

## Benefits and Constraints to HYV/Hybrid Rice Seeds Trade and Knowledge-sharing between Bangladesh and India

### Background

A major element of rice production is a reliable supply of rice seed (High Yielding Variety or HYV and hybrid) that farmers can afford to purchase. Timely availability and accessibility of quality rice seed is necessary for attaining higher rice yield on a sustainable basis. Favourable policy initiatives taken by governments of India and Bangladesh towards quality rice seed production and distribution are considered to be the primary reason for increased rice production over the past few years. However, considering the issues (leading to inadequate production, marketing, distribution and farmers' accessibility) infesting seed industries in the two countries, the task seem far from complete.

Given the inadequacy of farmers' accessibility to quality rice seeds, there is need for exploring avenues and channels which could make quality rice seed available and accessible to farmers at the right time and at affordable prices. Increased bilateral cooperation (trade and knowledge-sharing) in rice seed seems one viable option for the two countries. Bilateral cooperation has the potential of making rice seeds market more competitive in terms of price, quality and leading to greater market efficiency. In addition, cooperation could also result in more avenues in other agricultural products.

Currently, cooperation in area of rice seed between India and Bangladesh is very low, even

though there are no tariff barriers. Formal trade in HYV rice seed is conspicuous by its absence. In the absence of formal trade, informal movement of various rice seeds has emerged as a phenomenon, especially in the bordering areas. As far as the rice seed supply in India is concerned, while Breeder seed (by agriculture institutes/universities) is available in sufficient quantity to meet domestic demand, the multiplication of Breeder seed to Foundation seed and Certified seed is not fully realised and creates insufficiency in many states.

Bangladesh has a similar problem. Its total domestic supply of rice seed was only 39 percent out of its total demand, while rest of the demand was covered by import of seed from other countries, informal supply of seed from India and farmers' own seed.

Informal trade in HYV rice seed between India and Bangladesh was indicated by several stakeholders (farmers) during the field exercise conducted under the present study.<sup>1</sup> Formal trade relations between the two countries in the case of rice seed is confined to hybrid seed. Even in hybrid seed, India's exports of hybrid rice seed remain negligible, accounting for less than three percent of its total exports. This is despite

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the fact that once Bangladesh was a major importer of rice seed from India-Bangladesh imported 701 metric tonnes of HYV rice seeds (470 MT of Jaya and 231 MT of IR-8 varieties from India) in 1971-72. Further, Bangladesh imported 1,100 MT of IR-20 varieties from India in 1975-76. Apart from these, cross-border formal trade of other seeds is a normal phenomenon such as in fruits, vegetable and maize seeds. A recent study by CUTS (2013) has shown that bilateral trade intensity index for India with Bangladesh was 63.99 in maize seed, 35.89 in vegetable seed while it was only 0.47 in rice seed in 2011.<sup>2</sup>

Farmers in both the countries often consider HYV/hybrid rice seeds useful in comparison to improved varieties which are locally available. For example, it was found in the field study that in India, BR-11, a variety developed in Bangladesh, is widely used in West Bengal. Similarly, BR-12 and BR-9 that were developed in Bangladesh are found to be very popular in Bihar while BR-8 is widely used in Jharkhand. Apart from these HYV varieties, a Bangladeshi hybrid variety Hira is widely used in West Bengal. Similarly in Bangladesh, Indian varieties, such as Swarna, Parijat, Rajendra-Shweta and Minikit are used by many rice farmers. Swarna and Minikit are widely used because of their greater yield and Parijat gained popularity because of its shorter maturity period.

## **Constraints and Barriers to Formal Rice Seeds Trade and Knowledge-sharing**

**T**here are several constraints to the development of formal trade in rice seed, although there are zero tariffs for trade in rice seed. Policy-related problems such as lack of mutual acceptance of certified seeds, inadequate seed testing laboratories, delay in issuance of quarantine certificates and lack in harmonised certification process work as barriers to trade.

Import permit and a phyto-sanitary certificate are required to import rice seeds to Bangladesh. Furthermore, imported variety of rice must be included in the list of varieties of the National Seed Board (NSB) in Bangladesh.

It is reported that exporter/importer in India also requires bio-security, sanitary and phyto-sanitary (SPS) import permits, not only from the Ministry of Agriculture but also from Ministry of Trade. While importing all food products, India send the samples of export consignments to testing laboratories located at places far from the customs points, which causes delay in the export process.

There are issues in the quarantine certification procedures in both the countries. For example, India releases quarantine certificates in 45 to 60 days for import of seed, this delay poses risks to seed quality and business opportunities. In contrast, this process takes only around 24 hours in Bangladesh.

In both the countries, the private and public sectors suffer from lack of clarity about their roles in the overall rice seed production and marketing strategy. As a result, there are differences in the way both sectors perceive and interpret their respective roles. Seed companies confine themselves to trade of seeds, sourcing from public sector and sometimes imports rather than involving themselves in the production of seeds. Although for some, trade means private sector involvement but this is an area where public private partnership (PPP) could be important.

One aspect of the policy framework is that approval authorities treat all kinds of seeds in a similar manner. All notified crop seed like rice has to undergo two seasons of field testing whether it is certified by origin country or international bodies or not certified at all. This provision safeguards farmers' interest, and at the same time makes the registration process quite lengthy.

## Recommendations to Formalise Cross-Border Rice Seeds Trade and Knowledge-sharing

The research and development on rice seed needs to be strengthened in order to push benefits beyond the frontiers of domestic boundaries. Joint varietal development by India and Bangladesh can be useful as both share similar agro-climatic conditions and scientific know-how. Lessons can be learnt from International Rice Research Institute's (IRRI) experiment with Indian HYV variety Swarna which was introgressed using market-assisted backcrossing and subsequently introduced in India as Swarna Sub1 and BRRI Dhan-51 in Bangladesh.

Partnership between private companies, especially traders/companies, of the two countries will be the key for future success of cross-border trade.

Border Haats on both the sides could become potential sources of converting informal trade into formal trade. In the short term, these haats can provide a channel of seed supply not only for rice but also for other crops as well. In the long term, lessons can be learnt from the implementation of Border Haats and proper marketing avenues can be made jointly by both the countries, such as annual or bi-annual regional/international trade fair of rice seeds.

Indian side must establish fully functional quarantine offices at the border points especially on trade routes, similar to the Bangladeshi counterpart's. Strengthening of existing land border quarantine checkpoints by providing minimum facilities for seed health testing is necessary.

There is a need for an update of the import and export regulations of the two countries, for example, updating of the national list of varieties and SPS and plant quarantine regulations to create greater awareness on existing regulations among stakeholders.

Farmers' awareness on timely use of quality HYV rice seed is necessary. There are instances that some small and marginal farmers are using saved seeds of the same variety for a long time (as much as 15 years). There is, thus, need for creating more awareness among such farmers and also there is need for making seeds available to them at affordable prices. Campaigns, such as '*Beej Badlo, Bhagya Badlo*' could be good initiatives.

Inadequate seed infrastructure appears to be a major hurdle in improving seed scenario in the two countries. In India, it is noted that many of the seed certification offices are overburdened and understaffed. This is because, while their area of operation has increased, no additional manpower has been put in place to carry increased workloads. Apart from that, storage and transport facilities are weak; hence there is a need to develop these with well-qualified staff.

Bangladesh needs 'new' varieties from India which can produce better yields but Indian scientific community has shown its reluctance in sharing technology and 'new' varieties to Bangladesh. The situation can be improved by formation of a joint subject expert group (comprising scientists of agriculture universities of both the countries) to facilitate knowledge-sharing and 'new' variety development.<sup>3</sup>

## Issues and Recommendations to Formalise Cross-Border Rice Seeds Trade and Knowledge-sharing

Broader Agenda	Key Issues	Specific Recommendations
<b>Knowledge-sharing</b>	Research on 'new' variety development	Need for a joint initiative by ICAR and BADC for new variety development
	Field trials of suitable varieties	Need for identifying suitable varieties available in both the countries. This can be done by a joint subject expert group comprising scientists of agriculture universities of both the countries
<b>Trade</b>	Private sector trade	Need for identifying areas for cooperation between private seed producing and exporting companies in both the countries
	Certification, import permits and quarantine	Need for mutual recognition of standards, permits and licences
	Checkposts and laboratories	Need for establishing fully functional laboratories equipped with latest technology and qualified staff, strengthening of existing laboratories at border checkpoints
	Infrastructure	Establishment of storage and transport facilities, increase in the number of staff involved in seeds production, seeds testing and distribution

### Endnotes

- 1 For example, it was found during the field study conducted by CUTS and Unnayan Shamannay in the Chapai Nawabganj district of Bangladesh that Indian Swarna variety is cultivated in 87.37 percent rice area in Aman season.
- 2 Nitesh Kumar Singh (2013), 'Potential for Trade in Seeds between India and other SAARC Countries', CUTS International, Jaipur, Monograph No. 1331.
- 3 These concerns/views were expressed by the Bangladeshi participants at the International Conference on 'Addressing Barriers to Rice Seeds Trade between India and Bangladesh' organised by CUTS International and Unnayan Shamannay in Dhaka on 22 December 2013.

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