

Reducing misery by enhancing yield (A case study on SRI paddy cultivation)



Rajdeo Bhuiya of Senuri village-moving from subsistence to sustainability

Chandhrwa is a small *tola* (hamlet) of *Senri* village under *Barwadih Panchayat* of *Manika* bloc, *Latehar* district *Jharkhand*. *Rajdeo Bhuiya*, 35 years old farmer lives in *Chandhrwa tola* and a sole bread earner for his family of total 7 members at present, himself, his wife, three sons and two daughters. His elder daughter had been married off last year at the age of 16 years, her educational qualification was seven pass. Two sons and one daughter are the students of middle school in village.

The area is basically drought prone and farmers have very limited access to irrigation facilities and agricultural output is completely dependent on the vagaries of monsoon. Rain fed substance farming is a common practice in the area which results in fragile livelihood.

The incidence of Maoist insurgency has further aggravated the misery of the people. *Rajdeo Bhuiya* has total 3.40 acre of land in which only two acre is suitable for paddy cultivation. Rest is basically *tar* (high land) land. He had been cultivating paddy in his two acre of land by traditional method till last year and, according to him, the production of paddy was only sufficient to feed his family for 5 to 6 months in a year. For rest of the period, he had only option left for him was casual manual *labour* work available mainly in and around his village. Prevailing wage rate in the area is Rs80/- to Rs100/- which is lower than the statuary wage rate which is Rs120/- per day in *Jharkhand*. He only could arrange 100 to 120 days of work in a calendar year during non agricultural season including *Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)* work. Under such condition, it was difficult for him to support his family to have a dignified life; even fulfilling the basic requirements was a challenge.

During first quarter of this year, 2011, he came to know about the project Vocational Education and Training Programme (VET) being implemented in his area. This has provision of training for rural youths on agriculture; animal husbandry and NTFP related livelihood options. He attended a meeting organized by the staffs of *Bihar Pradesh Yuva Parishad (BPYP)* in village to sensitize the people on the provisions of VET, eligibility criteria for potential trainees etc. for the training programme of System of Rice Intensification (SRI). SRI is a method of increasing the yield of paddy produced in farming by bringing changes in the cultivation practice. *Rajdeo Bhuiya*, found the opportunity suitable for him and directly approached the BPYP office with application to get himself registered for the training programme.

Then he attended a 10 day training programme on SRI by BPYP along with other 47¹ farmers. The training covered both theoretical and practical part suitably designed for semi literate rural youths. It mainly covered the following topics:

1. Identification of suitable land
2. Leveling of land
3. Selection/treatment of seed
4. Nursery preparation and seed sowing
5. Preparation of paddy field
6. Transplantation
7. Weeding
8. Irrigation and water management
9. Control and management of pest
10. Harvesting

On completion of the training and being convinced by this method of paddy cultivation, *Rajdeo Bhuiya* decided to implement the same in 1 acre out of his total 2 acre paddy field by following all package of practices (PoP). Since SRI method of paddy cultivation requires less seed, irrigation and labour in comparison to that of traditional method, his input cost came down to some extent. Previously, 70 kg of seed, at the rate of Rs25/- per kg, was required to cultivate two acre of land, now when one acre of his land has been brought under SRI method, the requirement of seed for two acre (1 acre for SRI and 1 acre for traditional) has reduced to 35 kg. In case of SRI paddy only 2 kg of seed is required for cultivating 1 acre of land. So 50 percent of his input cost is saved. Similarly only 8 mandays labour was required in 1 ac of SRI paddy transplantation against 12 mandays in traditional transplantation at the rate of Rs100/- per mandays. Apart from reduced input cost, the production in SRI method is expected to be double² compared to that of traditional method.

All 48 VET trainees of SRI were effectively tailored in a similar project of NABARD and were given some input support as per provisions in the National Bank of Agriculture and Rural Development (NABARD) SRI project³ like $\frac{1}{2}$ kg of *desi* seed, fertilizers and 1 weedier for a group of 5 farmers.

The extension workers and project coordinators of BPYP, under the guidance of CWS, have been continuously providing on field support to *Rajdeo Bhuiya*, other farmers 48 farmers trained under VET project and to the non VET trainees also who have adopted SRI through the SRI project of (NABARD).

¹ 48 farmers in two batches

² In SRI method, the production of paddy is 15 quintal per acre compared to 7.5 quintal in traditional method

³ NABARD SRI project provided input support to 402 farmers in *Manika* block

Prior to this, *Rajdeo Bhuiya* and 4 other farmers, under the guidance of BPYP, raised SRI nursery individually in a common place. The size of individual nursery was 20ft longX4ft broadX6inch high. It was to share the additional work of taking care of nursery like covering it with *Palash* (*Butea monosperma*) leaf and irrigation at regular interval etc. and protecting it from animals and birds. Transplantation was done between 10 to 13 days of seed sowing in nursery. First weeding has been done after 13 days of transplantation and second after 10 days of first weeding. In addition to this, the whole POP of SRI is being followed under the regular guidance of BPYP at field level.



SRI Nursery

According to *Rajdeo Bhuiya*, this year, thanks to sufficient rainfall and his exposure and adoption of SRI method of paddy cultivation, he is expecting to harvest not less than 20 quintals of paddy sufficient for the consumption need of his family in last of November. It will also give him more fodder for his cattle. Saved expenditure and additional income will now be effectively contributed to improve the overall condition of his family resulting in moving towards a dignified life.

BPYP and CWS have been continuously trying to enhance the income of the people by reducing the input cost and enhancing the yield in agriculture through effective intervention at the same time channelize the additional income back to the family of beneficiaries for quality improvement in their life.

The spill out effect of VET programme:

Under the VET programme 48 farmers of *Manika* block were trained on System of Rice Intensification (SRI) this year which attracted the NABARD to initiate the SRI project in the area to basically spill out the effect of VET programme and extending the benefit of the same to more farmers. Both the projects are supplementing and complementing each other for the common benefit of the community. In total, 402 ST, SC and OBC farmers of *Manika* block have adopted the SRI technique of paddy cultivation this year which includes



some **SRI paddy field** of the trainees of *Kharif* crop stabilization under VET project also. Among them, about 15 farmers have done SRI in 1 acre of land (approx) and 4 to 5 farmers are very progressive farmers have done the same on about 2 acre of land. On an average all farmers have done SRI paddy cultivation on 25 decimal of land. Total area covered by SRI VET trainees and all 402 trainees in *Manika* block is 15.05 acres (approx) and 102 acres (approx) respectively.