



Making farming pay: Market-based solutions to poverty

Gift Lungu is a man with a long-term plan. Last year, he bought a pair of oxen. This year he will buy a small plot of land in town. With time Lungu says he will build a house on his land so that he can rent it out and use the money to pay for school fees for his eight children. He is making progress.

As a smallholder farmer in Zambia's Eastern Province, Lungu's biggest source of cash to turn his dreams into reality will come from the sale of groundnuts. And for the last two seasons, the markets have been paying Lungu well for the new high-yielding variety of groundnuts he is now growing. MGV-4, also known as CG-7, was recently released in Zambia and the red-colored groundnut has higher yields than the other varieties Lungu previously grew. Today Lungu is no longer just a dreamer. Tangible rewards from the marketplace have turned his dreams into the first steps of a new reality.

The challenge for agricultural research and development organizations has been to determine ways to replicate Lungu's story on a large scale. How can we increase the likelihood of success for all those individual plans and dreams? The answer to this question may lie, not on farm as was previously assumed, but at the markets where farm products are sold and profits drive household investment patterns.

The bottom line

For many of us the bottom line lies in the amount of money we earn. The more we earn, the more we can afford a better quality of life – better houses, better education for our children, health and life insurance, travel and holidays. Farmers are no different; their quality of life is determined by the money they earn at the rural marketplaces where they sell what they have grown that season.



Gift Lungu, his wife Jessie, and his namesake and son Gift Junior, pose in front of their groundnut granary at their home in Chipata, Zambia.

And, just like for many of us, the grass can appear greener on the other side. When faced with the choice of replacing a rural life for an urban one, many farm families choose to move. U.N. Habitat estimates that 14 million people in sub-Saharan Africa migrate from the rural to urban areas each year. After a careful assessment of the costs and the risks, more and more farmers exchange their farms for the monthly paychecks from jobs in cities, factories and mines. Families agree to be separated as husbands work regular city jobs and send cash home to wives and children in the villages. By 2050, the World Health Organization predicts that 70% of people will be living in urban areas.

One of the drivers of this trend is the fact that for many farming is simply not sufficient as the only means of earning a living. For those with other options, farming can become a secondary source of income, a buffer to protect them from the shocks and upheavals that life brings. Off-farm income is crucial in not only augmenting income,

but also allowing greater on-farm investment and therefore greater on-farm returns. For this group, earning more from their farming can make a difference in securing each foothold as they climb out of poverty. For the other families for whom farming and a rural life is the only option, making as much money from their farm is important to secure the basic standards of life that will allow them to make ends meet each month, to pay for school fees and uniforms for their children, to handle medical fees and hospital costs should they need it.

Turning to markets

In the search to make smallholder farming more profitable, markets appear to offer the possibility of generating sustainable solutions to the issues surrounding food security and poverty. Many organizations, including ICRISAT, are testing the value of market-based approaches. One of the benefits of working with markets is the increased likelihood of both short- and long-term impacts.



Left: After two–three days of drying them in the African sun, a worker in Malawi shovels groundnuts into bags. Right: Reminding parents to make sure they get their children ready for the next school term, these new uniforms are on display at a market day in Gwanda, Zimbabwe.

In the short-term, farmers have more cash to spend. In the long-term, as long as the markets keep paying a fair price making re-investments in production possible, there is a good chance for these benefits to accrue long after any individual project has come and gone. Finding market-based solutions that allow rural populations to integrate into supply chains appears to be the best way to address chronic problems of poverty and food insecurity.

Effective market-based solutions can also build resilience into rural communities. Farming is a risky endeavor in drought-prone marginal areas, or in countries that are economically or politically unstable. Diverse and functional supply chains that allow profits to trickle down to farmers provide more options to farmers and their families. “The possibility to invest more in farming activities or exploring other rural livelihood options increases diversity in systems, which is important in building resilience,” says André van

Rooyen, ICRISAT Senior Scientist. “Tomorrow if disaster strikes, they will perhaps be better prepared to handle it than before.”

Marketing challenges

While working at devising market-based solutions is a promising area, it comes with its own challenges and constraints, which are not always that straightforward to address. “In Africa there are a lot of farmers who have a great difficulty in selling what they produce,” says Alastair Orr, Economist at ICRISAT-Nairobi. According to him, market-related problems can usually be classified into two broad categories: access to markets and the terms of market engagement.

Farmers’ proximity to the marketplace can make a big difference. “Three out of four farmers in Kenya are at least four hours away from a market,” Orr says. As a farmer’s distance to the market increases, the cost of transporting his/her produce to that market becomes higher, cutting into the



The miles between farm and market means walking far carrying heavy loads.

profit to be made. Should farmers attempt to avoid the transport costs by selling to a passing trader, they run the risk of getting a lower price than what the market would have paid them directly. Besides physical access to markets, farmers also face other restrictions to successfully selling their products. For example, they may find that they do not produce enough quantities to warrant the transport to a better paying market. Or they may not be aware of what the market requires, the kinds of products, the qualities and when the market needs these products.

This lack of information can result in skewed terms of market engagement, resulting in unfair prices. "One of the big questions is can markets be made more friendly to farmers? The fair trade market is the best example we have to answer that," Orr says. Regular up-to-date information on prices, market demands, the right technologies, the

ability to negotiate terms and prices are all factors that can influence a farmer's mode of engaging with the market.

Marketing solutions

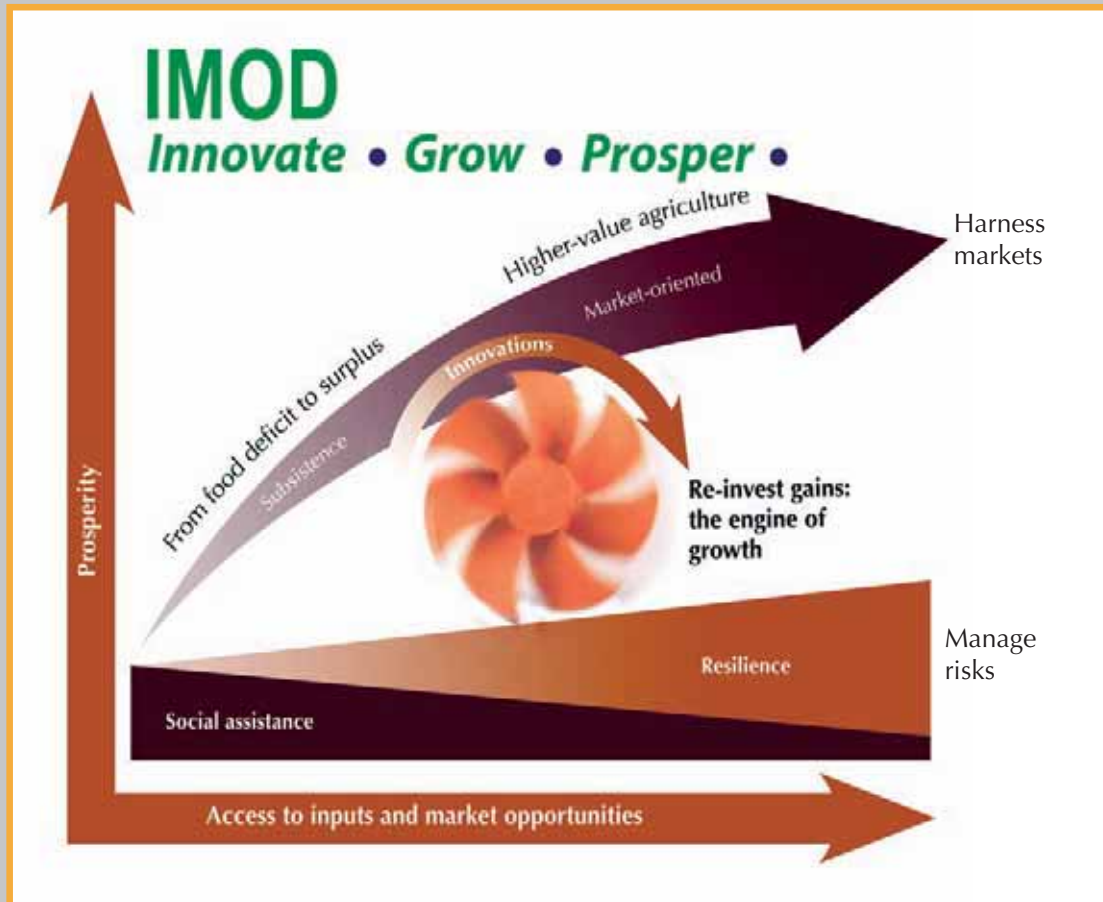
Some solutions to the issues of access and engagement lie outside the domain of the research sector or even the agricultural sector. For example, building the right infrastructure such as roads makes a huge difference in rural livelihoods. But the agricultural sector rarely influences such decisions.

However, there are a variety of options that research and development are exploring to create market-based opportunities in rural areas. Sometimes the solution lies in being able to help farmers change what they do to better align with market demand. For example, improving the availability of seed of market-preferred varieties, such as in the case of Lungu, can make the difference. Breeding varieties that have the right characteristics such as size, taste, cooking time etc. can enable farmers to tap into domestic and export markets easier. In Ethiopia, for example, farmers have switched to growing large-seeded white kabuli varieties preferred by the export market instead of desi varieties (page 12).

Research that teases apart the steps that take a crop from a farmers' field to its final destination miles away in other countries can open opportunities to increase profits for farmers. Finding ways for them to add value on-farm, utilize safer post-harvest technologies or joining together to market a product as a group as Malawian farmers do when selling their groundnuts can solve market access and engagement problems and increase the final take home profit (see page 17).

Sometimes the solution lies in physically building a market where regular sales can take place and prices reflect rewards for quality as in the case of emerging small-stock markets in Zimbabwe (see page 23). As these solutions evolve and we continue to learn more from the process of developing market-based solutions, it may just be possible to turn more of the dreams and plans of smallholder farmers into realities.

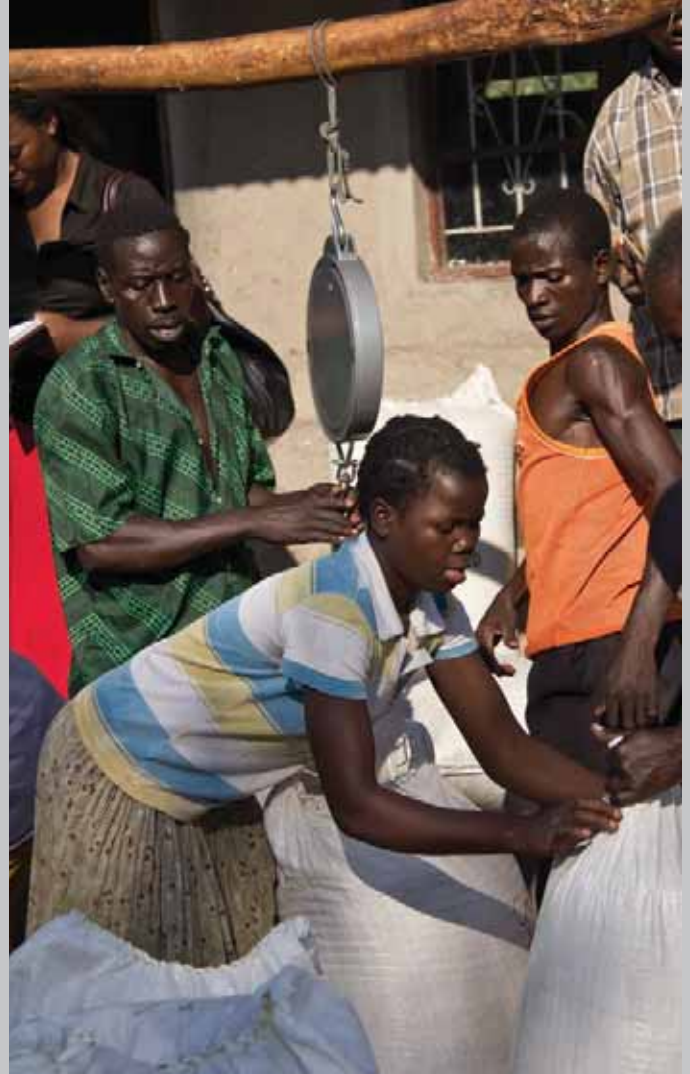
ICRISAT's IMOD



In 2011 ICRISAT developed Inclusive Market-Oriented Development (IMOD) as the unifying conceptual framework of the strategic plan to 2020.

IMOD envisions a pathway out of poverty by better linking farmers to markets to increase incomes. Research-for-development generates technology and innovations that increase the productivity and value of dryland farming. A portion of the profits are re-invested in additional innovations in following years, further increasing gains in a self-reinforcing cycle (engine of growth). Gains are also reinvested in building resilience (e.g., by increasing stocks of human, social, natural, physical, and financial capital), supplanting the need for high levels of social assistance such as emergency relief aid.

– Adapted from ICRISAT's Strategic Plan to 2020



What does ICRISAT as an agricultural research institute gain from the IMOD framework? Some of the ICRISAT scientists based in Eastern and Southern Africa weigh in:

“The emphasis on market helps us to reorient our research better and ask better questions. Traditionally we are production economists looking at supply side problems. Now we are being asked to solve demand-side problems as well.”

– Alastair Orr, Economist, ICRISAT-Nairobi

“I think of IMOD as a very useful tool to locate the specific situation of the target group and to visualize a way ‘forward’. This would help to tailor the intervention to their needs.”

– Kai Mausch, Economist, ICRISAT-Lilongwe

“IMOD promotes our chances of increasing the adoption of technologies. It isn’t us talking about technologies any more but it is the markets that define what production technologies farmers need.”

– Patricia Masikati, Modeller, ICRISAT-Bulawayo

“I think of IMOD as a yardstick for all of us to relate to. It is a reference point so that we can keep looking at the big picture and understand how our work fits to reducing poverty.”

– Sam Njoroge, Pathologist, ICRISAT-Lilongwe



“IMOD requires a real change of mindset of scientists to identify bottlenecks in farming systems and find solutions beyond the usual commodity-oriented approach. In the risk-prone environments that we work in markets stimulate greater reinvestments in both crops and livestock.”

– Sabine Homann-Kee Tui, Social Scientist,
ICRISAT-Bulawayo

“Working with markets is a very effective model to bring about real change because it is driven by real incentives. The rewards are external to projects and we can engineer positive feedback loops to increase sustainability and build resilience in dryland systems.”

– André van Rooyen, Crop-Livestock Scientist,
ICRISAT-Bulawayo

“IMOD allows us to be much more research-oriented. It helps us to refocus on our research mandate and to go beyond the usual monitoring and evaluation methods of asking how many varieties were released and how many farmers it reached to the next big question, which is, how much does this make a difference.”

– Dave Harris, Agroecosystems Scientist,
ICRISAT-Nairobi

Previous page: Farmers in Karonga district produce seed of Malawi’s special Kilombero rice. Fifty kg bags of rice are weighed and stored in warehouses until they are sold. Above left: Trucks that can bear heavy loads are important in linking farmers to markets far away. Above right: children in Zambia play on bags full of groundnuts.