



# Markets

## From research to outcomes

The CGIAR Challenge Program on Water and Food was launched as an initiative to improve livelihoods and food security through better water management for food production (crops, fisheries and livestock). From an initial focus on productivity, the emphasis changed towards the adoption of innovations that improve livelihoods and address specific challenges in different river basins. After more than ten years of work, there are a lot of lessons to share. Our work in Zimbabwe and Cambodia, for example, has shown how markets can contribute to the dissemination and adoption of these innovations.

Michael Victor and Swathi Sridharan

**T**en years ago, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) started a series of “Innovation Platforms” in different parts of Zimbabwe. Each platform consists of a group of farmers, traders, rural development agencies and extension officers, all of whom meet at regular intervals to discuss the main challenges facing them. These results are clearer in Gwanda, where different stakeholders have been working together for the last six years.

ICRISAT looked at the possible changes in terms of water productivity, income and food security, resulting from changes in the local farming systems, focusing simultaneously on fodder production and staple crops. “If farmers devote three hectares, half to maize and half to *mucuna* [velvet bean] in a rotation system, then on average they are able to meet 80% of the total biomass required to see their livestock through the dry season, even in a drought year”, says Patricia Masikati, a scientist at ICRISAT. “However, if they just grow maize on the same land, they can only get 20% of the biomass

they need.” The beauty of this type of solutions is that farmers do not have to compromise their food security. “It isn’t a solution that asks them to grow fodder at the expense of their own food. Farmers’ food requirements can also be met this way”.

Farmers’ interest grew as a result of the platforms’ activities. The platform in Gwanda has helped create a strong local market for goats, helping raise the value of one goat from US\$ 10 to 60. This has proved to be an enormous incentive for farmers to invest in their goats by growing their own stock feed, complementing it with (purchased) commercial feed, and also to improve their rangeland management techniques. “Farmers who used to sell one or two animals at their farm gate now plan ahead and sell their animals at the auctions, because they trust this system,” says Andre van Rooyen, a scientist at ICRISAT-Bulawayo. It is the creation of this regular marketing channel, with a reliable pricing structure, that has inspired the recent push in livestock-related technology adoption rates. “Farmers know what their animals are worth. And so they are now willing to invest in technologies or ap-



**Innovations have a greater chance of succeeding if linked to an effective marketing strategy.** Photos: CPWF / Swathi Sridharan / CPWF

proaches that help them produce more”, says Mr Van Rooyen.

**Water management** In Cambodia, one of the Challenge Program small grants supported iDE, an international non-profit development organisation, in its efforts to encourage a more efficient irrigation system. The original assumption was that poor water management was the major constraint in commercial farming in the project area, and drip irrigation was viewed as a solution. We soon saw that, although drip irrigation is a water-efficient and an effective labour-saving strategy, it is not cost-effective on its own, and farmers were not keen to try it. But when used in conjunction with changes in their farming patterns, or with techniques that help improve the fertility of the soils, their interest grew, and more of them were able (and willing) to cover the costs.

In order to further spread this approach, the project started working with farmers who were trained as “Farm Business Advisors”, helping them serve as mobile “retailers” of horticultural products and services, and also as providers of technical advice. This led to the development of strong links and relationships between farmers, input suppliers and marketplace retailers (and, through them, also with consumers). A stronger and regular demand helped more and more farmers see the benefits of the drip irrigation system and encouraged them to install them in their plots.

**Many lessons** A number of lessons can be derived from these cases. First, that committed local champions are a key to success. ICRISAT’s researchers have been working with local stakeholders for many years, allowing a relationship of trust to be built. In Cambodia, locally trusted farmers help spread ideas or innovations more effectively than extension agents or outsiders.

Second, researchers usually focus on improving one piece of the system (whether it is water or fodder yields). However, it is important to recognise that this may not necessarily be the best option. “We are generally concerned with the efficiency of one of these components. The problem is that improving water-use efficiency, for example, is not necessarily what motivates farmers” says Mr Van Rooyen. Together with actively engaging the beneficiaries of the research process in all activities, researchers have seen the need to find the right entry point. As seen in Zimbabwe or Cambodia, agricultural innovations have a greater chance of succeeding if linked to a marketing strategy. In both cases, the technologies (fodder crops and drip irrigation) have been around for a long time. However, it is only when producers are better linked to the markets, and when these pay well for a particular product, that farmers are encouraged to innovate, or to adopt a specific technology, on a regular, sustained basis.

Finally, both stories show the importance of exploring local markets first, before focusing on large-scale commercial chains. A stronger local market benefits everyone. It benefits farmers through improved incomes; traders and consumers get better quality products, and even local governments see higher incomes.

**Swathi Sridharan** is a science writer and communication specialist with ICRISAT based in Bulawayo, Zimbabwe.

**Michael Victor** (m.victor@cgiar.org) works as Communication Coordinator at the CGIAR Challenge Program on Water and Food. This programme was launched in 2002 with the aim of increasing the resilience of social and ecological systems through better water management for food production. The Challenge Program is a partner of the CGIAR Research Program on Water, Land and Ecosystems. To learn more about the stories presented in this article, contact Andre van Rooyen at ICRISAT Zimbabwe (a.vanrooyen@cgiar.org) or Michael Roberts at iDE Cambodia (mroberts@ide-cambodia.org).