Connecting Maize Farmers to the Markets: Creating Systemic Change

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ABSTRACT. The maize market in Bangladesh has been lagging behind demand, with the shortfall met by imports. Consequently, the potential of maize – still a new crop in the country – to contribute to growth and poverty reduction has not been realized to its full extent. Maize was an important and growing industry. From a low base in 1990, production nationally had increased15-fold (and by 50% in the 2000-2003 periods). Its growth had been fuelled entirely by the large rise in the poultry sector since maize is the principal ingredient in poultry feed. Bangladesh production competes directly with imports for the feed market. Strong domestic demand was manifested in high prices and relatively high returns for farmers. The essential economic logic of focusing on the sector –were dominant in Katalyst's mind, the wider employment and poverty-reducing impacts were also taken into account. Katalyst's view was that higher returns from maize would reach the poor in a number of ways: a) As agriculture small-holders – from the relatively high returns to maize growing b) as labourers and employees to others: although there are no official employment figures, maize is accepted generally to be slightly more employment intensive per crop than rice and potato (although less so than tobacco and vegetables) and much more employment intensive than wheat and pulses. Katalyst also believed that improved performance in the maize industry would lead to improved feedstock and greater competitiveness for the poultry sector. Three to five million people5 were estimated to be involved in the poultry sector. If continuing low output in response to strong demand conditions was the main symptom of poor market performance, for Katalyst, the key questions were clear: *(1) What were the constraints that prevented appropriate solutions from emerging through the market system (i.e. why wasn't the market working?), and(2) What could be done by Katalyst to address these issues?*[2]Beyond certain generic problems, there were more specific, inter-related issues that subdued output growth, all related to the "newness" of the crop in Bangladesh. The immediate causes were a) weak access to markets and input b) adopting maize as a crop in the current cropping pattern c) access to finance d) knowledge on nutrient management and soil fertility issue.The underlying cause was the poor private sector involvement in the maize market. And thus questions like why was the market system not providing a solution to weak knowledge and information? In particular, market players appeared to be especially slow to learn about new ideas and opportunities in issues like procurement systems such as contract farming: why was this so?Katalyst assessed that maize contract farming can be a tool to trigger the leverage points which will feed in to solve some of the underlying issues and also help serve a issues in the other markets like the poultry feed market.

Introduction

"The world's most exciting, fastest-growing new markets? It's where you least expects it: at the bottom of the pyramid. Collectively, the world's billions of poor people have immense entrepreneurial capabilities and buying power. It's being done – profitably." These words are from CK Prahalad`s *Fortune at the Bottom of the Pyramid*. The unfortunate truth is that Bangladesh mainstream businesses have overlooked the collectivity and the opportunity of working with the 'bottom of the pyramid' and bringing them into the market system. Those who could do that have created a successful business and changed the life of millions at the same time. Now if this does so much good for both business and for society, what stops every organization practicing it? The key reason could be that working with the bottom is a big undertaking. It means a great deal of commitment and out-of-the-box thinking. What in fact is needed is 'systemic change' – not only within the organization but also in the immediate business environment and in the market system where the bottom of the pyramid operates or has the potential to operate.

As we are talking of the poor (the 'bottom of the pyramid'), we have to understand the systems of specific markets or industries where the poor are entrepreneurs, customers or a part of the labor force. We have to understand how the poor operate in the current system. What benefits does the system present them with, and what problems do they face? What is the potential for the poor to get into a new market system? After we get the holistic picture of the current system in one frame, then comes the question "Can we effect change to make it better for the poor?" For that to happen, we first have to understand the key reasons for which the system is not performing in a way which will benefit them. These are the underlying constraints of the system – in other words, the root cause of the problem.

Systemic non-reversible solutions are needed to ‘resolve’ our problematic situation. A real resolution of our situation(s) implies ‘change’: a transitional change, and permanent change: In systems science, this is referred to as a ‘non-reversible’ systemic change. After all, it would do no good to change ‘for the better’, only for the system to revert back to the same (or similar) problematic situation. Each systems have many ‘aspects’ (or component parts), and interconnections; there is the issue of ’scale’ and ’scope’ (scale of breadth and depth).

Working with systems and systemic change, one has to consider the ’leverage points’ (Meadows, December,1999). These are places within a complex system where a small shift in one thing can produce big changes in everything. To make markets work for the poor, we thus have to find the leverage points which will help us solve the underlying constraints.

Pro Poor Relevance and Underlying Constraints in the System

In general, Katalyst’s target group in the maize sector includes farmers who possess between 0.20 to 2.50 acres of land, and can be classified as marginal and small farmers. Furthermore, a special focus is given to remote areas and chars (riverine islands and sand bars in the Jamuna region) where poverty is wide spread due to limited access to goods, services and assets, which is compounded by insecure environmental conditions. Currently, the total number of maize farmers in Bangladesh is approximately 476,000 house holds.

Marginal and small farmers in the north-western parts of Bangladesh earn on average of 655 BDT/month; whereas, in the Chittagong Hill Tracts, the income is slightly higher, 752 BDT/month per capita (the Katalyst Poverty Strategy Paper 2008).

Maize is a labor intensive crop, especially when it comes to post-harvest activities. It creates employment of approximately 60 person-days per acre during the entire season. Women make up over all 33% of the waged labor involved in sowing, harvesting and post-harvest activities such as shelling, drying, and grading (Katalyst 2008). It is also observed that involvement of women labors (waged and un-paid) is higher (about 50%) in the chars than the main land (about 30%).The approximate wage rate for male labor ranges between BDT 120 and 150 depending on the nature of the activities and for female labor it is around BDT 100-120. During our interventions in the char areas, it has been observed that women, though limited in numbers, are involving in maize cultivation under contract farming operations. Usually, these women are facing challenges of adequate capital for land leasing and other activities even though they can acquire inputs and information from contractors.

At first glance, it could be assumed that maize automatically offers a route out of poverty for marginalized farmers given that it is a cash crop with obvious demand and supply gaps. However, experience demonstrates that this is not the case, and careful market analysis using an M4P lens is required.

The most significant difficulty for poor farmers in char areas is the initial investment required for maize. The market hardly provides financial services to small farmers with limited assets. Farmers depend on the information transmitted by DAE officers who are not highly motivated to start with, and are often overburdened. Simultaneously, information providers do not see or identify the benefit of passing on valuable information that address maize cultivation.

Affordable modern technological devices are absent from the market which hampers maize production (e.g. low cost dryers are not available which decreases the harvest quality). Poor farmers cannot access quality inputs, as low quality seeds and other inputs predominantly circulate in the market. Moreover, varieties that lack sufficient information on their application are distributed. At the same time, farmers rely on traditional cultivation methods and do not demand innovative inputs (Alan Gibson, 2006).

Bangladesh’s maize market has been lagging behind demand, with the shortfall met by imports. Consequently, the full potential of maize – still a new crop in this country – to contribute to growth and poverty reduction has not been realized. For more than twenty years, maize has been a significant and growing industry. From a low base in 1990, production nationally increased 15-fold (and by 50% in the 2000-2003 periods). Its growth was fuelled entirely by the large rise in the poultry sector (maize is the principal ingredient of poultry feed). Bangladesh production competes directly with imports for the feed market. Strong domestic demand was manifested apparent in high prices and relatively high returns for farmers.

The essential economic logic of focusing on the sector was dominant in Katalyst‘s mind; also taken into account were the wider employment and poverty-reducing impacts. Katalyst‘s view was that higher returns from maize would reach the poor in a number of ways. Firstly, as agriculture small-holders – from the relatively high returns to maize growing; secondly, as laborers and employees to others: although there are no official employment figures, maize is generally accepted as being slightly more employment intensive per crop than rice and potato (although less so than tobacco and vegetables) and much more employment intensive than wheat and pulses.

Katalyst also believed that improved performance in the maize industry would lead to improved feedstock and greater competitiveness in the poultry sector, in which three to five million people were estimated to be involved. If continuing low output in response to strong demand conditions was the main symptom of poor market performance, for Katalyst, the key questions were clear:

(1) What were the constraints that prevented appropriate solutions from emerging through the market system (i.e. why wasn't the market working?), and

(2) What could be done by Katalyst to address these issues?

Beyond certain generic problems, there were more specific, inter-related issues that subdued output growth, all related to the 'newness' of the crop in Bangladesh. The immediate causes were a) weak access to markets and inputs; b) adopting maize as a crop in the current cropping pattern; c) access to finance and d) accurate knowledge of nutrient management and soil fertility issues.

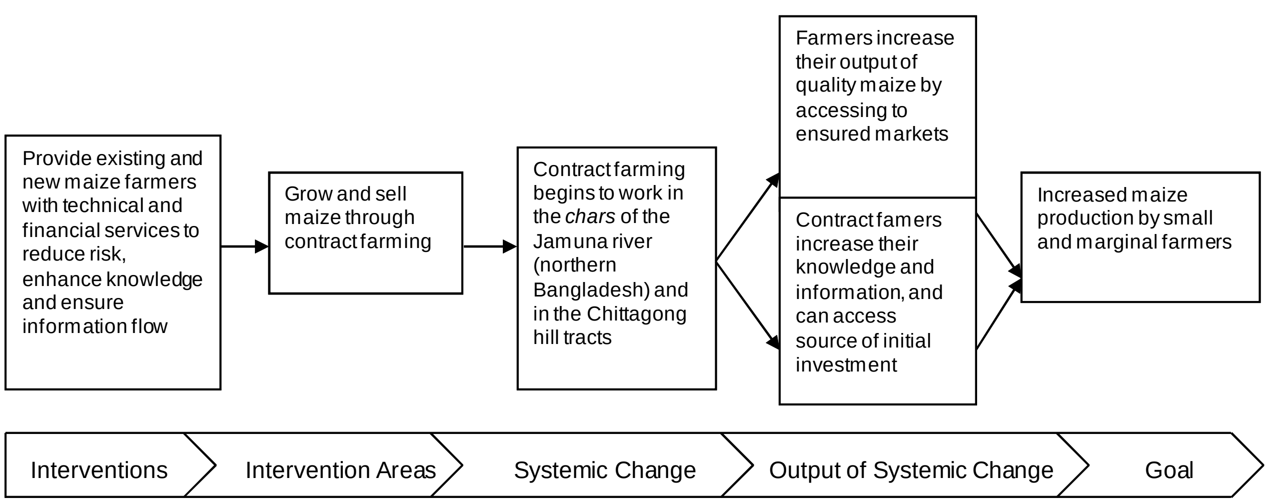
The underlying cause was the poor private sector involvement in the maize market. And thus questions like why was the market system not providing a solution to weak knowledge and information? In particular, market players appeared to be especially slow to learn about new ideas and opportunities in issues like procurement systems such as contract farming. Why was this so?

Katalyst assessed that maize contract farming could act as a tool to trigger the leverage points and solve some of the underlying issues. At the same time, it could help address issues in related markets, such as the poultry feed market.

Facilitating Systemic Change

Maize was still a new crop in Bangladesh, and occupied a niche market, distinct from the norms of traditional markets. Farmers were unsure of the 'how to' of growing and of selling maize, and persuading them to invest in it was therefore a challenge. Contract farming offered a potential means of addressing these very real constraints. By providing farmers with a package of support services (certainly technical, perhaps financial) as well as a guaranteed final market, it had the potential to reduce risk, enhance knowledge and information flow, and raise output. However, contract farming with small farmers was comparatively rare; not many businesses knew about it or how to do it.

The main players in the maize contract farming market were the input retailers, maize traders and institutional buyers (such as Doyel Agro and CP Bangladesh). Initially, Katalyst supported eight contractors to expand their contract farming operations to include around 1,500 farmers. Support mainly focused on the capacity building of contractors and their staff, to improve their ability to engage in contract farming and its management, as well as imparting technical and cultivation know-how, and creating linkages with input companies, financial institutions (mainly local commercial banks) and with the forward market.



Through Katalyst's intervention, these eight local contractors have received quality maize in bulk amount, a higher market price and increased sales volume.

When they saw the substantial profits to be made in contract farming, many new traders started to sign up. Katalyst now works with CP to promote the sub-contracting model, where CP is working with 50 sub-contractors in the north. The model is also being tested in the Chittagong hill tracts, where companies such as CP, Monsanto and EON Group are trying it. Katalyst is also working with three banks (Agrani, National Bank Ltd (NBL) and National Credit and Commerce Bank (NCC)) to establish a dedicated credit line (DCL) for maize contract farmers to give them access to collateral-free loans.

Signs of Systemic Change

As there were vast amount of fallow land in the *chars* and farmers there were extremely poor, contract farming took hold, particularly in the *char* areas of Jamuna river in Northern Bangladesh.

CP Bangladesh now operates with 50 subcontractors, and acknowledge that without Katalyst's facilitation and support they would have had no idea that contract farming with small farmers could enhance their domestic procurement system and prove so successful. In addition, the idea to make *char* farmers their customers for seed and their partners in maize production was, in the Bangladesh context, real out-of-the-box thinking.

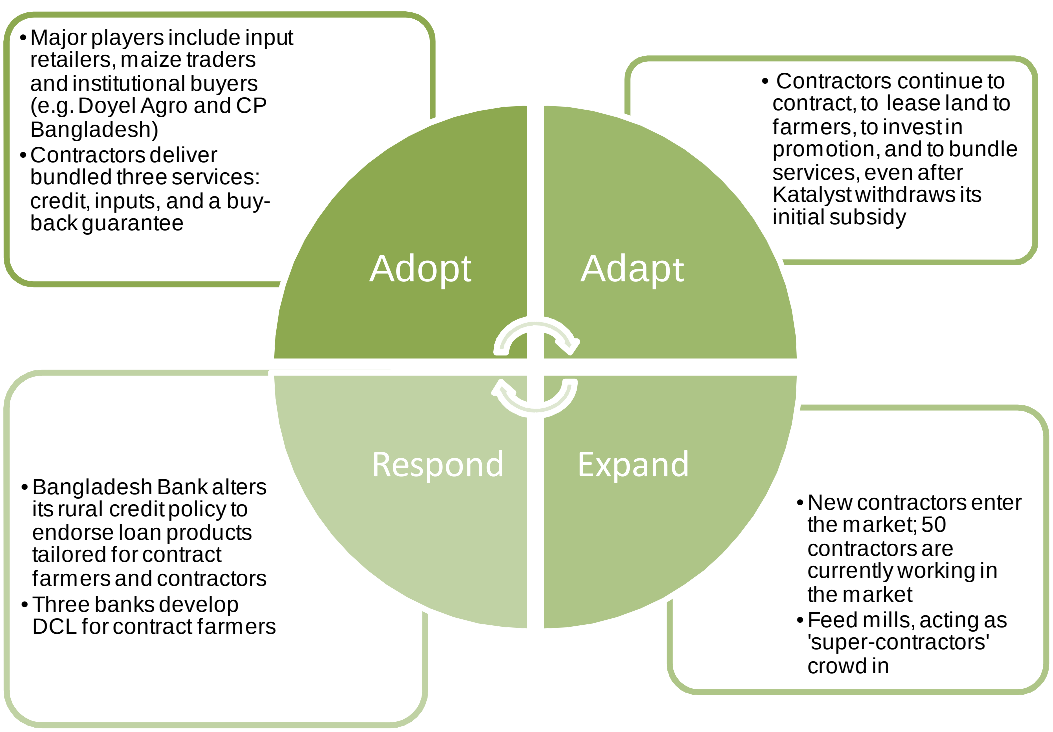
Contractors are also developing bundled packages with services for their farmers. They are beginning to realize that contract farming is a relationship-based business model and are now seen to be continuously innovating in the field to enhance their business. Recently, seven contractors in Chittagong ran an advertising campaign, handing out leaflets to farmers to explain about contract farming and encourage them to take it up.

The response from the wider economy has also been positive. Banks, who would have never considered *char* farmers as customers (due to their vulnerability and their tendency to migrate) now see contract farming as a secure model, capable of reaching last-mile clients. Bangladesh Bank has incorporated contract farming system into its rural credit policy.

Katalyst's approach to the maize sector was primarily through the door of the producers, and impact here was critical to wider systemic change. Specifically, change was envisaged in

(a) the overall business (output) performance of producers;

(b) their business models (how they worked, contract farming, applying better cultivation practices), and



(c) the response of other producers in the market (the crowding in impact), (Gibson 2006).

At the same time,

(a) Output among partners has grown considerably. Since support from Katalyst has not been financial (but rather opening up partners' eyes to new possibilities) and the businesses are profitable and can be expected to continue;

(b) How partners undertake business has changed considerably but in each case the emphasis given to knowledge and information has been enhanced;

(c) CP and its subcontractors expanded and improved the bundle of services offered to farmers and changed the way in which they are provided within the context of a bank loan agreement. What was previously a rather rudimentary approach has been enriched and formalised.

The Way Forward

The market development approach to business services in the maize sector is being developed from the starting point of having a sound understanding of how the poor operate within market systems. It then demands that the systemic constraints impinging on them are identified and addressed. In this instance, Katalyst's initial understanding of the role of the poor in the maize market system was rather general, especially in relation to contract farming. The poor have clearly benefited from Katalyst's work in the sector. At the same time, opportunities for leveraging the best from the market system – for example, looking at innovative ways of including small-scale farmers in contract farming mechanisms – have also been explored within the market context and more clearly identified.