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Innovating with Federations

Community institutions take the lead in seed marketing

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SUMMARY

The NGO Rangpur Dinajpur Rural Service (RDRS) has a strong expertise in organising poor households into federations, comprising 30-40 groups and operating at the union level. So far, RDRS has established 256 federations covering 268,000 households in Northwest Bangladesh. In 2000, PETRRA stimulated RDRS to experiment for the first time with uptake methods for rice seed. The project described here is the first of a growing number of innovative RDRS projects on rice. The federations give poor farmers a support framework to become successful rice seed producers. Trained seed producing households get Tk 1.5 (\$0.025) per kg over and above the grain price. The federation dries, stores and repackages seed from about 20 households into 10-kg bags of truthfully labelled seed. A seed committee, comprising five federation members, is responsible for the quality control and marketing of the seed. They sell the seed at twice the grain price. To ensure sustainability of this innovation system, incentives are ensured for all actors, with profits being shared between the seed committee, RDRS and the federation on a 40:40:20 basis. By August 2004, RDRS had trained more than 500 rice seed producers in 28 federations, who together provided quality seed to roughly 14,000 resource-poor farmers.

ACTORS AND NETWORKS

RDRS is a regional NGO that mobilises the rural poor for social and economic development into community-based organisations. RDRS provides vocational training and microcredit to groups of about 20 poor households. Each group elects a chairman and a vice chairman; the latter must always be a woman. After about five years, when a group is considered socially graduated, it can join the federation, which comprises 30 to 40 groups and operates at the union level. Through a revolving funds mechanism, the approach has been expanded to more than 250 federations, some of which have started establishing networks with other institutions for increased access to services and resources.

Under the PETRRA seed uptake project, various federations were selected based on their interest and availability of resources, like suitable land. RDRS, with its long experience in establishing groups and running microcredit programmes, is responsible for managing and recovering input costs from participating farmers.

Three senior staff members of the Bangladesh Rice Research Institute (BRRI) provided training on seed production and processing to field staff of the Department of Agriculture Extension (DAE) and RDRS. These are in turn responsible to train farmer trainers and monitor seed producer groups.

EVOLUTION OF THE METHOD

Quality rice seed is available in the region through the governmental Bangladesh Agricultural Development Corporation (BADC), but the main problem is that seed of the right variety is often not available at the right time. A delayed access of 2-3 weeks seriously disrupts farmers' planting and harvesting.

Before working with PETRRA, RDRS had a vegetable seed promotional programme, but seed production was limited and only for use by the target households. In 2000, PETRRA stimulated RDRS to embark on research on uptake of rice seed. Although farmers were trained to produce quality rice seed at the federation level, both RDRS and the federations still lacked experience in selling seed. So RDRS approached the Bangladesh-German Seed Development Project which strengthened the production, business and marketing capacity of RDRS's staff through several training-of-trainer sessions.

The emerging RDRS seed innovation system is continuously evolving (see photo).

THE RDRS SEED INNOVATION SYSTEM

Select federation

Federations are selected based on their interest and availability of resources like



Mr. Imul Mosadek from the Bangladesh Agricultural University collects data for his MSc on hybrid rice seed with the help of Ms. Bulbuli Rani and her husband. Bulbuli is vice-chairman of one of the RDRS federations that started growing seed.

suitable land, grain storage facilities and interest of their members to become seed producers.

Establish seed producer group and seed committee

The executive committee of the federation forms a seed committee comprising five members, of which at least one is a woman, and who are in charge of seed quality control and marketing.

The federation along with RDRS then selects about 20 households who are interested in producing quality seed and willing to follow the guidelines. Overall, men are trained to become seed growers while the women are trained in seed processing. However, women are increasingly involved in field activities themselves, as described in Part II on gender.

Train master trainers

Prior to PETRRA, RDRS had no experience of working with rice. It was a big leap for them, but they did it when they recognised how important rice is for alleviating poverty. Three BRRI senior scientists trained 15 RDRS staff, who in turn taught about 250 farmer seed producers. At first, RDRS covered the costs via projects, but later on federations started to organise and pay for the training from its profit margin from selling seed.

In each of the seed-producing federations, RDRS staff also trained 3-6 farmer trainers on rice cultivation, who in turn taught about 2,500 farmers. Improved rice production stimulated demand for quality seed. Currently, farmer trainers facilitate sessions on a hire contract basis about twice a month, receiving Tk 50 (US\$ 0.90) per session. This money comes from the overall federation budget, as such reinvesting profit from the revolving funds and other activities.

Train federation-based seed producer groups

About 15 to 25 federation members are organised into a seed producers' group and receive training three times a season: during planting on improved production techniques; during maximum crop growth stage on crop protection; and during harvest on threshing, seed drying, and so on.

Training takes place at the federation's facilities and in the field. Moving away from residential training, where participants stay for three to five days in the RDRS training centre, has made it easier to offer training to women. The family approach in agricultural training is used, with far reaching impacts on household decision-making and women. This approach was tested by several other NGOs under PETRRA, one experience being described in Chapter 4.

The vice chairman of the Mohendra Nagar federation in Lalmonirhat district and member of the seed committee, Ms. Bulbuli Rani said: "Women need to receive training on field activities, not only post-harvest. This is especially important for activities such as weeding and roguing, as our husbands may be out of the house to do another job at a crucial time in the season."

All seed committee members also received training on seed business and marketing. When Paul Van Mele asked her what major insights she got from that training, Bulbuli replied: "Before I didn't consider it, but now I realise that the customer is my God. We should respect their choice (of variety)."

Assess market demand for quality seed

When establishing a new seed producer group in a region, it is very important to know what the market demand is: how much of what variety is needed at exactly what time of the year? Only then the group can establish an annual seed production plan and place specific requests for breeder seed to BRRI.

The regular federation meetings, with representatives from the different groups, enable the seed committee to quickly gather information from its on average 1,000 members. For sales outside the federation, initially information about local preferences is collected with surveys during weekly markets. Making use of a place where farmers are already gathered saves transaction costs and gives a more or less unbiased selection of farmers to gauge demand. A similar approach called Going Public, uses two-way communication to not only gather but

"Having training at the federation facilities allows us to attend more easily. Before we only received residential training and had to stay overnight three days or more, making it hard for those with babies and children."



also share information is described in Chapter 9 and by Bentley et al. (2003).

Once local preferences are known, the seed committee prepares a seed production plan and discusses it with the seed producers. After harvest, they actively market their seed to non-federation members within the union in an innovative way (see Box 20.1), resulting in people placing demands for the next season.

The RDRS federation model also allows for efficient exchange of information and seed between federations. Lalmonirhat district covers nine unions, each with one federation. Over about three years, all the farmers in the area know about the quality seed from the Mohendra Nagar federation.

Due to increased awareness, demand is increasing steadily every season. For the coming season, this federation targets to produce 10 tons of truthfully labelled seed, about double what they produced this season. To produce 5 tons they had to procure 150 kg of seed from BRRI. The long-term target is to produce 40 tons of seed.

Establish federation-based processing, storage and packaging facilities

Appropriate facilities at the federation level are necessary to ensure delivery of quality seeds. Federations with a grain storage facility can easily convert it for seed storage. The minimum requirement is a cement drying floor, while some federations have a seed drying machine obtained through a previous project funded by DFID. These seed dryers are particularly useful in a community-based seed system, whereby large quantities of seed have to be dried. They could potentially be shared between federations.

PETRRRA funded the purchase of two small organic cocoons (see photo), each with a capacity of storing five tons of seed and costing Tk 100,000 (US\$ 1,750). Three others have been purchased through a GTZ project and eight more through revolving funds. Alternative community storage structures are being explored with a local plastic-producing company. By August 2004, two other federations used RDRS

"We hang banners at local bazaars, markets, banks, the Union Parishad, anywhere people gather. We let everybody know that quality seed of BR 14, BRRI dhan 28 and BRRI dhan 29 is available from our federation," explains Ms. Bulbuli Rani during one of the meetings at the Mohendra Nagar federation in Lalmonirhat district in April 2004. As vice-chairman, she is a well-respected community member. Mr. M. G. Neogi, the senior programme manager agriculture from RDRS replies, "This is like Going People." Four days earlier he had heard Paul Van Mele's presentation on Going Public, during a national workshop in Dhaka where he, among many other NGO and government extension service providers, learnt about a range of innovative uptake and extension methods developed under PETRRRA. Driving back to the RDRS campus, Neogi is still pondering: "Since our childhood, we see the medicine men using the hat (weekly market) to sell their products, but we never thought we could use this approach in our own profession." In September 2004, Neogi informs Paul that RDRS will mainstream Going Public in their agricultural programme from 2005 onwards.

Box 20.1
Hanging
Banners



Organic cocoons are made of white PVC with an airtight zip and reduce post-harvest losses to less than 1%. The one depicted in the photo can store 5 tons of rice seed. Trained farmers have overcome the psychological barrier of storing seed at the community. But as cocoons are expensive, alternative solutions are being explored with local manufacturers.

revolving funds to transform existing rice storage into seed storage facilities, bringing the total of well-equipped federations to 15.

Create incentives for all actors

The incentive mechanism for farmer trainers has been explained earlier. In this part, we will elaborate on the innovative incentive mechanisms for the other actors.

First of all, the clients of quality seed need to be considered, as community demand for quality seed will be the first incentive for seed producers. By using quality seed of modern varieties, farmers' rice yield has increased by more than 50%, reaching 5.7 tons per hectare in boro season (November - May) and 4.9

tons per hectare in aman season (July - November) leading to a big improvement of food security for resource-poor farmers. The clients of truthfully labelled seed clearly reap benefits and get a quick return on investment.

Once demand is ensured, at what profit will federation seed producers remain interested? And how much is needed to recover costs for service provision such as marketing support? The federation pays their seed producers Tk 1.5 (US\$ 0.025) per kg of seed over and above the grain price. After drying, storing and packaging, truthfully labelled seed is sold to customers at double the market price of grain. The federation members, seed committee and RDRS share the profit on a 20:40:40 basis. All agreed on this profit-sharing mechanism; the share of RDRS goes into the revolving fund and has already enabled RDRS to further expand the model to other federations.

The seed innovation system created employment in other sectors. Under their income-generating activities programme, another federation now produces polythene-lined jute bags to package seed, whereas initially bags were purchased from Dhaka. This integration of services strengthens the overall community seed system. The federation model allows for poor people to help one another to improve their livelihood.

Define clear responsibilities for quality control and marketing

Having a share of the profit isn't a gift; it comes with specific responsibilities. The federation provides physical assets and dries, packages, and stores seed. The seed committee inspects the fields of the seed producers and conducts a seed germination and moisture test after harvest. Once all seed is harvested, they communicate the level of seed production to members of their own and other

federations. Demands for the next season are gathered. As opposed to the Grameen seed and Farmseed models, where farmers sell their own truthfully labelled seed or quality seed (see previous chapters), here the seed committee members are in charge of the sales, reducing the transaction costs for the seed producers.

Production and marketing planning takes place at the union level. RDRS helps the federation's seed committee to prepare a yearly action plan and a budget, to assess the required seed quantity, and develop a marketing strategy.

Expand coordination of seed production and marketing to regional level

RDRS can facilitate seed exchange between federations, but to get more actors involved to buffer against sudden seed shortages in the region, a different structure was needed. Therefore, a focal area forum was established for Northwest Bangladesh with representatives from various government institutions, resource-poor farmers, private sector and NGOs. The forum helps to provide poor farmers access to consistent information, quality seed and rice technologies even after the PETRRA project. The forum improves quality seed demand assessment at the regional level and acts as a decentralised hub. On a seasonal basis, they place their demand for breeder seed of specific varieties to the rice seed network coordinator at BRRI, as described in Chapter 17.

Through a series of workshops, the Northwest focal area forum so far approved the varieties BRRI dhan 28 and BRRI dhan 29, and confirmed the RDRS federation seed system as suitable for scaling-up in Northwest Bangladesh. Members decided to rotate the chair periodically and oversee the planning and implementation of rice-based activities. They committed resources to make this happen. Sustainability of the forum was boosted after the endorsement by the state minister for agriculture (see Box 21.1).

"If the customer is dissatisfied, that's the end of my business." Vegetable sellers in the street know this all too well. And those who sell quality seed are vulnerable in the same way, presuming they do not have a monopoly in the region. PETRRA has enabled many poor seed producers to emerge across Bangladesh.

KEYS FOR SUCCESS

- Building on community institutions (federations), farmer seed producers and farmer trainers increases efficiency of human, social and physical capital.
- RDRS is open to new ideas and ready to share this with federations (see Box 20.2).
- Ownership is ensured by giving the civil society a voice in project decision-making.
- Creating a conducive learning environment for women gives them more voice in rice seed cultivation and agriculture.



- **Capacity building of federation seed committee members addresses technical and marketing aspects.**
- **Training-of-trainers for extensionists and farmer trainers.**
- **Incentives for all stakeholders are based on profit-sharing.**
- **Revolving funds pay for farmer trainers and covers training costs of seed producers.**
- **Revolving funds allows RDRS to cover more federations and crops.**

Box 20.2
Bagging Seed

"Initially we used polythene bags to package truthfully labelled seed, but the bags got easily perforated by the seed, allowing moisture to seep in, so we now use a polythene-lined jute bag," explains Mr. M.G. Neogi from RDRS. When visiting the GKF seed processing centre and shown the bags used by them, Neogi asks Mr. Jabbar, the manager of the centre, if he can take one as an example: "These bags are better than ours and I will show them to those federations that produce seed. I cannot make any decisions on what type of bags they use, only the federations can, but at least I can introduce it to them."

DIFFICULTIES, RISKS AND ASSUMPTIONS

Timing of seed supply by BADC is unpredictable from one season to the other and the seed by BADC is subsidised. "If we sell our seed at a higher price than BADC, they sometimes dump seed in our area and we cannot sell the seed from the federation," informs Neogi, hitting the nail on the head. The subsidised government seed system remains a challenge for these bottom-up innovations.

Another risk is related to scaling-up and maintaining quality insurance. The more the federation expands their market to other unions, the further the distance becomes between seed producers and clients, and the higher the need will be to strengthen quality control.

Apart from the more technical and marketing issues, mentality changes are required. The partnership between DAE and RDRS (and NGOs in general) is still in its infancy. Over the years, DAE has developed a culture of working on the basis of projects and getting financial resources to do a particular job. Although the project trained their staff as master trainers, DAE still asked the project to pay for using their staff as trainers. Appreciating the opportunity to work in partnership requires a mental shift or perhaps a change in operational procedures endorsed by higher officials. The endorsement by the state minister for agriculture actually made this happen.

SCALING UP

From 2000 to 2004, PETRRA funded training activities at federation level and

helped to purchase two organic cocoons. Three more cocoons were purchased by a GTZ project. In the scaling-up process, eight others were acquired through revolving funds. As cocoons were too costly, however, two other federations opted to use RDRS revolving funds to transform existing rice storerooms into seed storage facilities. To optimise resources, these are shared among 28 seed-producing federations.

By August 2004, revolving funds had expanded the rice seed production to 28 federations; five of them equally embarked on wheat, potato and mustard seed production. During this period the latest high-yielding varieties BRRI dhan 28, 29, 33 and 39 had been extended to more than 14,000 farmers through the federation seed production system, of which 60% were federation members, the others being neighbours.

RDRS partnered with BRRI to conduct action research in farmers' fields to validate varieties new to the region or unreleased ones, as described in Chapter 16. As such, the federations started to serve as a forum to quickly gather feedback, narrowing the gap between research and adoption of new varieties.

Consequently, RDRS started experimenting with action research on a broader range of rice-related issues and involving students from the Bangladesh Agricultural University, resulting in the signing of a memorandum of understanding between the two institutions for conducting action research jointly over a period of 10 years (see Box 20.3).

April 21, 2004. Mr. Imul Mosadek is working in the rice field when we arrive in Neezpara village. Although the sun is out again and temperature is at its peak, he is still wearing his green raincoat and collecting data in his notebook: "I am very pleased to conduct my fieldwork on hybrid rice seed production with Bulbuli. She is highly motivated and stimulates me a lot." To the question why she gets involved in research, she promptly replies: "I only know if something is a good technology when I have seen it with my own eyes. Hybrid rice is said to give much higher yields than modern varieties, and if it works I will adopt it and promote it through the federation. And if I can produce the seed myself that would be even better." Hybrid rice seed production is not an easy technology and new to Bangladesh, but Bulbuli is determined to give it a try.

PETRRRA emphasised having farmers participate in setting research priorities and developing technologies, as well as conducting research on technology uptake. This approach encouraged poor farmers to adopt research findings, such as transplanting 2-3 seedlings per hill compared to farmer's traditional practice of using 5-6 seedlings per hill. By 2004, several students from the Bangladesh Agricultural University (BAU) had engaged in this new way of doing research, as part of their MSc degree. Eight worked on crop management, eight on social aspects, two on gender and two on livelihoods. Following initial success, the executives of BAU and RDRS signed a memorandum of understanding for implementing a students' internship programme and exchanging staff for a ten-year period.

Box 20.3
Institutionalising
Participatory
Research under
PETRRRA

CONCLUSION

Innovations at RDRS emerged at various levels and include: a pay-for-service mechanism for training farmer groups; sharing profit on seed sales and reinvesting this through revolving funds; using creative marketing strategies; establishing a focal area forum; and institutionalising action research with two leading governmental research and education institutes. The social capital built up over the years has offered a fertile ground for rice-based innovations to sprout.

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