



Photo: BRLPS

Many women in Gaya have adopted SRI in paddy crop

SRI Kranti

The rice revolution

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An innovation needs support to survive. The same innovation can make a revolution, provided it gets the recognition and support from the government. The Bihar government has shown how an innovation when transformed into a revolution can influence food production.

I came to Gaya, a district in the Indian state of Bihar in 2007, with the specific objective of encouraging women farmers to try SRI in their fields. I was expecting some difficulties, but I was stunned by their lack of interest. Their perception was clearly expressed by one of the farmers who came to listen to the SRI documentary, I had brought to Shekhwara, a village in the BodhGaya block: *“This man has come to fool us, we have been growing paddy for generations, we know how to do it!”* Only when I was leaving this meeting did one of the participants, Mrs Kunti Devi, come to me and, showing pity, said she’d try it out in her land. She faced enormous pressure from her neighbours, however, was willing to try. Farmers’ opinion changed when the tillers started coming out after 12 to 15 days – and when she harvested an equivalent of 9 tons/ha.

A large number of women from Shekhwara and other villages heard about this and came to talk to Kunti Devi, and to count the number of tillers. More than 100 women in Gaya decided to try SRI in part of their fields, together with 25 women in the neighbouring district of Nalanda. These plots were seen by researchers from the *Krishi Vigyan Kendra* (the Farm Science Centres or KVK, a government institution under the Bihar Agriculture University) and also from the Agriculture Technology Management Institute, ATMA. Both scientists and officers were invited to go to the field to cut the crops and estimate the total yields. The Agriculture Director of the Magadh Division was one of those present when the results were 12.5 tons/hectare. The high yields they measured convinced them to bring their colleagues and superiors to the field – and convinced more farmers to join us.

There was so much interest that we set ourselves a high target for the coming year, hoping to work with 2,000 farmers. Surprisingly, more than 5,000 farmers tried the System of Rice Intensification in their fields. The Chief Executive Officer of the Bihar Rural Livelihood Promotion Society (or BRLPS, a World Bank-funded project run by the state government) in Patna and the District Agriculture Officer in Nalanda took a special interest in what was happening, and came to the fields several times. The local district magistrates and commissioners went to the villages several times to encourage and congratulate all farmers for “their enormous contribution in ensuring the food security of these communities”.

PRADAN organised a series of workshops in both districts, and not before long, there were SRI songs and SRI role plays, and even an *adhivesan*, or a get-together of SRI farmers in the district. We as an organization and our successful SRI farmers as individuals, started gaining recognition. SRI farmers were being awarded for their achievements and invited to Kisan Melas to share their experiences, all organized by the Department. More and more farmers started talking about SRI, adopting and harvesting better yields. In 2012-13, PRADAN along with 9 partners has reached more than 25000 farm families across 9 districts in Bihar.

Moving on to SWI, simultaneously

For the 2008-2009 season, ATMA provided a small grant to PRADAN and, with the support of the BRLPS, we started trying out the SRI principles with wheat in both Gaya and Nalanda, working with 278 farmers. After having seen such clear results with paddy, there was little resistance to the idea of trying a similar approach with wheat. The low seed requirement and the higher yields motivated many farmers to try it out, even if they also feared the additional labour needs (especially at the time of sowing).

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Once again, a large number of people visited these plots, including farmers, local government officials, and even representatives of the Indian Council of Agriculture research, ICAR, Shri T. Vijay Kumar, Joint Secretary of the Ministry of Rural Development in New Delhi, came along with various state officials to visit the SRI-wheat fields and interact with the women belonging to the self-help groups promoted by the BRLPS. He listened to exciting experiences about SRI paddy and SRI wheat from common villagers and saw high tillering in SRI-wheat plot. All the officials who visited these plots were excited to see the results of the efforts of women members. At the end of the 2009-2010 season, we counted more than 15,000 SRI-wheat farms.

Other initiatives

In 2008-09, PRADAN was implementing the Diversion Based Irrigation (DBI) Project supported by the Tata Trust. As part of this project, we started piloting SRI fields with *brinjal*, tomato, bitter gourd and chilies in the Gaya district. This also drew huge attention of researchers from state and across India. Scientists from the National Institute of Rural Development in Hyderabad, and even from IRRI, in the Phillipines, came to see the SRI vegetables along with local government officials. The Director DRDA, Gaya observed the benefits of SRI and DBI combined and sanctioned many such similar projects in villages either through department or through community in villages under our guidance. Thus, the higher yields have also been fundamental in convincing donors and authorities.

During the 2009-10 season, ATMA invited PRADAN to run a pilot project to validate a way of enhancing the yields of rapeseed. A large number of scientists and authorities were invited to visit these different SRI plots, and one of the results has been an interesting exchange of information with representatives of, for example, the Wheat Research Institute and with scientists at the Directorate of Rapeseed Mustard Research Institute in Bharatpur, Rajasthan. The SRI-Rapeseed yields were very exciting for local government and they supported PRADAN in running women farm schools in 11 blocks of Gaya for spreading SRI methods in Rapeseed.

In 2012, we piloted System of Root Intensification method in Elephant Foot Yam. The yield enhancement in this crop under SRI has also been quite encouraging and large numbers of farmers are coming up for this crop.

Working with other crops made us look in detail at the main principles behind SRI and at the logic of providing space for roots to grow. SRI came to be known as the System of Root Intensification. It was fortunate that “*Sri*” is a word largely used to express respect: “*Sri Vidhi*” quickly became a common name among the rural communities and the policy makers in Bihar.

Gaining attention

In 2008-09, a state level workshop on SRI paddy was organized at Patna, the state capital of Bihar. This workshop was inaugurated by the then Agriculture Minister, Bihar Dr(Mrs) Renu Kumari Kuswaha. She became excited to learn the experience of SRI farmers, particularly women.

During the first months of 2009, the Chief Minister of the Government of Bihar invited farmers from the whole state to come to the *Kisan Mahapanchayat* or “big farmers collective”. More than 2,500 farmers participated in this meeting, together with Mr Nitish Kumar, the Chief Minister, and members of the Council of Ministers and many other top state officials. One of the farmers invited to come was from Gaya: Mrs Barati Devi. Having obtained 18.1 tons/ha in her fields, she was asked by the organisers of the meeting to share her experiences in two minutes. The Chief Minister was very surprised to hear a village woman share such impressive results, so he asked the organisers to give her more time. She spoke for half an hour, describing her experience – and convincing all those present.

In October 2009, BRLPS organised another big meeting with the members of the women self-help groups. One SRI stall was also put there among the other stalls again, calling the attention of the Chief Minister. He visited the stall before the inauguration of the meeting, discussing with the farmers who were there. It was here that he first saw a manual on *SRI vidhi*, perhaps another reason why he spent most of his time at the SRI stall. Addressing the self-help groups, he referred to the System of Root Intensification as *khadyan samasya ka hal hi nikal ayega*: a solution to the food security issue in Bihar.

Larger dissemination

In 2010-11, the Chief Minister came to Gaya together with the Agriculture minister, Mrs Renu Kumari Kusawaha. Their visits to the SRI-wheat fields in Shekhwara, and their interactions with all farmers, convinced even more authorities (among them, the Agriculture Production Commissioner), and were a key factor in the state government’s decision to encourage the broader dissemination of SRI throughout the state, with funds to support at least 5 farmers in every district. The government invited PRADAN to run a training programme in the different divisions. We started working with village women as facilitators, training both farmers and the governments officials. It was very encouraging to see that, in spite of the severe drought experienced between 2009 and 2010, the interest in our work did not diminish.

And even more encouraging was to read about the state government’s decision to declare 2011 as the SRI year, calling it *SRI Kranti* (or the “SRI Revolution”). Preparing for the celebrations, different government agencies developed printed extension materials with the help of the Agriculture Training and Management Agency, which added to the ones we had prepared. During the first days of January 2011, the Chief Minister himself opened the SRI Kranti year with a special session at the S.K.Memorial Hall in Patna, expressing the intention of his government of reaching a total of 350,000 hectares of SRI rice in the coming years in front of more than 2,600 district officers. Dr R.K. Sohane, then Director of the Bihar Agriculture Management Extension and Training Institute (BAMETI), played a crucial role in organising a series of training workshops in all the divisions and districts of Bihar. The media, both print and electronic, helped disseminate news and results. Farmers like Jayjeet Kumar, Barati

Devi and Sunita Devi shared their experiences with the authorities in Patna, and teams of two village women and one man from different villages provided training and support in the 38 districts of Bihar.

The results have been impressive. During the 2011-12, season the state statistics were already talking of 335,000 hectares of SRI rice, involving 26,000 families. The total production of paddy in the state of Bihar broke the previous record of 4.6 million tons, reaching a total of 7.2 million tons. Much of this comes from the SRI fields, where the average yields are around 7 tons/ha. One of the farmers in the village of Darvespura, in the district of Nalanda, harvested a record yield of 22.4 tons/hectare, and received the special Krishi Karman award from the President of India on January 15th, 2013. The same prize was awarded to the Agriculture Minister of the government of Bihar for the yields and the overall production levels in the state. We have a lot to be proud of, what is happening in Bihar!



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