketing, and weather as well as new agricultural techniques and technologies. There is great potential to improve the information flow to, from and among small scale farmers. The information and communications technology (ICT) field has made great strides in connecting some rural regions of developing countries to information networks. These innovative initiatives are potentially an important complement to other, non-ICT, agricultural knowledge and information systems. However, the lack of basic amenities in rural villages (e.g. the lack of electricity supply among many others) and the illiteracy of many small scale farmers continues to create great challenges for the delivery of information.

The Bill & Melinda Gates Foundation is developing a pilot initiative designed to be a resource for information on small scale agricultural technologies (SSAT). The resource is intended to make information on existing agricultural technologies easily accessible to the group of individuals and organizations making choices about technology adoption in developing countries. A rating system for the technologies is part of the project (supported by testing the technologies in a range of environments), as is a Wiki mechanism to incorporate user feedback. In addition, it is anticipated that the resource may provide a way to connect the articulated needs of small scale farmers (regarding technologies that are not yet available) with the design and manufacturing communities via a prize/challenge system.

The Idea

It is standard in most industries to have sources of unbiased, reputable information about the products needed by that industry or community. One of the best examples of this is Consumer Reports which was developed to provide consumers unbiased information that would enable them to choose products of the lowest cost and highest quality.

When an organization serving small scale farmers wants to choose a technology such as a maize grinder, choices are very limited (if any) and there is usually no third party information about the products on offer. What is available may be a suboptimal choice for the small scale farmer in a variety of ways – it may be expensive, difficult to maintain, unsuited to the environment, etc.

The SSAT resource is being designed as an Internet website that may potentially incorporate the following elements:

- 1) Core Service: Third party comparisons of key small scale technologies that tested for those things of most importance to farmers – a consumer reports for small scale farmers. A critical part of this service will be ensuring the needs and requirements of small holder farmers are accurately reflected.
- 2) In addition to the third party comparison, the website encourages the input and feedback from users – using Amazon.com like interfaces and rating systems

- 3) All current manufacturers of the products could list their contact details and even selling prices – a manufacturer’s directory.
- 4) Attached to the best rated products would be the full manufacturing designs (if not patented), or licensing details that would enable local industries to make the product and links to financial services to fund them if needed
- 5) Our review committee will scan the website to spot obvious product gaps (especially quality and price) and establish “innovation awards” to develop products for specific design specifications (i.e. a diesel pump that will pump 10m water for under \$30). In particular, affordability and market potential will be targeted.
- 6) A related section would be a direct research for reward element. Companies, organizations would post specific problems (with clear specs) with a defined reward for the solution. (a model like Eli Lilly Innocentive website)

Implementation

The scope of the SSAT pilot will initially be focused on India and E. Africa. In India the possibility of collaborating with the MS Swaminathan Research Foundation is being explored, using the network of village kiosks they are implementing. However, all potential methods for reaching the audience, including mobile phones, PDAs, and the “last mile” type courier approaches are being assessed. While the design is in its early stages, it’s likely that the resource will not seek to address illiteracy issues/iconic interfaces/voice-overs/etc. Rather the resource’s target audience will be organizations involved with small scale farmers: NGOs, government ministries and parastatals, farmers associations and cooperatives, extension services, private sector manufacturers, agricultural universities and training institutions.

There are many potential benefits, but also significant challenges in designing the SSAT resource, and a user-centered design perspective is crucial to the planning process. The resource, while targeted at those *working* with small scale farmers, aims to provide a tool that may change the technology adoption behaviour of the farmers themselves and thereby improve their livelihoods; a sound understanding of small scale farmers as users of technology is critical.

As Project Director for the SSAT Resource pilot, I bring a background of economics and development experience as well as an understanding of developing country intellectual property (IP) issues; I am an agricultural economist with a background in IP law. In addition to my work for the Bill and Melinda Gates Foundation, I am Director of Strategic Planning and Development at the Rockefeller Foundation-funded organization PIPRA (The Public Intellectual Property Resource for Agriculture, www.pipra.org) and publish in the field of IP law and policy. My professional interests are focused on the design and implementation of practical services to support innovation and improve livelihoods of the poor and underserved in developing countries, while my research interests lie in the law and economics of: IP rights and developing countries; open source in copyright and patents; innovative IP sharing mechanisms; US universities’ technology transfer systems; and the strategic use of patents in developed countries.