Final Report on the Comparative Study between Micro Seed Dealer (MSD) and Micro Seed Retailer (MSR) in SHOUHARDO III Implementing Area

Introduction

Strengthening Household Ability to Respond to Development Opportunity (SHOUAHRDO) III is a food security program funded by the United States Agency for International Development Office of Food for Peace (USAID/FFP). It is a multi-sectoral program with cross-cutting themes including agriculture and livelihood, health and nutrition, resilience, women empowerment, and good governance. The program is implemented in 947 villages, 23 Upazilas, and eight districts in northern Bangladesh. People in the char and haor regions in northern Bangladesh suffer from unique challenges including river erosion and frequent floods, poor infrastructures, and service accessibility. Moreover, poor hygiene and sanitation and lack of awareness on social issues are some of the key prevailing challenges. These challenges over the years made it difficult for the community people to sustain resources and break the cycle of poverty. SHOUHARDO III has been intervening to ensure sustainable agriculture and livelihood for these people. Part of this involved forming community groups including farmers both women and men and building their capacity on quality seeds, farming technology, input and output markets as well as connection with the public and private actors. So far the participants were able to ensure better production, income, strengthen the connection with the private sector.

To ensure farmers' continued access to quality inputs SHOUAHRDO III engaged with private seed companies including Lalteer, Brac Seed, Metal Seed, Syngenta, and Ispahani to strengthen the seed distribution mechanism for the poor and ultra-poor farmers in program implementing areas. To get through the last mile, the program trained micro-seed retailers (MSRs) at the village level. These retailers made it possible for rural women to purchase seeds from their doorstep. Besides, the program coordinated with these private companies particularly Lalteer to develop micro-seed dealers (MSDs) to ensure farmers' knowledge of quality seeds. Consequently, program participants have significantly increased production and income.

Micro seed dealers typically have a business territory including several unions. They have a direct relationship with seed companies and received training (from the companies) on seed variety, transaction process, and other technical information. They sell seed in bulk quantity and urge for a lower price (compared to the seed retailers). On the other hand, micro seed retailers exist at the end of the supply chain on the vegetable and field crop seed market. Seed retailers as per the seed demand develop seed procurement plans and sell good quality seed as decided in the seed quality act in their respective area. Typically, a micro seed retailer covers up to two villages. They receive information about seed variety, seasons, and quality from the dealers. Micro seed retailers are based in nearby locations to the community compared to the micro seed dealers.

In FY19, SHOUAHRDO III was on the verge of transitioning to a more sustainable food security program. It took almost a year for the program to achieve a turnaround in many ways. The program modified several approaches dropped some activities and initiated system-level thinking.

To review and restructure traditional thinking, the program integrated a strong culture of learning as a part of the Collaborating, Learning, and Adaptation process. The study will inform the learning agenda of SHOUHARDO III with a quest for sustainable impact in the targeted community, particularly by identifying gaps and areas of improvement in developing local service providers. The objective of the study is to assess the micro seed dealer and micro seed retailer models so the program can strengthen its effort in delivering agro-inputs and enhance knowledge among farmers efficiently and in a sustainable manner.

Methodology

The study was accomplished following a qualitative methodology. The data was collected and compiled employing a combination of methods and tools, including structured interviews and focus group discussions. Altogether 32 sample interviews were conducted in October and November including 16 seed dealers and 16 seed retailers affiliated with SHOUHARDO III. The respondents were purposively selected from the list of dealers and retailers that the program worked. Initially, the plan was to collect data from four Upazilas, including (1) Islampur, (2) Fulchari, (3) Austogram, and (4) Dowarabazar. Later on, Mithamoin was added to this list, and the data was collected from five Upazila. The draft data collection was applied in a field test that took place in Sirajganj (a non-study area) and reviewed afterward. An orientation for the data collectors was organized in October 2019 in Sirajganj.

Findings of the Study

The section below entails findings form the structured interviews and focus group discussions.

1. Type of Business

The study findings suggested that 24 respondents (out of 32) were engaged in field crop seed selling. According to *Table1*, the number of MSDs selling field crops was higher (15) compared to the number of MSRs (9). However, the number of MSDs and MSRs that sold vegetable seeds was almost equal. The most common field crop seeds sold by them were rice, maize, and, mustard whereas the most sold vegetable seeds were sweet-gourd, chili, bottle-gourd, red amaranth, and radish. The majority of the MSRs (12 out of 16) offered technical support to the farmers at different stages of cultivation compared to half of MSDs (9 out of 16) doing the same.

The findings suggested that MSDs were more experienced than MSRs as 13 (out of 16) MSDs had more than five years in selling agricultural inputs compared to six (out of 16) MSRs. One of

the MSDs had almost 20 years of experience in the seed business. *Table 2* represents the years of experience for both MSDs and MSRs.

2. Business Risk

Natural disasters (e.g. floods and monsoon rains), price fall, seed damage, fire, and theft were marked as the major business risk for both seed dealers and retailers. Among others, seed damage due to date expiration and the decrease in price was labeled as business risks. More than 60 percent (20 out of 32) of the respondents took credit from microfinance institutions (e.g., ASA, BRAC, and Grameen) and 15 respondents (out of 32) tapped into their savings to mitigate these risks. Five of them sold products at a low price to cope with business risks.

3. Demand

Table 4 and Table 5 show the sales volume of MSDs and MSRs in char and haor. A difference in sales can be noticed from these two tables. The minimum sales amount for MSDs in char was USD17.65 and the maximum amount was USD1177.00 whereas in haor the minimum sales amount was USD 353.10 and the maximum was USD 5885.00. As shown in Table 4 and Table 5, four out of eight MSRs sold seeds up to USD 58.85 in a week irrespective of their location. In char, the majority (five out of eight) of the MSDs' weekly income was below USD 294.25, whereas six (out of eight) MSDs in *haor* seed sales varied from USD58.86 to USD 2354.00.

Weekly sale in USD	# MSR	Weekly sale in USD	# MSD
0.012 - 58.85	4	Below- 294.25	5
58.86 - 117.70	2	294.26 - 588.50	1
117.71 - 176.55	1	588.51- 882.75	1
176.56 - 235.40	1	882.76 - 1177.00	1

Table 1 The volume of weekly sales (in USD) for MSD and MSR in the Char region.

There was not much difference in terms of selling inputs to male and female customers. Almost all the respondents (30 out of 32) sold inputs to male farmers, and 28 (out of 32 respondents) sold to female farmers. Above 60 percent (10 out of 16) of the MSDs reported selling inputs to retailers. Both MSDs and MSR developed relationships through good behavior, selling in credit, and selling quality seeds at fair prices to their clients. Of all, 20 respondents (out of 32) stated that they sold seed to farmers on credit. Almost all (31 out of 32) respondents mentioned that during pick-season (typically winter starting from November towards the end of February) sales figures increased whereas it decreased in monsoon (starting from mid-April till September). Consequently, they had fewer profits during monsoon; most of them took a loan from different NGOs and banks during this time.

Weekly sale in USD	# MSR	Weekly sale in USD	# MSD
0.012 - 58.85	4	Below 588.50	1
58.86 - 117.70	3	588.51 - 1177.00	3
Above 117.70	1	1177.01-1765.50	1
		1765.51- 2354.00	2
		Above 2354.00	1

Table 2 The volume of weekly sales (in USD) for MSD and MSR in the Haor region.

4. Supply

About 72 percent (23 out of 32) respondents shared that they supplied inputs to village and union. One fourth (8 out of 32) of them supplied to Upazila. All the 16 MSRs responded that they bought inputs from the dealers (MSDs and big dealers from the Upazila level), and two of them mentioned private companies (e.g. including Lalteer, Brac Seed, Metal Seed, Syngenta, and Ispahani) as an alternative source. On the other hand, 10 (out of 16) MSDs purchased inputs from big dealers in Upazila and district. More than half (9 out of the 16) of the respondents MSDs reported private companies as an alternative source of input collection, and five of them (16) purchased directly from the producers and Bangladesh Agricultural Development Corporation (BADC)[1]. About 94 percent (30 out of 32) of the respondents, regardless of MSDs and MSRs developed relationships with the people they bought inputs from at the time of purchasing seeds and pesticides. On the other hand, only one-fourth (8 out of 32) of them mentioned that the representatives from the companies (e.g. Lal Teer, Brac Seed) proactively developed a business relationship with them.

5. Quality

In the case of maintaining the seed quality along the chain, 75 percent (12 out of 16) of dealers maintained standard germination levels for their seeds, and 56 percent (9 out of 16) of retailers were able to maintain the standard germination level. 50 percent (8 out of 16) of dealers sold short-cycled seeds and another 50 percent of dealers sold adaptive varieties of seeds. The study findings show that five retailers (31 percent) sold less short-cycled seeds than the dealers and only four retailers (out of 16) sold adaptive varieties of seeds. 56 percent (9 out of 16) of dealers and 50 percent (8 out of 16) of retailers could increase their seed production along with their value chains.

From the study findings, it is evident that the dealers have significant perishability of seeds than those of retailers. Overall, the retailers had higher shelf-life (141 days) of their seeds than the dealers (124 days). Similarly, the retailers found to have higher shelf-life (224 days) for vegetable seeds than the dealers (120 days). Providing both field crop and vegetable seeds, the dealer found to have higher shelf-life (130 days) of their seeds, for the retailers, it's 77 days. No retailers found to store seeds for more than three months, however, the dealers found to store for a different duration. On average, 94 percent (15 out of 16) of dealers store seeds above 500 packets, only 13 percent of retailers (2 out of 16) found to store the same amount of packets. 44 percent (7 out of 16) of retailers store seeds for one month only and 56 percent (9 out of 16) of the store for 2-3 months.

[1] BADC is an autonomous government body that manages the agricultural Inputs Supplier i.e. agricultural seeds, non-nitrogen fertilizer and Minor Irrigation facilitating to farmers of Bangladesh. Cited at http://www.badc.gov.bd/ on 20 January 2020.

Whereas one dealer (6 percent) stores seeds for one year, 13 percent (2 out of 16) of the store for six months, 44 percent (7 out of 16) of the store for 2-3 months, 25 percent (4 out of 16) of the store for one month, and the rest 13 percent of them couldn't specify their storage duration. Both the retailers and dealers found to incur quite a similar amount of storage loss. Around 81 percent (26 out of 32) of the respondents shared that their storage loses about five to ten percent. The highest storage loss (10-20%) was faced by the MSDs, each having storage above 500 packets of seeds. Two of the three respondents who did not have any storage loss were MSRs.

6. Source of information source and determining the price

Both dealers and retailers received information on weather and price of seeds from representatives of private companies, other dealers and retailers, and government. The findings suggested that MSDs had better access to information as 13 (out of 16) MSDs stated that they had more than one source for information. In comparison to that, only six (out of 16) of the MSRs had similar access. Most of the retailers (10 out of 16) could only access one information source. The majority of the MSRs (15 out of 16) and MSDs (12 out of 16) reached out to other dealers and retailers for price information.

According to the respondents, electronic devices (e.g., television) and cellular technology (e.g., mobile phone/network) played a vital role in accessing weather information; 88 percent (28 out of 32) of the respondents shared that they got weather information through mobile phones. Similarly, most of the respondents (27 out of 32) referred to television as a major source of weather information. The study findings exhibit that the retailers have higher authority in determining their seed price than the dealers. 75 percent (12 out of 16) of retailers determined the seed price by themselves, whereas, 50 percent (8 out of 16) of dealers determined the seed price by themselves.

7. Market competition

The dealers had to compete with more seed sellers in the same market and village than the retailers. On the contrary, the retailers were competing with relatively fewer sellers in the same market. Findings suggested that the dealers had to compete for around four sellers (3.9 on average) in the same market, while the retailers compete for less than three sellers (2.5 on average) in the same market. The respondents outlined quality seeds, fair price, and friendly behavior as three major features that distinguished them from other sellers. Among other reasons, about 81 percent (26 out of 32) of the respondents mentioned quality seeds, 75 percent (24 out of 32) of the respondents referred to a fair price, and 66 percent (22 out of 32) of the respondents said that friendly behavior helped them stood out among other sellers.

8. Availability of credit, technology, and skill

The majority of the respondents (29 out of 32) stated that they had the credit facility. The list of organizations included NGOs (ASA, Grameen Bank, BRAC, SKS Foundation, Gono Unnayon Kendro-GUK), local organization (Hat Samity, Common interest group, Bougla Bazar, somoby somity, Small Samity, Bangla Bazar Cooperative Association), and Village Savings and Loan Association (VSLA). ASA was the most (eight out of 32) cited organization among all. More than half of the respondents (19 out of 29) with access to credit facilities shared that they paid high-interest rates. However, only accessing credit was not enough for their business. They mentioned skills and technology as essential elements of their business.

More than half of the respondents (19 out of 32) shared that they used digital scales in their business. The cost of introducing new digital scales varied from USD27.07 to USD200.09 (depending on the number of scales) for MSDs and MSRs. Around 44 percent (14 out of 32) of the respondents had employees to run their business. Hiring employees varied according to the seasons. The demand for an extra pair of hands was high in winter and low in summer shared by ten (out of the 14) respondents who hired employees.

9. Market association and partnership with lead farms

The study suggested that seed dealers and retailers were more engaged with local market associations rather than with private companies. Findings from this study revealed that about two-thirds of the respondents (23 out of 32) were affiliated with one or more market associations. For most retailers and dealers (22 out of 32), the top three motivations to get affiliated with such association included savings and financial support. On the other hand, 53 percent (17 out of 32) respondents shared that they were connected with private companies. This connection began at the time of purchasing seeds and pesticides from a particular company.

10. The demand for quality seed, context, and challenges associated:

Types of seeds: Respondents in the group discussion explained that most of the farmers would buy rice, maize, mustard, and vegetable seeds. They would go for big packs (typically 10 kilograms) of rice seeds whereas for the vegetables they would buy small sachets (e.g.100 grams). They shared that when they would see a new seed in the market, they would often buy it in small quantities because at that point they were unsure of its quality.

Accessing quality seeds: In char, respondents in the focus group discussion suggested that they collected seeds from local markets from the dealers mostly. They suggested that farmers with large farmlands saved seeds from the previous season. On the other hand, farmers who did small-scale production either collected or purchased seeds. An empirical study by Iqbal and

Toufique (2016) in the Bangladeshi context found that the use of formal seeds [2]is comparatively higher among small farm owners than the larger farm owners. Similarly, the respondents in the focus group discussion shared that farmers who owned a large array of farming land cultivated rice whereas the smaller ones were growing vegetables.

In both char and haor, farmers took suggestions from the upazila agriculture officer on issues related to agricultural production, as was stated by the respondents in the focus group discussion.
However, they were not aware of or learned about the quality of seeds as most of them could hardly read what was written on the packets of seed. They purchased seeds from the local dealers and many times the dealers supplied seeds that were expired which resulted in farmers undergoing significant loss in terms of producing quality crops in expected quantity. They also did not have any reliable sources from where they could get the authentic information. Some of the FGD participants assumed the Upazila agriculture officer suggestions on seeds were biased by different companies and the dealers.

Price of seeds: Besides not having reliable sources of quality seeds as a challenge, farmers experienced extractive behavior of the seed dealers. In many cases when the demand for seed was high the dealer increased the price of seeds. FGD respondents stated that they were compelled to purchase seeds from the dealers knowing that the seeds were overpriced due to lack of alternative sources. Similar behavior was also noticed for MSRs in Haor as they continued to increase the price of seeds. However, farmers who attended FGD suggested that group-buying seeds could help them get quality seeds at a fair price.

Analysis and recommendation:

1. Sales, Reliability, and Quality:
The findings from the interview and FGD confirmed that there was an increasing demand for quality seeds for the farmers. Farmers preferred buying small packets of seeds from the retailers, especially for vegetables. The female customers, according to the respondents, mostly demanded seeds that were of local varieties, short-cycled, and rich in nutritious value; these were shared mainly by respondents that sold vegetable seeds. It appeared that women, in particular, had a high demand for vegetable seeds. Nevertheless, the findings also suggested that the retailers who sold only vegetable seeds had weekly sales worth USD6.07 on average but those selling both vegetables and field crop seeds had weekly sales equivalent to USD 105.93. Hence, selling diversified products was a key determinant of increased weekly sales for MSRs. The program may work with the existing retailers to diversify the goods that they sell.

[2] Formal sources of seeds comprise the legal dealers including those of the Bangladesh Agricultural Development Corporation (BADC) and private seed companies, NGO and the informal source includes farmers' saved seeds, seeds purchased from neighbors, and mobile seed vendors.

Some aspects of the quality of seed include its genetic properties, i.e., the inherent genetic makeup of the variety, and the germination rate, seed health, and purity of the seed (Louwaars and Boef 2012). According to the Bangladesh Agricultural Development Corporation (BADC), in Bangladesh, the use of seeds that lack these qualities is one of the major factors for the low productivity of crops (BADC 2012). It also stated that the formal sources of seeds comprise the legal dealers including those of the BADC and private seed companies, NGO and the informal source includes farmers' saved seeds, seeds purchased from neighbors, mobile seed vendors, etc. During the FGD, male farmers shared that they were a bit reluctant to rely on the retailers for field crop seeds, hence, they bought it from the dealers mostly. Farmers' sense of reliability was connected to quality inputs. According to most of FGD respondents, retailers could not always ensure quality seeds[3]. Quality seeds meant for them to have better germination rates, higher production, and short-cycled crop. Some of them experienced a low germination rate and decreased production. They could only get quality seeds from the Upazila agriculture office though the male farmers barely practiced this as they shared during the focus group discussion. Also, most farmers' inability to read the information printed on the packets (of seed) made it easy for retailers to sell inputs with expiry dates. There seemed to be a gap in accessing quality inputs for farmers. To change the existing gaps in the agricultural input market system, it is vital to create a balance between the supply and the demand side. It seemed that there is no longer a linear process in place when it comes to the seed-value chain and the program will need to strengthen its work with micro seed retailers to ensure the availability of quality inputs for farmers.

As the quality of seed can be compromised at the level of distribution, voluntarily or involuntarily. Studies suggested that seeds can lose quality through improper packaging or transportation by the traders or other agents (Ibid). Findings from the FGDs also revealed that when smaller farmers asked for small amounts of seeds from good quality seed-packs of large size, MSRs opened the large packs and sold small amounts of seeds to multiple farmers (from the same pack). As a pack, in this way, could stay open for quite sometime before its seeds could be completely sold, the quality of the seeds degrades. By doing this, MSRs adulterated the contents of the large seed packs of good companies with inferior quality seeds. In order to ensure farmers' access to quality seeds, the program may need to strengthen incentives for retailers. Some studies suggested that gradual replacement of informal seed by formal seed is believed to increase crop production by 15-20 percent in Bangladesh (Jaim and Akhter 2012, Islam et al. 2010).

2. Price and distance

In plain land areas like *char*, villagers collected seeds from the local and Upazila market instead of the retailers at a price that the FGD participants perceived as 'fair'. On the contrary, in *haor* areas, due to transportation challenges resulting from geographical conditions, there were two relatively fewer competition for MSRs. As a result, farmers had to purchase seeds from MSRs at

[3] Some important aspects of seed quality are trueness to variety; the presence of inert matter, seed of other crops, or weed seed; germination percentage; vigor; appearance; and freedom from disease. (Available at: https://content.ces.ncsu.edu/seed-and-seed-quality)

a high price, sometimes two times higher than the market price. An exception was noticed in terms of the number of seed retailers in the same market for Austogram; the findings suggested there were more five seed retailers in this area.

It may also mean that there was an increasing demand for seeds in deep haor. Despite being in the same business, strong vertical linkages worked as leverage for both MSRs and MSDs to manipulate price information as a short-term incentive. A total of 12 out of 16 MSRs stated that the price of seed was determined by themselves. The FGD findings suggested that retailers were determining the price of the product by themselves which drove the farmers towards the dealers as they looked for a fair price. However, half of the MSDs shared that they were determining the price by themselves too. In case of high demand, MSDs behaved in and extractive way and overpriced seeds for farmers. Apart from quality, ensuring fair prices for farmers may need further work from the program.

3. Recommendations

The table below shows particular areas that the program may consider to work on to strength the seed value chain:

Area	MSD	MSR	Farmers
Access to quality seeds	MSDs can bridge the MSRs with lead firms so the firms have a clear understanding of the demand, output, and challenges faced by farmers. They should also be in charge of monitoring seed quality and production.	MSRs will need incentives to stop compromising with seed quality. Their access to formal seed channel will also need to be improved	Consistent awareness and knowledge on formal seed through the village entrepreneurs' forum
Ensure fair price	Initiative incentives so they only sell seed on the company determined price mentioned in the packets	Initiating cash/ non-cash incentives so they only sell seed on the company determined price mentioned in the packets	
Capacity and linkage	Engage lead firms rather than taking a program-led	Engage lead firms rather than taking a program-led approach	Village entrepreneur forum may be

	approach to developing a client-focused and inclusive agricultural input value chain. Let the firm be on board through a self-selection process.	to developing a client-focused and inclusive agricultural input value chain. Let the firm be on board through a self-selection process.	utilized as a platform to raise awareness, build capacity, and disseminate information
Service gap	Collaborate and strengthen partnerships with private seed companies so they can extend their support to seed retailers without going for a costly setup.	Develop new retailers, especially women retailers at the Union level to let them have a fair-sized of the client base Diversify retailers' sales	Increase awareness through entrepreneur forum on the accessibility and availability of seeds and associated services
Role of private companies	- Awareness of the farmers - Motivating the retailers - Setting up long-term business goals - Incentives from companies through dealers - Monitoring the quality of seeds periodically, check the germination rate, and provide a technical suggestion.	- Distribute seeds through retailers - Organize a period meeting with dealers and retailers - Consistently offer incentives to the dealers so they continue to provide support to the retailers	- Develop a database of farmers as their clients and regular monitoring of seed quality and production volume

Conclusion

SHOUHARDO III has already started moving towards a sustainable exit. One of the purposes of the program is to increase equitable access to income and nutritious food for men and

women. The program aimed to achieve this through a series of intermediate outcomes, including increased agricultural production, increased access to agricultural markets and increased off-farm income for the Poor and Extreme Poor (PEP) people. The program needs to strengthen non-functional loops in the agricultural inputs system of which seed is a vital part. The study was designed to identify specific areas of ensuring agro-inputs and knowledge to PEP farmers. The findings pointed prevailing gaps in quality, price, and information related to seeds. More specifically, the findings suggested that the program participants were struggling with common systemic patterns such as short-term incentives that drive extractive behaviors, limited information flows, reduced willingness to invest, and a high percentage of win-lose outcomes. Systemically, these institutional biases weaken the market systems' capacities to effectively communicate and respond to market signals such as price, supply, and demand. The program will need to work on the above-mentioned areas to strengthen this system within its lifecycle.

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Annex 1: Structured interview format

In-depth Interview with Dealer/Retailer
Question Guide

Introduction

Assalamu Alaikum ...

My Name …….

I have come from CARE Bangladesh. Currently; we are conducting a comparative assessment between Micro Seed Dealer and Micro Seed Retailer in Char and Haor areas under SHOUHARDO III. The objective of the study is to assess the effectiveness of micro seed dealers and micro seed retailers so the program can strengthen its effort in delivering agro-inputs and knowledge among farmers efficiently in a sustainable manner. Your identity and feedback will be kept confidential and this information will be used only for research purposes. Do you agree to be the respondent? Thank you for agreeing to participate in the interview.

Topic	Subtopics	Questions (broader)	Response
Personal Information	Name, age, and gender	1. We can ask and fill in the form or can obtain a business card	
	Address	2.	
	Mobile no.	3.	

Type of business		4. What value chain(s) are you part of?	a. Field Crops i. Maize ii. Rice iii. Mustard b. Vegetables i. Sweet-gourd ii. Chili iii. Brinjal iv. Radish v. Cali-flower vi. Battle-gourd vii. Tomato viii. Red amaranth ix. Stem amaranth x. Others c. Fertilizer d. Pesticide e. Providing suggestions/ advice
	Physical function	5. How does the respondent add value to the product/ services product?	a. Input seller (Small or bulk volume) b. Technical support c. Packaging d. Grading and sorting e. Branding f. Storage g. Transportation h. Sell on credit i. Others
	Experience	6. How long has s/he been doing this business?	a. 1-2 years b. 3-5 years c. More than 5 years d. Not specified
Business Risks		7. What are the major risks/constraints that your business faces? (probe here for risks related to climate, market price fluctuations, input/service /buyer ineffectiveness, etc.). Prioritize three and explain their impact on your business.	a. Natural disaster b. Theft c. Fire d. Price Fall e. Damage f. Market Competition g. Political Influence h. Delayed season

		8. How these constraints are different for men and women-led business?	a. Mobility for women b. Lack of acceptance for women c. Women are forced to sell in due d. Not applicable
		9. How did/do you mitigate these risks?	a. Tap into savings b. Take credit c. Sell products at a low price d. Can't identify
Demand	Quantity	10. Quantity of product/service sold normally per week in pick-season	Weekly: (Dealer) a. Below 10000 taka b. 10000 – 15000 taka c. 15000 – 20000 taka d. More than 20000 taka Weekly: Retailer a. Below 1000 taka b. 1000- 2000 taka c. 2000 – 3000 taka d. 3000 – 4000 taka e. More than 4000 taka
		11. Quantity of product/service sold normally per week in the off-season	Weekly: (Dealer) a. Below 2000 taka b. 2000 – 4000 taka c. 4000 – 6000 taka d. More than 6000 taka Weekly: Retailer a. Below 500 taka b. 500- 1000 taka c. 1000 – 1500 taka d. 1500 – 2000 taka e. More than 2000 taka
	Type of buyer	12. To whom do you sell/provide services?	a. Male farmers b. Female farmers c. Retailers
		13. How did you meet the people /develop relationships with the people you sell/provide services to?	a. At the time of selling products b. Good behavior c. Quality Seeds d. Selling in credit e. Selling at a fair price f. At the time of providing suggestions/ advice g. Giving credit

			h. Being involved in local arbitration	
	Seasonality	14. Has there been a trend over time in changes to the volume of sales?	High i. Summer ii. Winter	Low i. Summer ii. Winter
		15. If so, how does this affect your business?	a. Less profit b. Less sell c. Increased credit d. Selling a poor quality product e. Deterioration in relationship	
	Variety	16. Do you sell a different variety of seeds?	a. Yes. b. No.	
		17. What are the most demanded varieties?	a. HYV b. Short-cycle product c. Climate-smart varieties d. Local variety e. Nutritious f. Can't identify	
	Consumer preferences	18. What varieties are demanded by women?	a. HYV b. Short-cycle product c. Climate-smart varieties d. Local variety e. Nutritious f. Can't identify	
Supply	Source area	19. Where are your supply areas (geographically)?	a. Village b. Union c. Upazila d. District	
	Source by type of person	20. Who do you buy inputs from?	a. From dealer b. From private company c. From producer d. Not specified e. Others	
		21. How did you develop relationships with the people you buy from?	a. At the time of purchasing seeds and pesticides b. They proactively develop the relationship c. Others	
	Price	22. Have there been any trends in price over the past 5-10 years?	a. Yes. Gradually increased/ decreased b. No. Price remained static c. Can't identify	
Quality	Quality	23. What is the quality of the product along the chain?	a. Standard germination level b. Short-cycled c. Adaptive variety d. Increase production	

	Perishability Post-harvest issues.	24. Does the product have a shelf life? If so, what is it?	a. Yes. Duration----- b. No
Storage	Quantity	25. On average, how much do you usually store?	How many packets? a. 100-200 pkt b. 201-300 pkt c. 301-500 pkt d. above 500 pkt
	Time	26. For how long?	a. 1 month b. 2-3 months c. 6 months d. No specific period
	Storage problems	27. What percentage of your total products are gone in storage losses?	a. 5-10% b. 10-20% c. 20-50% d. 50% above e. Not applicable
Grading and sorting	Grading	28. Do you grade or sort?	a. Yes b. No
information	Sources	29. Where do you get market information e.g. on prices?	a. Other dealers b. Other company c. Company representative & other retailers d. GoB e. NGOs service providers f. Own experience g. Not applicable
		30. Where do you receive climate/weather /EWS information from?	a. TV b. Mobile phone c. Newspaper d. Others dealer e. Others company by over phone, company representative & other retailers f. By GoB (SAAO) g. NGOs service providers
Price Information	Market power	31. Who determines the price?	a. Company b. Dealer/retailer c. Self d. Local market committee e. By Govt.
	Associations	32. Do you belong to an association?	a. Yes b. No

Institutional and legal framework		33. What is the value of being part of this association?	a. Savings b. Financial support c. Decision making d. More selling e. Credit support f. More profit g. Relationship buildup h. Information (ICT) i. Auction
Market structure	Competition	34. Number of seed sellers in the same market	a. 01 b. 02 c. 03 d. 04 e. 05 f. 06 g. More
		35. What distinguishes you from other sellers?	a. Fair price, b. Quality seed c. Behavior approach. d. Not sell date Expiry seed. e. Seed sells through the lending system. f. Different Seed g. available in year-round h. Technical support
Credit availability	Sources type	36. Which credit institutions do you have access to?	a. BRAC, b. ASA c. Grameen Bank d. VSLA e. Gram Somite f. Progressive g. ESDO h. POPI i. DAM j. Bank k. Govt. Loan l. Others
		37. Are there challenges to accessing credit? If so, what are they?	a. Yes (what are those?) i. High interest ii. Time-consuming iii. Collateral iv. Suitable amount v. Others b. No
Technology and skill availability	Sources and type	38. What technology do you use in your business?	a. Mobile app b. Digital scale c. Digital cash machine

			d. Others, please specify
		39. Cost for technology	a. 5-10% of the total sell b. 10-20% of the total sell c. 20% above d. Not applicable
Labour Asset	Sources and type	40. How many employees do you employ?	a. None b. 1 c. 2 d. 3 e. 4
		41. How does your labor demand change seasonally?	a. High/low in Summer Season b. High/low in Winter Season c. Year-round d. No change
		42. What are the three major assets, apart from labor, that your business relies on?	a. b. c.
		43. How much do your labor and other asset cost?	a. 5-10% of the total sell b. 10-20% of the total sell c. 20% above d. Not applicable
Partnership with lead firms	Sources and type	44. How many lead firm do you work with?	a. 0 b. 1 c. 2 d. 3 e. 4
		45. How did you form this business relationship with this lead firm?	a. At the time of purchasing seeds and pesticides b. They proactively develop the relationship c. Others

Annex 2: Focus Group Discussion checklist

Quality	- Do they get the right product? - Are they in the right condition? - What do they think about the quality of those (agricultural) inputs? (The overall understanding of the farmers about quality inputs should be captured.) - What they experienced regarding access to quality inputs? - What do they know about sources and process to get quality inputs? - What are the challenges they face, and what are the ways to overcome/mitigate those?
Quantity	- What type of seed do they buy more often? - What are the most popular package sizes? - Do they come in the right quantity?

	- Are there issues around high value/small packet, or, low value/big packet?
Price	- What experiences the villagers have regarding price (of quality inputs)? - Do they pay additional charges to the retailers?/to buy it from adjacent places? - If yes, what is their motivation (e.g., save time, less labor, situates in nearer place, can get advice/suggestion, have good understanding/behavior, etc.) to pay the high price/extra money?
Time/season	- When do they purchase the seed? - Do they get the seed at the right time? - How frequently do they need seed? – single sowing/multiple sowing times?
Location	- Are they seed available within their reach? - in the right place - What is the distance that they normally travel between farm and retail outlets? - From where and how the village farmers purchase/collect agricultural inputs? – specific market name/s - What are the advantages and/or disadvantages of visiting those places?
Capital/credit	- What are the credit needs of the farmer? - Range of credit amount during production season? - Do they get credit under-the right contractual terms?
Transportation	- What kind of transport is used by farmers to collect seeds? - What is the cost associated?
Information	- How do you get information from retailers/dealers? - What kind of support do they receive from the input sellers?
Recommendation	- What are the top three recommendations (by the villagers) regarding quality inputs?