

## ***Addressing Barriers to Rice Seeds Trade between India and Bangladesh***

### **Consolidated report on country/state level workshops**

#### **I. Introduction**

The project “Addressing Barriers to Rice Seeds Trade between India and Bangladesh” (RISTE), launched in January 2013 with support from Bill & Melinda Gates Foundation, is being implemented by CUTS International with support from four partners in India, and one in Bangladesh. Since the launch of the project in early 2013, project partners have successfully carried out planned activities. These include conducting both primary (such as focused group discussion with farmers, and interactions with several stakeholders involved in HYV rice seed flow) and secondary research. After carrying out the planned activities, project partners prepared the initial draft report reflecting the findings.

Each of the project partners organised state/country level workshop to present findings of the initial draft report as shown below (Box 1).

<b>Box 1: State/country level workshops organised by RISTE’s Project Partners</b>					
<i>S. No.</i>	<i>Partner</i>	<i>State/country</i>	<i>Date</i>	<i>Venue</i>	<i>CUTS’ team participation</i>
1.	Mukti	West Bengal, India	21-11-2013	Conclave, Kolkata	SPS/NK
2.	Unnayan Shamannay (US)	Bangladesh	23-11-2013	US’ Conference Room, Dhaka	SBK
3.	IGS, Basix	Jharkhand, India	25-11-2013	Palash Residency, Ranchi	SPS/NJ
4.	Bihar Water Development Society (BWDS)	Bihar, India	27-11-2013	BWDS’ Conference Room, Patna	SBK/NK
5.	Samruddhi	Odisha, India	30-11-2013	The Crown, Bhubaneswar	SPS/SBK/NK*
<p>Note: SPS: Suresh P Singh; NK: Nitesh Kumar Singh; SBK: Saurabh Kumar; NJ: Neha Jain. *Dr Mahfuz Kabir, Dhaka also participated in the meeting. Dr Kabir is associated with the Bangladesh partner Unnayan Shamannay as Lead Researcher in the RISTE project. Source: CUTS’ project team participation in the workshops</p>					

The state/country level reports focus on two basic issues: firstly to understand the mechanisms of HYV rice seed flow in the respective state/country, and secondly to understand demand supply scenario. It is understood that proper understanding of HYV rice seed flow will also lead to identification of issues and challenges faced by the seed industry with respect to availability and accessibility to seeds by the end users, i.e. farmers. Besides, it is also expected that interactions with the stakeholders involved in the HYV rice seed flow will pave the way for addressing major issues and challenges.

*Further to the focus of the initial draft reports, the basic purpose of the state/country level workshops is to present findings and to gather inputs – comments and suggestions – for finalisation of these reports.*

The below sections highlight major issues and challenges that emerged during the workshops. It also highlights comments and suggestions gathered during the workshops to make these reports more useful to the major stakeholders, such as policy makers, research institutions, seed producers, seed traders, and also farmers.

## II. Major issues vis-à-vis the RISTE project

### A. Farmers' lack of awareness

- Despite the fact that HYV adoption rate has risen to over 80 percent in many Indian states, farmers' in many areas in the four states suffer from lack of awareness on suitable HYV rice seed. This, in fact, appears to be a common issue observed in all the four states in India and also in Bangladesh. Farmers in areas like West Singhbhum district of Jharkhand and Dakshin Dinajpur of West Bengal are also not aware about different suitable varieties of HYV rice seeds and information on these. One of the major reasons for this is inadequate government extension services in almost all areas. This often compels farmers to use a single seed available with them. This was reported for some areas in Odisha, where farmers have not changed their seed for about 15 years. This often makes them suffer from low yields and production.
- Lack of awareness is reflected by low seed replacement rate (SRR) across the four states and in Bangladesh. At present the SRR vary in the range of 20 to 30 percent in the four states. Among the four India states, the issue is more serious in Jharkhand. Interactions with farmers revealed that they are not much aware of the ongoing government programmes such as Krishi Vikas Kendra and also recently released varieties. In many districts of Odisha, SRR is found to abysmally low at less than 10 percent in five districts (Jajpur: 8.4 percent; Kandhamal: 8.8 percent; Kendrapara: 9.7 percent; Nayagarh: 9.8 percent; Mayurbhanj: 9.9 percent).
- West Bengal SRR is about 25 percent. However, lack of awareness on recently released and suitable varieties, weak infrastructure, and lack of support from the government are argued to be major areas of concern. Stakeholders called for urgent government's attention to address the issue.
- There are also some positive developments. In some areas of Odisha, It is noted that seed replacement rate (SRR) in the state has increased significantly over the last few years, rising from a litter over 8 percent in 2007-08 to about 22 percent in 2011-12. This is an important development and needs to be further strengthened. Increase in SRR is primarily because of increasing level of increased production and supply of certified seeds by state and private agencies. Besides, increased level of awareness has also contributed in the development .
- Reports reveal that coastal and tribal areas are having low SRR, compared to other areas. In these areas, long duration crops are grown. It is also observed that small and marginal farmers are not using modern varieties (HYVs), mainly due to lack of availability of stress tolerant varieties suited to these areas. This calls for re-focusing breeding strategies.
- These calls for initiatives to focus on small and marginal farmers, if improvement in SRR are desired.

### B. Farmers' preference

- A significant variation in preference for different types of seeds by different age group farmers is observed. Interactions with farmers in Jharkhand reveal that while older people prefer traditional varieties of rice seeds; for younger generation farmers, preference is in favour of hybrid seeds. This is primarily because of high yield capacity of hybrid seeds. For farmers who are in their middle age, preference goes to HYV seeds. It is also noted that literate farmers prefer HYV rice seeds.
- Farmers' preference for short duration rice seeds is observed to be quite high.
- Farmers appear to prefer varieties such as Swarnamasuri, Pratiksha, Satabdi, Lalat and Ranjit. These preferred varieties are common in all the four states in India and also in Bangladesh.

Though in Bangladesh, these are used informally. Similarly, many registered varieties in Bangladesh are accessed informally and used in India in states like West Bengal, Assam. Some of these include BR11, BR9.

### *C. Inefficiency in production, marketing and distribution*

- Small seed producers often face problem in registering as registered seeds growers.
- In many areas, it is observed that farmers have no choice but to accept seeds available in the market. This is because of shortage in production, and inefficient distribution systems.
- Small and village level producers (village seed association) find it difficult to produce HYV rice seeds. This is mainly because of some restriction put on them with respect to procurement of foundation seeds only from state agencies/universities. A point was made that seed production and distribution might improve significantly if government allows the private sector to operate more freely in terms of procurement of foundation seeds from other places/states.
- In some areas (Bihar), agencies (National Seeds Association and other agencies) sell Swarna variety as Truthfully Labelled Seeds (TLS) as it is not a notified crop in the state. This leads to informal flow of seeds from one state to another within India. Though this is not a major area of concern, but it results in low upliftment of locally produced certified seeds. Often, state contracted seed growers are compelled to sell their seeds as grains, and suffer loss.
- Often, HYV rice seeds made available to farmers are not of good quality. It is also noted by the farmers in four states in India that their trust on government agencies with regard to production and distribution of good quality seeds has declined. The problem relating to bad quality of seeds is also reported in Bangladesh.
- HYV rice seed not available at government stores below 30 Kg packet. However, local traders sell HYV rice seeds in retail (1 Kg/2KG). For a large number of farmers, especially small and marginal ones owing less than one hectare of cultivable land, 30 Kg packet is not considered to be appropriate. West Bengal government has already taken some initiative to address the issue. The same could be followed in other states and also in Bangladesh.
- It is observed in all the four states in India and also in Bangladesh that shortage in supplies leads to adulteration of certified seeds. This has become a major issue of concern among farmers.

### *D. Infrastructural bottlenecks*

- Lack of adequate infrastructure, such as storage capacity, is also argued to be a primary reason for inadequate production, marketing and distribution of HYV rice seeds. This often causes seed growers to sell seeds as grains.
- Interactions with farmers and seed dealers in Bihar, Jharkhand and West Bengal, revealed that these states have inadequate local production infrastructure. These states procure HYV rice seeds from other states for local use. This compels farmers buying seeds at a relatively higher price.
- There are also instances of low exploitation of ground water resources. These need to be strengthened in all the eastern Indian states.
- Seed certification infrastructure is very weak in all the four states and also in Bangladesh and at many times farmers finds it difficult to access seed. This is because seed laws in both India and Bangladesh are very old (enacted in seventies). The two laws are not in a position to

effectively address the issue of increasing seed requirement in the two countries. At many times farmers find it difficult to procure seed at the right time and affordable prices.

- Two major bottlenecks in seed production in the state are: seed certification agencies in the state are understaffed; and these agencies have inadequate seed certification infrastructure. Inadequate infrastructure often results in lack of timely availability and accessibility to quality seeds in the state. It is observed that small and marginal farmers have not replaced Swarna variety for about 15 years.
- It is suggested that to improve SRR, there is need for improving infrastructure and making seeds available at farmers' doorsteps.

#### *E. Regulatory issues and government support*

- There are restrictions on the state seed growers to procure foundation seeds from outside the state. Seed growers are asked to procure such seeds from BAU, or other state agencies in the state. Such a restriction leads in informal procurement.
- Interactions among the stakeholders during the workshop revealed that there is insignificant support from the government, which is hindering production and distribution of HYV rice seeds. Private sector and NGOs (as was seen in Jharkhand) could perhaps fill this gap. There is need for the government to facilitate participation from the private sector and NGOs in the seed market.

#### *F. Competition from hybrid rice seeds*

There are indications that over the last few years, marketing of hybrid seeds by private seed companies are influencing some farmers to adapt hybrid rice seeds. However, experts are of the opinion that sustainability of use of hybrid rice seeds will be very low because of general state climatic conditions. It will be useful for both India and Bangladesh to further explore and assess their reliance on hybrid and HYV seeds. *G. Role of private sector, NGOs*

- Private sector and NGOs (including private seed growers and seed villages) are now playing significant role in meeting seed requirements in all the four Indian states and in Bangladesh. It has now become abundantly clear that private seed growers receive higher preference from farmers compared to state agencies.
- It is noted that the private seed growers contribute in the range of over 75 percent of the total seed supplies in the four states of India and in Bangladesh. Considering the overall demand and supply scenario and the constraints, it is advisable that role of private sector and NGOs should further be strengthened.

#### *H. Informal flow of HYV rice seeds*

The project activities completed by the project partners reflect ample proof of informal flow of HYV rice seeds from India to Bangladesh and vice versa. However, information on channels through which such informal flow occurs is yet not clear. From the interactions with stakeholders in Bangladesh during the workshop and earlier, especially government officials, revealed the following:

- In Chapai Nawabganj in Aman season out of 48000 ha land, Swarna is cultivated in 33000 ha. Apart from that, in the same region in boro season, Parijat variety is cultivated on 35.97 percent area and Somsa is cultivated on 3.53 percent area. In Jessore, Swarna including guti,

kolamocha and bulet accounts 33.53 percent, Minikit in boro season account for 27.90 percent and Minikit in aus season accounts 28.30 percent of the total area. In Dinajpur, Swarna account 53 percent of total cultivation. Several such examples exist at other points of the border between the two countries.

Similarly, with regard to informal flow of HYV rice seeds from Bangladesh to India, interaction with stakeholders, especially government officials and seed dealers during the workshop and earlier, revealed the following:

- Informal flow of HYV rice seeds from Bangladesh has been reported at many places in India. This is especially in areas of West Bengal bordering Bangladesh, such as Dakshin Dinajpur. Varieties which flow informally include BR11 and some others.
- There are also instances of informal flow of HYV rice seeds from Bangladesh to Bihar. Varieties which flow informally include BR9, also known as Bangla rice. BR9 is considered by farmers in Kishanganj's Islampur bordering Bangladesh to be a better quality seed than what is available locally. This variety is bartered informally (through personal contacts/relatives).
- Katihar and Purnia in Bihar also have some evidences of informal flow of HYV rice seeds from Bangladesh. This occurs sometimes Saharsa district as well.

Besides, there are also informal flows of HYV seeds within the four Indian states. For example, varieties like Naveen, MTU 1001 and Konark varieties comes informally from Odisha to Bihar.

### **III. Why these issues are important for India and Bangladesh?**

There are several factors that make addressing the highlighted issues very important. Rice is a staple food for the people of both India and Bangladesh. It is known that production of rice is critically dependent on availability and accessibility to quality seeds. Of all the inputs required for a sustainable rice production, quality rice seed is the most critical input.

India and Bangladesh, or say whole of South Asia, is characterised by a large number of people below the poverty line. Evidences suggest that in India while nearly 30 percent of people fall below the poverty line; in Bangladesh, it over 31 percent. The two countries also account for a major share in global hunger and malnutrition.

It is also observed that over the last one decade, both India and Bangladesh is progressing at a rapid pace, both in terms of demographics and economic growth. Situation in agricultural production with respect to rice has also significantly improved. While India has recently emerged as the world's largest exporter of rice; Bangladesh has become self-sufficient. It is now important that the current situation is maintained and further strengthened. If one considers a longer time horizon – say 2050 – as indicated by FAO's report, changing dynamics will influence demand for rice (being a staple food) increasing significantly. The existing dynamics of rice production – even though production has increased over the last few years significantly – suggest that the two countries might find it difficult to produce enough rice, if constraints related to infrastructure and technology are not addressed effectively. The present study has highlighted several limitations relating to production, marketing and distribution of HYV rice seeds which can hamper increased rice production.

Besides, the issues highlighted above make it abundantly clear that seed industry in four states of India and Bangladesh is infested with various issues that have potential to constrain rice production in the two countries. Issues like farmers' lack of awareness, inefficiency in production, marketing and distribution, infrastructural bottlenecks, regulatory issues and government support and informal flow of HYV rice seeds call for immediate government attention. Addressing these is critical for ensuring

sustainability in rice production and meeting the food requirements of increasing population of the two countries. The looming threat of food insecurity which is further aggravated by climate change impacts further reinforces the need for government attention.

#### **IV. Possible approaches to address major issues**

Several measures – say interventions – by different stakeholders are required to improve the seed supply scenario in the two countries. Some immediate measures could potentially include creating awareness and improving the SRR; setting up better infrastructure for production, certification, marketing and distribution of HYV rice seeds; ensuring increased role for private sector and NGOs; and last but not the least increased knowledge sharing and cooperation between India and Bangladesh. This should obviously include policy measures to formalise trade in HYV rice seeds. Brief details on the proposed measures are given below:

##### *Inefficiency in production, marketing and distribution*

- There is need for bringing in more efficiency in the production, marketing and distribution of HYV rice seeds. This requires better understanding of the seed market and taking appropriate measures to increase production and ensuring efficiency in distribution. Improvement in certification infrastructure is very important.
- One way of increasing efficiency could be giving greater role to private seed growers. It was noted during the workshop that private seed associations made it a point that seed production and distribution in the state will improve significantly if government allows the private sector to operate more freely in terms of procurement of foundation seeds from other places/states. A favourable policy discourse is required for this to happen. Further, it might be noted that the production and marketing capacity of private seed producers has significantly improved over the last few years. They are now in better position to meet local and outside seed requirements. Government should facilitate greater participation from them in the HYV rice seed market.
- Since farmers show increasing preference for certified seeds, it is important that initiative for creating greater awareness and further improving the SRR is sustained in the coming periods.

##### *Government initiatives at local bilateral level*

- A participatory seed production programme could be initiated by the government in both India and Bangladesh to help increase production and use of certified seeds. Some of the states in India (such as Jharkhand) have already initiated this. Such programmes could facilitate farmers to produce seeds for their own use, and also for exchange and sale of seeds.
- Considering inefficiency in the HYV rice seed market and farmers' lack of awareness, seed production and marketing could be made more participatory. This implies farmers' increased participation in seed production and marketing. Initiatives such as seed village<sup>1</sup> could be a useful approach towards promotion of this participatory approach. Such initiatives would not only improve availability and accessibility to HYV seeds, but also strengthen farmers' position as a major stakeholder in the seed market. In addition, there are also suggestions that the existing government scheme – National Rural Livelihood Mission – could be used for promoting such participatory approaches.

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<sup>1</sup> Seed village is an initiative in the state of Jharkhand, wherein trained group of farmers are involved in production of seeds of various crops and cater to the needs of themselves, fellow farmers of the village and farmers of neighbouring villages in appropriate time and at affordable cost.

For increasing cooperation between India and Bangladesh, overall, there is need for formalising the channel. This is expected to help in increased availability and accessibility to HYV seeds in both the countries. It will also make the process of production, marketing and distribution of seeds more efficient and reduce the transaction costs. This should ultimately reduce the cost of seeds to farmers and make seeds available in a timely manner. There are, however, also some contrasting view – it is argued that just because there is informal trade of rice seeds, does not mean that it must be legalised, rather one needs to consider the issue from the perspective of “can the two countries grow together not through illegal means but through legal means?”

Some specific suggestions improving trade and knowledge sharing in rice seeds include:

- Both India and Bangladesh should work on improving varieties like Swarna Sub-1, BR 11, and other seeds that could be adapted in both the countries.
- There is need for a MOU signed between the two countries to facilitate such cooperation in areas which are sensitive for both the countries.
- It is suggested that such initiative should have active involvement of relevant government and non-governmental agencies. National Bio-diversity Authority of India, which gives approval for such trade, needs to be involved.
- Efforts should also be made to cover small and marginal farmers in the new seed initiatives.
- Research institutions in both the countries, such as CRRI, BADC, BRRI should nominate varieties for joint evaluation and testing. This could facilitate formalisation of rice seed trade and other cooperation.

#### *Formalisation of seed trade between India and Bangladesh*

- On the issue of formalisation of HYV rice seed trade, it appears that there is no technical barrier in this. It is noted that parental line of some of HYV rice seed for both India and Bangladesh comes from IRRI, Philippines. Once parental line is received, both India and Bangladesh work on this to produce certified seeds for domestic use. Since parental line of some HYV rice seeds for both the countries are from a same origin, adaptation of HYV rice developed in one country could be adaptable to other. Such varieties need to be identified and tested for their adaptability to local conditions.
- For varieties which have been developed by India and Bangladesh also there is also need for testing suitability of varieties available in both countries. Once such varieties are tested, and if found suitable, there should be initiative to release these for domestic use by farmers. This will, however, call for a major improvement in the institutional set up for varietal evaluation and release in the two countries. Both the countries should be willing to follow the same protocol and share data for varietal evaluation prior to release. A major effort on technical aspects and also some degree of political commitment hold the key.
- Government of India and Government of Bangladesh have signed a MoU to import BR-9 variety for trial to India. As indicated, initially India will import these varieties only for trial/research purpose through government research institutions/agriculture Universities. More suitable HYV rice seed needs to be identified for such trade and knowledge sharing.