System of Rice Intensification (SRI)

With the rainfed tribal farmers of Malkangiri

A Brief report 2014.....

RRA Network
Malkangiri
PROLOGUE

The RRA Network, Malkangiri, has been actively working with the rainfed tribal farmers of the district since the past three years now, on SRI (System of Rice Intensification).

Last year the Network worked with almost 300 farmers and was successful in mobilizing the State Plan (2013-14) under Department of Agriculture for 300 hec. In which the SRI farmers received direct cash incentive of Rs 4700/hec.

This year the network upscaled to work with almost 500 farmers in the 4 blocks of the 7 blocks in the district.

This report attempts to capture few of the highlights of SRI Kharif 2014 in order to better conceptualize and implement SRI in the context of rainfed regions by creating and sharing a strong action based research study.
METHODOLOGY

The process steps followed for adoption and promotion of SRI practices with the rainfed farmers of the district started with initial cultivation of green manure, dhanicha. However, the timely availability of dhanicha seeds posed a problem and only a few farmers took up the cultivation of green manure though the need and knowledge of this practice was spread among a large number of farmers.

The monsoons were late to arrive but the Network initiated trainings on SRI from early June and held both theoretical and practical sessions. Last year’s experiences and learning were used to encourage first time farmers and better the practice among old farmers.

Demonstrations were conducted for seed treatment and bed preparation at revenue villages and potential farmers from nearby hamlets were involved in these trainings as well. The Village Level Worker (VLW) of the Agriculture Department and the Network’s CRPs (community resource persons) were used as mediums to spread technical knowledge regarding SRI.

Once the first round of trainings and demonstrations were conducted, CRPs along with FNGO staff visited individual farmers’ fields to oversee their progress. During this time arrangements were made to ensure the availability of weeders to farmers by mobilizing 5-6 farmers and procuring one marker and weeder per such group, from Department of Agriculture.
MONITORING & EVALUATION

Regular field visits by CRPs and partners ensured that a certain amount of punctuality was maintained as far as dates were concerned. During field demonstrations farmers from near by were called to witness for themselves the procedure and technique involved. Exposure visits were organized and farmers were taken to fields where weeding was being done timely, in order to encourage them to take up regular weeding as well. This proved beneficial since the number of tillers in a field where weeder had been used and in a field where it had not, is conspicuously different, the former showing crops with higher number of tillers.

Throughout the process, the CRPs were entrusted with the task of maintaining a “tracking sheet” for each farmer. This sheet was checked by NGO partners and Agriculture staff, as and when they visited the field.

Crop cutting was organized in a large way in order for non-SRI farmers to be present during the time of harvest and see the actual benefits of SRI. The events were held at the concerned SRI farmer’s field and PRI members as well as Agriculture Department officials were invited.

The table below shows the analysis regarding seed wise yield that was procured by farmers from their respective ‘tracking sheets’

<table>
<thead>
<tr>
<th>Variety of Seed</th>
<th>Average Yield in Q/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>KHANDAGIRI</td>
<td>10.79</td>
</tr>
<tr>
<td>MANDAKINI</td>
<td>16.95</td>
</tr>
<tr>
<td>1010</td>
<td>15</td>
</tr>
<tr>
<td>1001</td>
<td>19.1</td>
</tr>
</tbody>
</table>
CASE STUDIES:

Sada Bhumia of Tlapadar village, Salimipanchayat, Mathili block, has a total of 6 acres of land of which 4 acres is used for paddy cultivation, giving him an average yield of 10q/acre. This kharif for the first time he attempted SRI in one acre. He had no irrigation facility but managed a yield of double of what he gets through traditional practices, a 20q/acre.

Agriculture and farming practices in India are generally assumed to be male dominated and a number of technological advancements in agriculture are based on this assumption, thus failing to address the reality of the millions of women farmers in the country. RRA Network makes a conscious effort to imbibe the gender dimension in all its activities and hence promoted the practice of SRI among women farmers with special care.

Rebati Bhumia was the first woman to experiment with SRI in her village and has already made up her mind to ensure that the other women who are part of her SHG, will also take up the practice next season. Rebati’s family like other families in the area, depend on PDS for meeting their annual paddy consumption requirements, however, this year, Rebati has contributed to her household’s food security in a more significant way by adopting SRI and doubling the yield of their land.

SRI- A PRACTICE NOT A VARIETY OF SEED...

The Network witnessed a number of mixed responses from the community while trying to spread the practice among them. One of the most common and misconceived notions was that SRI is a type of hybrid seed and hence will give better yields, similar ideas were shared, such as only hybrid seeds can be used for SRI. The Network aimed to break these myths and hence persuaded few farmers to take up SRI with the traditional varieties of paddy that they have been cultivating since generations.

In 3 villages of Parkanmalla panchayat, the farmers tried SRI with their indigenous varieties, Bhutachudi, Manchkunda and Sarnamasuri, and the average yield was found to be 15.66 q/acre. Similarly in Nuaguda Panchayat and Gunthawada panchayat, 14.25 q/acre was procured by 15 farmers who had used their traditional Chudi variety, compared to the yield of 7 q/acre acquired through conventional method.
SRI BEYOND A SCHEME....

Last year, Kharif 2013, Lakhinath Bhumia of Padiarasi village, took up SRI for the first time in 1 acre of his total landholding of 5 acres. Lakhinath received an incentive from Department of Agriculture for taking up SRI, under the State Plan scheme which provides Rs 4700/hec for SRI farmers. This year Lakhinath did not bother about the availability of the scheme and made up his mind to do SRI regardless of whether he will be eligible for any government subsidy or incentive and went on to do 2 acres in SRI.

There are many farmers like Lakhinath who were simply convinced of the benefits of SRI and decided to see for themselves. This is a big achievement for the Network since subsidies and free inputs has become the norm of most development programmes.

SRI IN ORGANIC....

Use of liquid manure was largely promoted among SRI farmers by linking them with local SHGs that had been given training on preparation of organic manure and bio-pesticides. Though the use of chemical input is restricted among the rainfed farmers of our district, especially in paddy crop, however, application of urea and infected paddy crop is a common sight. Hence we thought of addressing these two issues by getting farmers into the practice of complete organic inputs.

In addition to applying cow dung, farmers have now started using compost, handi khata, Jeebamruta etc. green manure in the form of Gliricidia has also been taken up for the first time in the district.
DETAILED COMPARATIVE REPORT

The following data was compiled after closely studying 5 fields of SRI farmers and 5 fields of non SRI (conventional) farmers. The data was then compiled to get an average of

The precautions taken were: same variety of seed used, irrigation facility unavailable in all 10 fields, rainfall received similar in all 10 fields.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Cost of cultivation (1 acre)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conventional method (Rs.)</td>
<td>SRI method (Rs.)</td>
</tr>
<tr>
<td>Ploughing</td>
<td>1800</td>
<td>1800</td>
</tr>
<tr>
<td>Seed</td>
<td>400</td>
<td>50</td>
</tr>
<tr>
<td>Transplanting</td>
<td>1600</td>
<td>800</td>
</tr>
<tr>
<td>Weeding</td>
<td>1200</td>
<td>500</td>
</tr>
<tr>
<td>Fertilizers</td>
<td>800</td>
<td>400</td>
</tr>
<tr>
<td>Harvesting &amp; Thrashing</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Total</td>
<td>7800</td>
<td>5550</td>
</tr>
</tbody>
</table>

Yield and Income

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield (q/acre)</td>
<td>12 qut.</td>
</tr>
<tr>
<td></td>
<td>25 qut.</td>
</tr>
<tr>
<td>Gross Income @ (Rs. 1200/-per q)</td>
<td>14400</td>
</tr>
<tr>
<td></td>
<td>30000</td>
</tr>
<tr>
<td>Net Income</td>
<td>6600</td>
</tr>
<tr>
<td></td>
<td>24450</td>
</tr>
</tbody>
</table>

The farmers are primarily skeptical about this technique of transplantation not simply because it is new to them but also because of the fact that 10-12 days old seedlings look very young and small, hence they feel apprehensive whether it will grow well or not if transplanted at this point.

Secondly the practice of weeding is hard for them to pick up. Even if weeding is done once and then followed by another round, third time weeding is still rare to come across. Also the instruments required during SRI, namely marker and weeder, are at present of poor quality and hence the practice to make and store these instruments locally will be taken up.

The importance of protective irrigation during critical periods of cultivation was realized by SRI farmers in a completely new way. We lost out on a number of potential SRI farmers due to the apprehension of late and weak monsoons; hence many of them simply broadcasted their fields and left the rest on nature. However, the provision of critical irrigation would encourage a number of farmers to undertake the risk of SRI and other new techniques and also provide them with assurance while the process is underway.

CHALLENGES

The traditional practice of broadcasting that is being followed by farmers for generations is very different from SRI and hence the community is still doubtful about whether to adopt or not.

Main obstacles faced while trying to convince community is namely at times of transplanting, since in traditional transplantation the bed is left for 20 days and more, however, in SRI farmer required to transplant within 10-12 days and transplanted seedlings to be planted immediately contrary to traditional practice of replanting the seedlings after washing the roots, drying and keeping for few days.
OUR NETWORK STRUCTURE
MALKANGIRI

SECRETARIAT
Partner NGOs & corresponding outreach areas
Kalimela-GDS
Korukonda-TSRD & SOMKS
Mathili–ODC
K.Gumma-Parivarttan & Mode

Network’s outreach for fishery programme – 7 blocks and 1500 waterbodies
Network’s outreach for production system programme – 20 GPs in 4 Blocks.

RRA MALKANGIRI MODEL

Line Departments (Agri, Horti, animal husbandry, DRDA, IAP etc.)
Technical & Financial, extension support
Convergence of various schemes and departments

Farmers Resource Center

Proposals at Gram Panchayat
Information and support point
Facilitate implementation of sanctioned proposals

Facilitate implementation of sanctioned proposals

Farmers Producer organization at Panchayat/ Block level, at later stage

RRA Program (Process, planning & system set up)

Single window clearance system for Panchayat plans

A national network having comprehensive pilots (CPs) operating in different socio-ecological rainfed regions of the country.
Malkangiri CP: Evolved in the context of MGNREGS and OTEL-P - the opportunity to make a district level impact – evolved over an year long consultations and exchanges of ideas among the CSOs, District Administration and Line departments.
Intended to be an open network and a process of engagement of stakeholders in Malkangiri to promote collaboration and partnerships in the development of the district.
The network intends to bring in integration of various mainstream programs and make them effective and efficient, and to get the community in control over such public investment decisions and development processes.
Taken up Gram Panchayat as a unit for planning and development and integration of various mainstream programs.

CONTACT No. 06861230909
Email id: rramalkangiri@gmail.com