

CLP Market Assessment

Market system for agricultural services – Lalmonirhat chars

Abdur Rob

Practical Action Consulting

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1. Introduction

1.1 Objective of this study

To examine opportunities for market development in agricultural services market systems that are important for CLP participants in Lalmonirhat. Identify the main market development opportunities, outline support needs, and identify actors and resources needed to realize more reliable income and employment opportunities.

To produce an exemplary market-system report that demonstrates market-system mapping and illustrates the kind of results, findings and recommendations that can be expected to emerge from using a market development approach in design of future interventions.

To orientate key staff in the CLP market development unit to the market-system mapping approach – through their active participation in the fieldwork planning, data collection and interpretation of results.

1.2 Rationale for selection of agricultural service market-system

Following the apparent success on island chars of livestock service providers, CLP is keen to explore whether a similar ‘business’ model might work for improving char households access to agricultural services. The focus would be on field crops – such as maize and chilli as discussed above.

The main services that are needed seem to be around access to improved or reliable seeds, fertilizer, agricultural equipment rental, post-harvest processing and above all knowledge.

Agricultural service provision is a cross-cutting market system – it touches on a wide range of possible crops / product sectors. For the purposes of this study, two distinct market maps are shown here: one for seed markets, and the other for agricultural knowledge (agri-information).

Agricultural services related to improved seeds, fertilizer, and equipment rental, separately or as a package, have been widely used in many parts of the country to improve agricultural system that includes production, processing and marketing while increasing productivity of land and labor. However due to high transaction cost, low purchasing power, poor infrastructure and scattered clientele, people in char land do not have access to the services mentioned above. Taking this into consideration, CLP has been exploring methodologies for agricultural service development. It wants to understand types of services in existing agricultural value chains mainly to improve chain efficiency i.e productivity, transaction cost, market and overall poverty reduction among the CLP core beneficiaries and local economic development.

2. Location and methodology

2.1 Locations of assessment

The assessment was conducted in Hatibandha, Jaldhaka and Gangachara Upazila in Lalmonirhat district where CLP has started its second phase of programme since April 2010. The locations were chosen to see competitiveness and critical gaps of agricultural service value chains including sustainability issues related to role and impacts of Agricultural Service Providers (ASPs) that CLP is planning to promote.

2.2 Methodology

A 6 member team (comprised of CLP staff and staff of its implementing organization) was formed and led by a senior staff from CLP market development unit. The team attended a 3days orientation on market assessment. Desk information review; primary data collection through in-depth interview; focus group discussion; PRA exercise on seasonal calendar; participatory market mapping workshops with market

actors and stakeholders were the main methodology of the study. Study tools were developed for collecting information from the following market actors and stakeholders in three Upazilas. Actors interviewed or participated in the study include

- 60 farmers
- 8 Agricultural service (fertilizer, seed, irrigation) providers
- 3 *Aratdar*/traders
- 3 Upazila Agricultural Officers
- 3 SAAO
- 3 Banks and MFI and
- 1 NGO

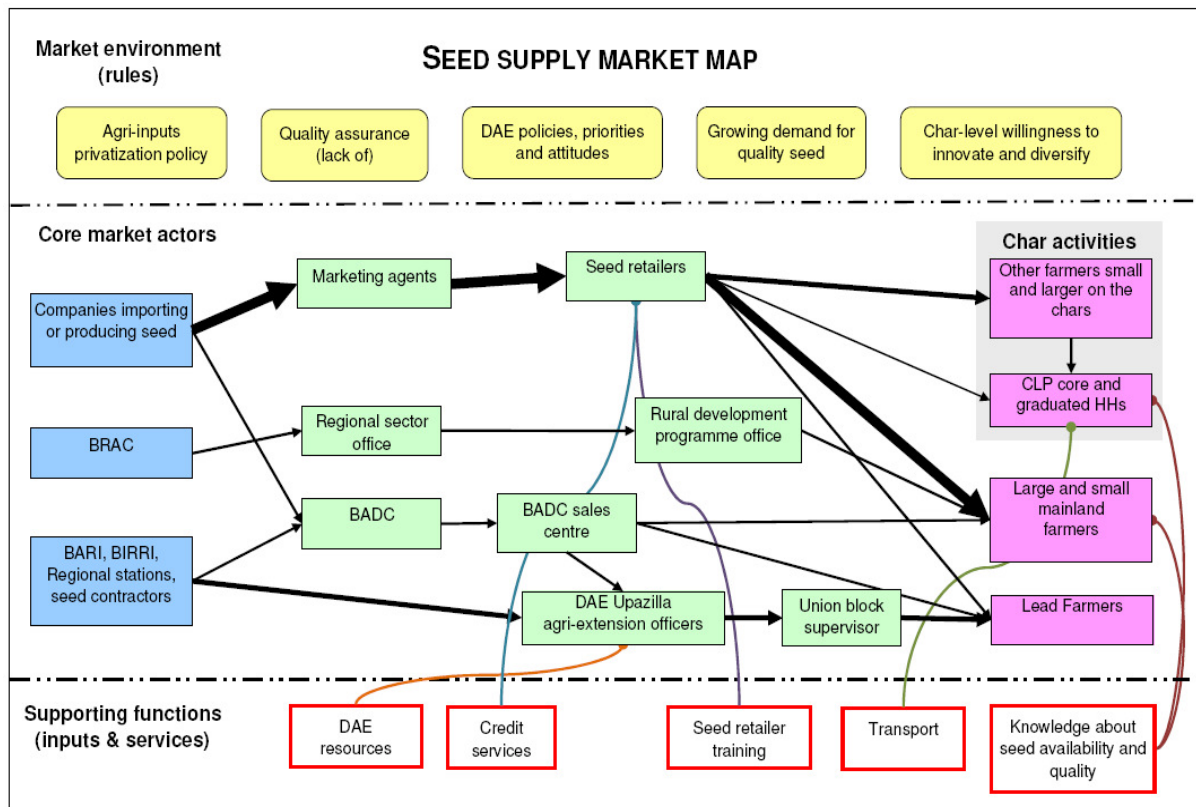
Limitation of the study

Availability of information from government institutions was a problem; most of the institutions visited did not have up-to-date information. Time and timing was also not right as people were busy about Eid ul Azha, Government officials were engaged in school examination duty. Time for collection of information was also short.

3. Agricultural service market system

3.1 Core market-chain functions

3.1.1 Seed supply



Farmers collect seed from on farm, local sources and it covers 60-70 percent of seed they use. In order to increase food production, this community system of seed supply is increasingly replaced by commercially produced hybrid seed.

Both public and private sector including NGOs are expanding their role in seed delivery system. Public sectors i.e. BARI, BRRI, BINA, DAE, BADC Agricultural universities are involved in varietal development, source seed (breeders seed) and seed multiplication.

BRRI and BINA focus on rice varietal development while DAE and BADC are involved in production and distribution of certified seed through SAAO and BADC sale centres. BARI is involved in vegetable, maize and pulse varietal development. The public, private and NGO (BRAC) sectors are involved in seed production, processing, quality control, storage and distribution. They do these in their own farm and through contract farming.

A wide range of private sector business comprised of small farmer seed entrepreneurs, one-man owned wholesalers/importers, international seed companies and joint venture companies are involved in seed marketing. According to the current seed regulation, seed business needs to be registered as a seed dealer with the National Seed Board (NSB).

BRAC has set up 50 marketing outlets in different parts of Bangladesh through which it distributes seeds to dealers and wholesalers under the name "Sufala Seed" (3). BRAC beneficiaries can buy seed from their regional centres and Rural Development Programme (RDP) Offices.

In the study area, farmers are involved in production of Paddy, Maize, Jute, Chilli, wheat, and vegetables. About 15 companies such as ACI, Bayer crop science, Supreme, Syngenta, Auto Crop, Oryza, Lal Teer and Samps supply seeds directly or indirectly. More than 60 local retailers are selling seeds supplied by these companies. Despite many seed retailers, price of seed is controlled by these companies.

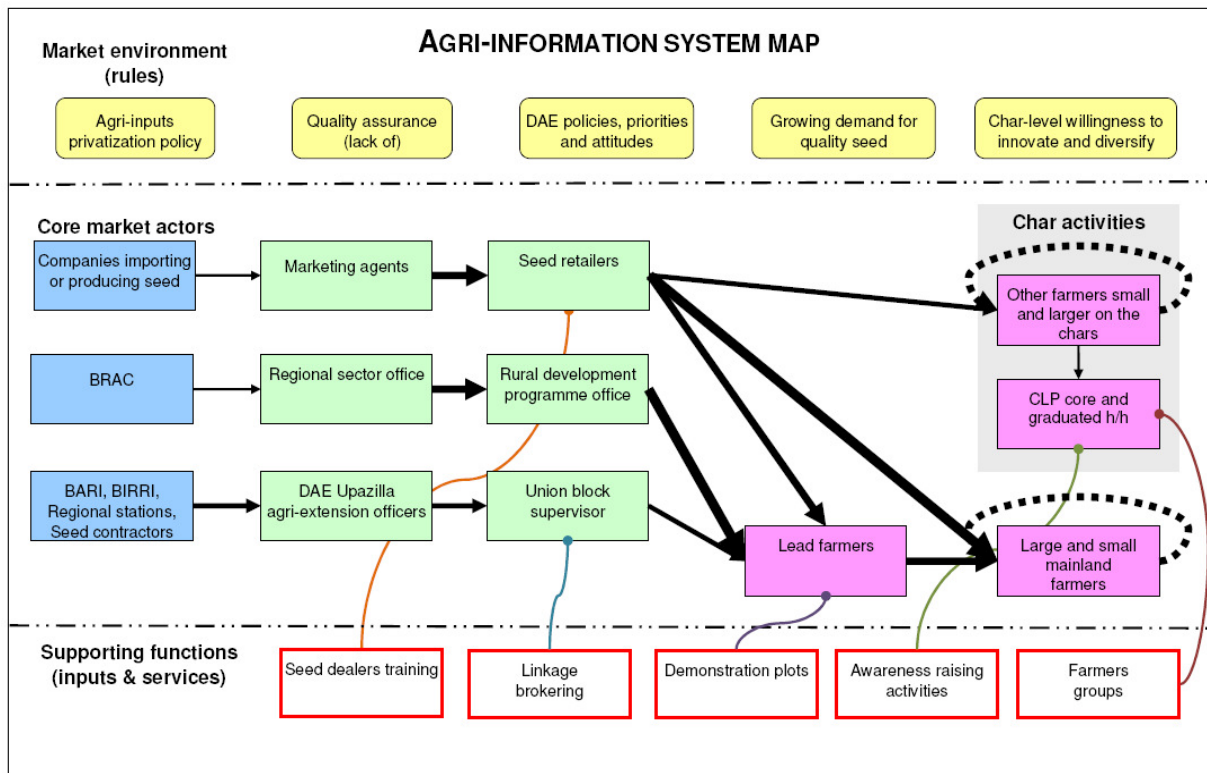
Overall, the government has no control over price and seed standard quality. Seed dealers and farmers are not aware of these. It has been observed that in some cases farmers purchase more of their seed requirements.

3.1.2 Agricultural information

Agricultural information provision includes information on price, production, plant nutrients, water use demand and supply of product and services. Farmers, retailers, traders, wholesalers, transporters, processors are the sources of agricultural information. Market success or failures depends on these actors. The farmers' bargaining position is improved through collection and dissemination information. It reduces the costs of selling the produce by reducing risks. By using and interpreting information, farmers are able to decide which market they should send their produce to get more prices or, whether to send their produce to market at all.

Market size: In the study area all farmers are involved in rice, chili, maize and vegetable cultivation but a limited number of them are involved in commercial cultivation. All of them use fertilizers, pesticides and micronutrients and closely interact with dealers and retailers for information. They get some information from NGOs and in rare case from SAAO of DAE. But NGOs provide information to their members only. SAAO have better knowledge but not always available in the char.

Farmers interviewed informed that they do not take soil testing due to non availability of this service. It seems that the farmers are aware of the usefulness of soil testing, improved information and advice for determining dose and application but availability is a problem. Some farmers complained that the retailers try to sell more seeds, fertilizers, chemicals and micronutrients than they need.



Seasonality: Availability of lands for cultivation in char fluctuates during monsoon. Therefore, farmers are interested to know about crops or vegetable that can be safely harvested before monsoon comes.

Trends: Char farmers tend to use their own ideas about doses and application method as they think they understand the soil and weather conditions in the char. A kind of disconnect from the mainland and non-existent of services like soil testing or non-availability of advice from dealers/ or retailers may influence them in this regard.

Retailers/Suppliers capacity: Most of the dealers /retailers of fertilizers/ pesticides/ micronutrient sellers lack required knowledge and information about the product they are selling.

Prospects for information services: It is evident from the above discussion that awareness raising about soil testing services, prescription about doses and application method, farmers and suppliers training, demonstration are important for developing information system in the char. Char based input suppliers development has also prospect.

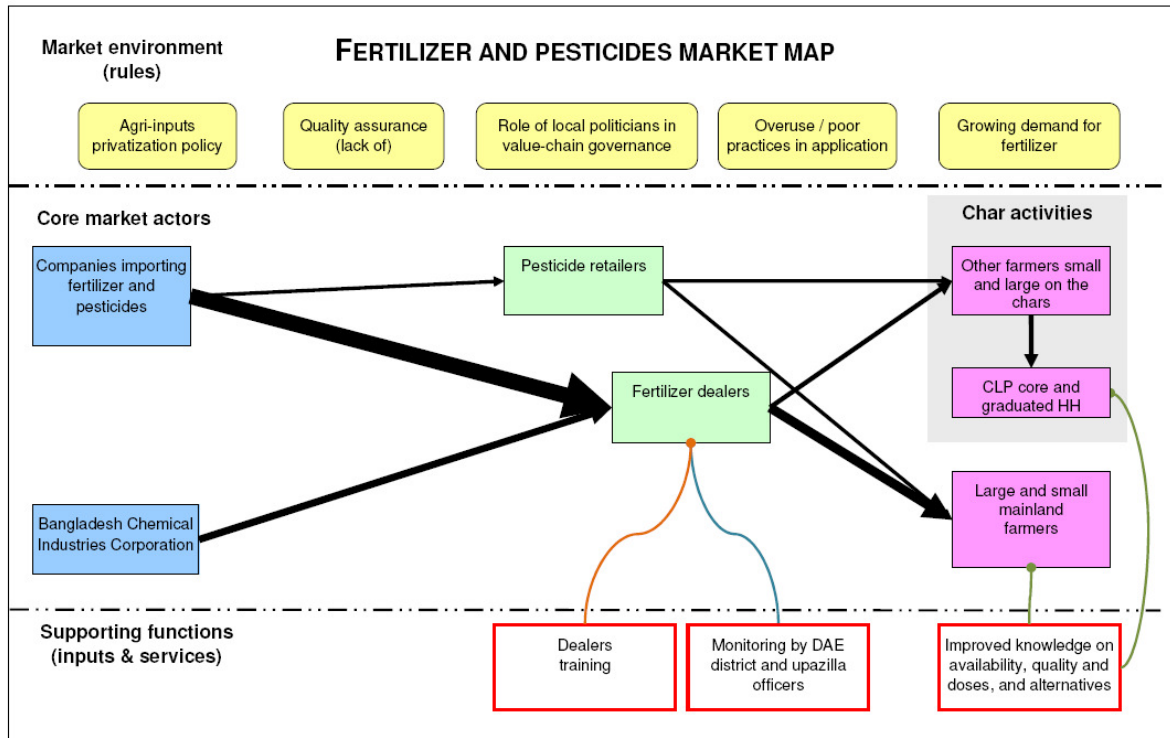
3.1.3 Supply of fertilizer and pesticides

Fertilizer is one of the main inputs used for increasing crop production. The demand for fertilized and pesticides has increased with expansion of modern agricultural practices. Government of Bangladesh and private sector business together try to ensure timely supply of fertilizers. Government of Bangladesh takes measures to maintain a fertilizer buffer stock at the regional, district and Upazila level. It plays a vital role in production, importation, marketing, distribution, monitoring supply, storage, price and quality of fertilizer at various levels. Fertilizers available in the market are highly subsidized.

Public sector production and import of urea as well as production of small quantities of TSP, SSP and DAP are managed by the government through the Bangladesh Chemical Industrial Corporation (BCIC) and

distributed through BCIC appointed dealers. Private sector imports and markets additional TSP, DAP and other fertilizers (MoP, SoP, gypsum, magnesium sulphate and micronutrients) required in the country.

DAE through it Upazila level office collect demand for fertilizer based on which they arrange the production and import of fertilizers. The gap in the system creates short supply against demand though the situation has improved much in recent times.



3.2 Rules / Business environment

DAE policies, priorities and attitudes

The Department of Agricultural Extension (DAE) is the largest public sector agricultural extension organisation work with 10 -15 percent of rural farmers. It implements government agricultural policy with revised extension method which prioritises decentralization; responsiveness to farmers needs; targeting and using a range of extension methods. DAE targets its technologies according to landholding criteria, which is not good reflection of wealth. They try to implement all extension activities based on farmers' information need but constrained by limited outreach due to limited number of SAAOs who lack the facilitation and group motivation skills. The district and Upazila level offices remain weak in full implementation of Extension Approach.

Growing demand for quality seed and inputs

Seed and fertilizer are key inputs for increasing crop yields. The demand and supply of these two key inputs, indeed, are of immense importance. Farmers interviewed mentioned that demand for fertilizer has increased with the introduction of high yielding rice and maize cultivation in the area. According to the seed and fertilizer dealer, there are more than 60 seed and fertilizer dealers in the 3 Upazilas where this study was conducted. One or two years back the number of dealers/ retailer was less. As mentioned

earlier 15 companies are active in the area also indicates that farmers are using more seed and fertilizers. However, farmers were not satisfied with the quality of inputs and they think it is one of the reasons for increased use of inputs to achieve higher production. The team also found that some of the farmers think they know more than others and use seed and fertilizer in a disproportionate way.

Char level willingness to innovate and diversity

Char farmers are willing to innovate and diversify product range. They are particularly interested in development and promotion of short-season crops such as pulses and edible oil crops might fit into char environment of prolonged flooding or short duration droughts. However, the current agricultural marketing systems and infrastructure in char do not create any incentive for the poor farmers to support diversification away from rice. Organizing producer groups to reduce transaction costs and disseminate market information, strengthening market chain relationships, improving post-harvest storage and processing activities will encourage farmers to produce more diverse, higher-value items. Innovation in input and service delivery system will increase production and productivity to a great extent. Development of alternative transportation system or solar power based production units would also contribute a lot in char economy.

Quality assurance

Most of the retailers in the mainland or char area selling seeds, fertilizer, pesticides, micronutrients are of low quality or adulterated by different means. Interview with farmers confirms that all most all farmers are not able to recognize quality inputs. They informed that except one or two retailers, most of them promote inferior quality inputs to get more commission and to make more profit. Sometimes inputs seller also lack knowledge and awareness about the quality inputs.

DAE on behalf of Upazila service monitoring committee is responsible for monitoring the availability and quality of inputs such as seeds, fertilizers, pesticides. But due to lack of man power, resource and other socio-political factor, they cannot play this role effectively.

However, the situation is improving slowly. For example, government has reduced the price of some fertilizers. As a result of these initiatives, it is expected that traders will adopt less unfair means to increase profit.

Agri-privatization policy

Bangladesh was able to privatise agricultural inputs such as seed, fertilizers, and agricultural machineries long before other South Asian nations. Therefore, it has benefitted from private sector investment which ensures availability of inputs and services in the rural area. Through private-public partnership, the government of Bangladesh has successfully overcome the fertilizer supply problem. Few years back when government was alone involved in import, production and distribution of fertilizers, was unable to ensure timely supply of sufficient fertilizers. It created huge anger among farmers that turned into frequent political unrest in the country. However, the privation policy needs further improvement particularly in distribution of fertilizer subsidy so that it can benefit the poor farmers while maintaining relationship with private sectors. Government also need to work on privatization of seed system. Although it has increased availability and production, quality stand is

3.3 Supporting functions

DAE resources

As an agency within the Ministry of Agriculture, DAE conduct farmers training on integrated crop management. It arranges demonstration of new crops and varieties, inputs and technology; observes

national and international day through different activities; monitor supply of quality seed, fertilizers and insecticides at Upazila level and represent Upazila level seed monitoring committee. DAE staff provides technical advice to farmers on cultivation methodology, disease and insect management, fertilizer management and irrigation.

While commenting on DAE's role, farmers in the study area were not satisfied as they don't find them when they are in need.

Credit Services

Informal credit: The char farmers do not have the purchasing power or working capital for buying quality seed, fertilizer and insecticides. Therefore, they depend on mainland input sellers who sell these inputs at higher price than the market rate. Farmers sell their product just after harvest to repay the cost of inputs and other loans. They cannot hold the produce stock for getting prime price. In this context, farmers need credit support to continue production and achieve sustainable livelihoods. Apart from this, farmers also borrow money from relatives and friends.

Banks: Bangladesh Bank has directed all public and private banks to provide financial service to these poor farmers. But in practice the banks have high risk perception of chars regarding repayment capacity of the borrowers and lack incentives due to lack of infrastructure (road, transportation, building, electricity, etc.).

NGO/MFIs: Their credit schemes have inappropriate repayment schedules although some of them have already started seasonal loan to meet the requirement poor farmers.

Seed and fertilizer retailers' training

In the study area, most of the seed or Fertilizer companies interact with retailers in a one way method with limited information. Retailers are also reluctant in communicating with farmers. Low trust and relationship prevails in this process. As a result, farmers have access to limited and quality inputs and face low productivity and low growth. Designing retailers' training and promoting information on fertilizers, seed as embedded service could be an option that can improve the situation. Topics such as responsibilities of retailers; relationship with farmers and fertilizer and pesticides usage could be included in the retailers' training module. Retailers' increased knowledge about trade related rules and regulations; product and production knowledge and client relationship management would help them change their attitude toward farmers. It will also help them increase income from the business.

Transport

Farmers and collectors (*faria*) hire bicycle pullers to transport harvested crops to the jetties / landing points. They pay Tk. 20 per 100 kg carried over 1 – 2 km (approx 2% of farm-gate value).

Bicycle pullers are generally young men. Because of poor / absent road surfaces, rickshaws are not usable and bicycles are pushed rather than ridden. This informal transportation contributes to excessive marketing cost.

Farmers and collectors (*faria*) hire boat or scheduled boat service to transport primary assembling markets. They pay Tk. 20 per 100 kg of products carried over 10 – 20 km (approx 2% of farm-gate value). During dry season this rate goes up Tk 30 depending on the distance.

Knowledge about seed availability, quality and doses and alternative

Farmers use seed, fertilizers, pesticides, micronutrients and irrigation primarily based on information received from the neighbouring lead farmers, inputs sellers and service providers. The input

sellers/dealer/marketing officers provide information as embedded service. Other sources are DAE/SAAO and NGOs and donor funded project. GO and NGOs conduct awareness campaigns and provide soil testing services at subsidized rates. Soil Test results tell the condition of land is in and what and how much fertilizer required for making land more fertile and also what crops would be the best for the land. Proper knowledge on the inputs and service are also critical in terms of saving farm lands from indiscriminate use of chemical fertilizers, lowering investment and increasing yield. For example, cost of fertilizer and pesticides can be reduced remarkably if integrated pest management is practiced in certain crops by the farmers. However, most of these service providers are absent in the study area, therefore, farmers do not have access to the knowledge in appropriate doses and applications procedures of fertilizers and micronutrients.

Linkage brokering

Linkage brokering activities are conducted for training, extension, establishing collection centre, producing to order through the calendar and advocacy.

Large number of char farmers is involved in crops and vegetable production. But there are only a few market traders or wholesaler buy whole range of product from them. Few buyers mean limited competition or monopolistic market which affects the farmers most. However, farmers are also not aware about the forward market and its price volatility, all sorts of difficulties the traders face during aggregation, packing, managing trucks, on-loading, transportation and off-loading. Face to face discussion between farmers and traders would enable both parties to share their concerns and find out solutions, build trust and relationships between farmers and traders.

Demonstration plots

Demonstration, experimentations are conducted to promote appropriate or new technologies or services among farmers or local service providers. For example, demonstration can be arranged on performance of organic manure, varietal trials on field crops and vegetables, seed processing and preservation and soil solarization technique. However, people interviewed mentioned that no organization has arranged any such demonstration for them.

Awareness Raising

Farmers participated in the focus group discussion are found motivated about the use of fertilizers, insecticides and micronutrients but they are not aware about the doses and application method. They use these inputs mostly on their own idea according to land sizes and crop types, though they also consult with local lead farmer or input sellers. Farmers know about the DAE and its SAAO, only a few of them go to these public extension workers. Farmers' awareness on brand, quality seeds and associated technical information are low. Farmers generally face problems related to input and production process. Major constraints for the farmers are lack of quality seeds and associated technical information. A market oriented action plan for awareness raising need to be implemented in coordination all market actors and stakeholders to achieve satisfactory result from this effort.

Farmers' groups

Farmers' groups are very important in relation to linkage brokering, stable supply chain development engaging the farmers in advocacy and negotiation. For example, farmers' groups linked with new buyers through training, market information and reputation can built a collection centre so buyers could come to a central point.

Currently, char farmers have no organization and therefore unable to bargain with landowners, buyer and inputs suppliers. Weak competition among input suppliers put farmers in this situation. Informality of land ownership / leasing gives power to land-owners and make poor farmers vulnerable and compel them to accept unfair terms of share-cropping arrangements. The char farmers need to engage themselves in advocacy and negotiation with DAE for increasing number of SAO and improving their agricultural extension services.

Monitoring by DAE district level office

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4. Problems and opportunities

Demand for agricultural services: Growing demand for agricultural services to enable livelihood diversification is a new reality. Char residents (especially CLP graduates) appear relatively highly motivated to innovate and try alternative agricultural activities. But supply is a big constraint. GO/NGO and private sector need to work together for developing skilled and reliable service providers on input and output production and marketing.

Isolation: Relative isolation of char areas from supply chains and sources of information; high transport costs and limited access to credit for agricultural production seriously affect the char livelihoods. GO/NGO and private investment on infrastructure, char human resource development, produce bulking points and farmers' organisation can address this problem to a great extent.

Role and policy of DAE: Dept. of Agri Extension policies, priorities, resource allocation, official's attitudes and incentives do not encourage service delivery to char areas or smaller farmers. Currently, DAE staff tends work on their own due to lack of skill and knowledge in organising farmers into group although new extension policy gives importance on group and community based extension method. As NGOs have considerable experience, they can help DAE to overcome this problem. But it seems that NGOs need to improve their communication with DAE for collaborative work based on win-win situation.

Knowledge gap: Inexperience and lack of knowledge / information among farmers, combined with isolation from normal farmer-to-farmer sharing networks (e.g. lead farmers) put the char farmers in a vulnerable situation. Ignorance about assessing quality of seeds and inputs, best cropping practices, dosages and timing of inputs leave to use own ideas and trial and error method. It costs, production are income from the cultivation depend luck.

Narrow attitudes of seed/fertilizer retailers: Due to lack of knowledge and information on the seed and fertilizer, the retailers are reluctant about proper communication with farmers. The retailers sometimes try to sell poor quality inputs by using their market-power and narrow attitudes. This situation is

prevailing in the study area. Although this is being addressed by greater competition and training from quality seed producers in some places.

5. Vision for a better market system

5.1 Vision of sustainable outcomes

Effective agri-services provision: Effective agri-services provision based on the char is key. A network of entrepreneurial local 'ASPs' would offer accurate information and advice (e.g. cultivation practices) to farmers for fee / or as an embedded service. Their advice is backed up by an effective relationship with DAE block supervisors (or other DAE staff). In order to build this relationship, the ASP would organize char farmers into groups to develop client base. It can also attract DAE to work with LSP. The ASP would intermediate with the mainland input suppliers (taking a margin from sale of inputs). The ASP might also play a role as an agent in access to financial services: seasonal loans, crop insurance.

5.2 Plausible intervention strategies

Selection of ASP: emphasis 'entrepreneurial' qualities during ASP selection, and treating agricultural services as independent small businesses. There are of course some real talents in the char have skills in communication, interest in business and willingness to build networks. Selecting this type of ASP would ensure business success over a period.

Formation of Local ASP Association: facilitate formation of local ASP associations to achieve economies of scale, and bargaining power. Peer group collaboration produces sustainable impact on business. The LSP would be able to negotiate with both DAE and seed and fertilizer retailers for training information and knowledge regarding application/production method.

Collaboration with DAE: involve DAE block supervisors if possible during CLP activities - ASP selection and training. Insufficient number of SAAO makes this proposition relevant to DAE. While collaborating with CLP on ASP development, the DAE will be able to realize its policy target related to achieving larger outreach.

Dialogue: facilitate dialogue among ASP associations, seed retailers and DAE block supervisors through meeting workshop and face to face interaction on pertinent issues that may arise time to time.

Seed/Fertilizer Retailers Training: explore modalities for providing training to seed retailers in customer-relations and information-sharing. This can be started with need assessment of retailers. CLP can explore option to identify seed companies, NGOs and other intermediaries who are willing work designing retailers' training and promoting information on fertilizers, seed as embedded service.

6. Conclusion

Market oriented agricultural service has prospect to grow as a profitable business in the study area. Selection, of training, association of ASP and collaboration with DAE, need to be facilitated for efficient service arrangement. Greater emphasis on improving their entrepreneurial quality would be an area to look upon. Mentoring and marketing support are essential for their business growth.

Achieving economies of scale, lowering transactional cost and providing agricultural service services sustainably will require innovation in ASP business model. By establishing service points, conducting learning sessions and demonstration ASPs can become more effective in generating demand for their services.