

3rd Annual Activity Report

FY: 2015-16



Enhancing Agriculture of Women and Marginal Families

विकास के मूल सिद्धान्त

(Principles of Development)

“पंच स” जिन्दगानी के लिए ।

“पंच ज” जीवन चलाने के लिए ॥

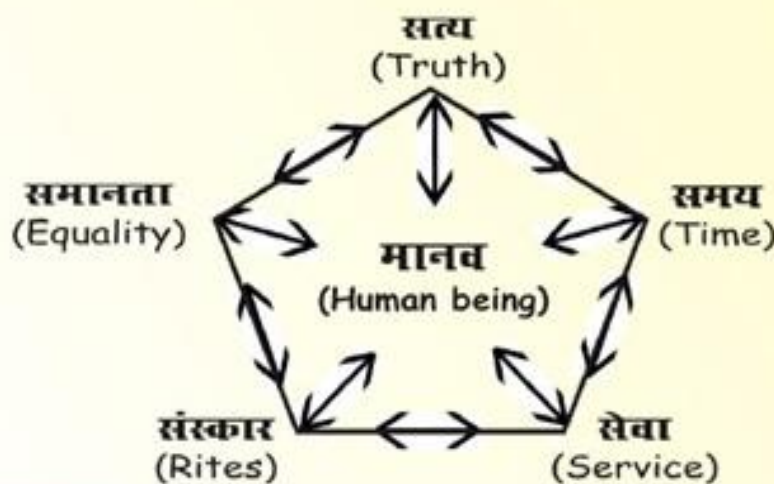
(Five S: To achieve the goals of life; Five J: To run the life)

पंच स (Five S):

1. सत्य (Truth) 2. समय (Time) 3. सेवा (Service) 4. संस्कार (Rites) 5. समानता (Equality)

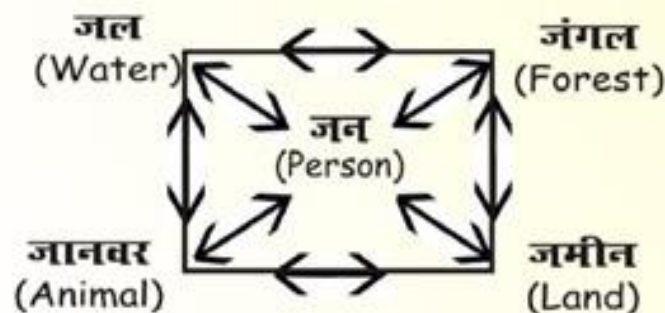
जिस जन्तु के व्यवहारिक जीवन में सत्य, समय, सेवा, संस्कार एवं समानता का समावेश हो उसे मानव कहा जाता है। विकासकर्मी के लिये मानव बनना प्रथम शर्त है।

(A living creature having truth, timeliness, service, rites and equality in its practical life is called a human being. For development work a man has to become a human being first.)



पंच ज (Five J):

1. जल (Water) 2. जंगल (Forest) 3. जमीन (Land) 4. जानवर (Animal) 5. जन (Person)



सृष्टि/प्रकृति के विधि अनुरूप प्राकृतिक संसाधनों का स्थायी एवं टिकाऊ विकास करना ही श्री विधि विकास कहलाता है।

(Sustainable development of natural resources including human resource based on law of nature/God is called SRI method of development)

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Chapter-I: Introduction

Preservation and Proliferation of Rural Resources and Nature (PRAN) works with poor and marginal communities at the grassroots to enhance their food security and cash income through System of Root Intensification (SRI) method of crop cultivation. It also builds capacity of Government functionaries, grassroots organizations and various other actors of rural development in SRI. The primary operational area of PRAN is Bihar State.

PRAN is an offshoot of PRADAN. It was formed in 2012 with a view to address food security and income of small and marginal farmers. It is registered in the holy city of Gaya as a Public Charitable Trust under The Indian Trusts Act, 1882.

PRAN engages spirited youth – both from local areas as well as those who have earned higher academic qualifications elsewhere – to work closely with people and promote livelihoods based on natural resources through application of SRI principles in life and livelihoods. PRAN builds capacity of local and educated people through its principles of development: *Panch S (Satya, Samay, Seva, Sanskar and Samanata) and Panch J (jal, Jungle, Jameen, Janawar and Jan).*

Our Mission and Approach

Our Mission

“Enhancing Agriculture of women and marginal families _ preservation and proliferation of rural resources and nature”

Our Approach to Grassroots Action

PRAN believes that SRI way of life and livelihood beginning with crop cultivation has great potential positively impact the community and the environment. Strengthening farming systems integrated with Climate change adaptation for women and marginal households in particular is main area of our intervention. The major focus of PRAN is to form SRI women groups to sustain the activities of SRI method of crop cultivation. PRAN also works with existing women collectives in villages formed by various organisations, Gram Panchayat and other social bodies. Facilitating women collectives to identify and nurture local cadres through phased training of village women and men farmers enable our interventions reach out to large number of small and marginal farmers.

Area Profile and Outreach

Area Profile

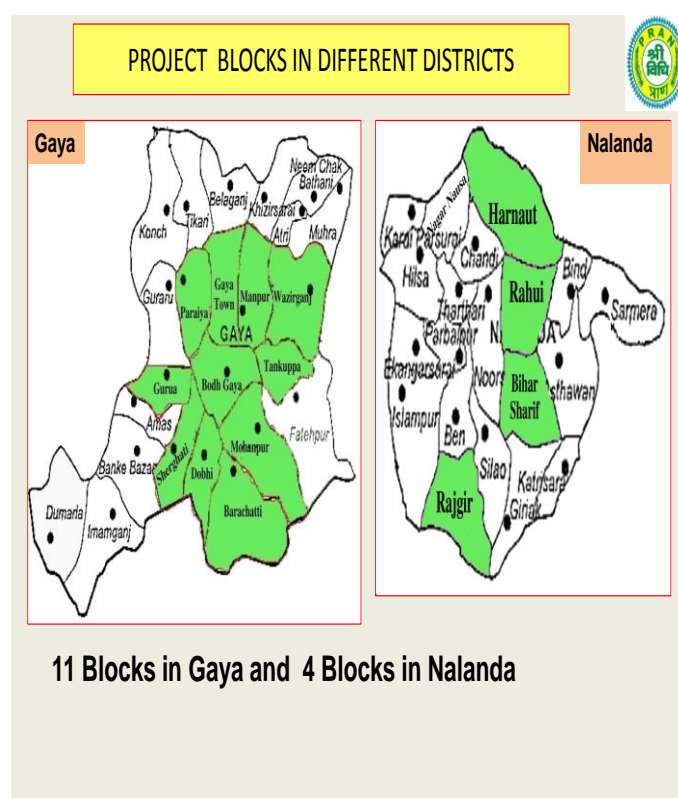
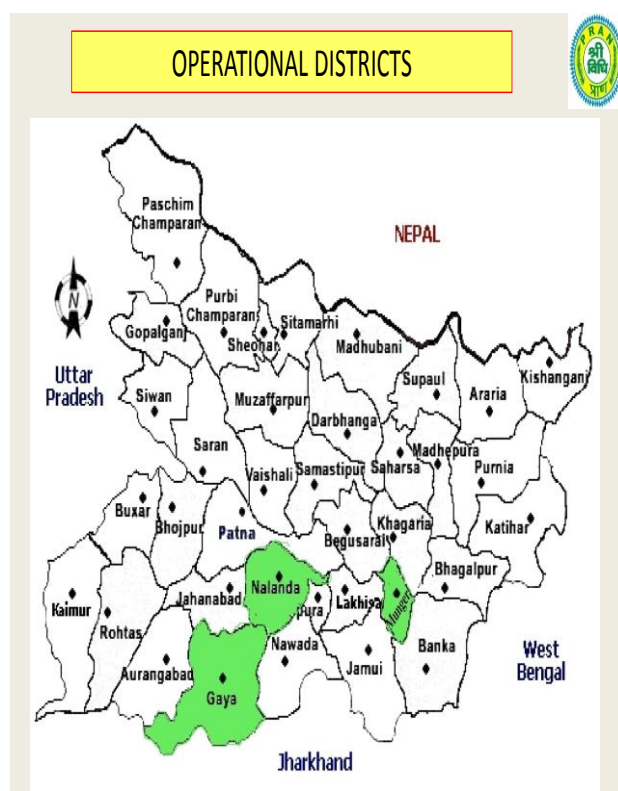
PRAN works with socio-economically disadvantaged communities, such as Schedule Castes, women, landless, backward communities and marginal and small cultivators. Grassroots action involving innovative and sustainable agriculture to enhance livelihoods is PRAN's primary focus. Improving the husbandry of natural resources is the

broad avenue PRAN follows to enhance livelihoods. Average productivity of major food grain and other crops in general is very low in Bihar. Small and marginal rural households face food grain insecurity; poor and bad monsoon aggravate the situation. Distress migration to distant places in search of work is a common phenomenon.

Despite accelerating growth rates in food grain as well as non-food grain production, the status of agriculture in Bihar is not comparable to agriculturally developed states or even all-India average. With similar area, West Bengal produced more than double of paddy output in Bihar. Similarly, Haryana with half of the area produced almost equal of wheat output to Bihar. The case of other crops such as maize, arhar, gram, sugarcane, rapeseed/mustard, potato, etc. was no different. Moreover, the yield gap between the potential and the actual was large at 50-70% in the state, depending upon the crop and irrigation condition.

Outreach

PRAN's current grassroots operations are in three districts of Bihar viz. Gaya and . However, for training of personnel and grassroots workers of other organisations, including Government, the resource persons associated with PRAN go to all districts of Bihar and elsewhere in the country.



As PRAN works on two aspects **working with local rural communities** and **working on thema of SRI**, we focused our work accordingly.

Working with local Rural Communities

We are partnering with PRADAN to implement SRI Scaling up project in Bihar. We focused our attention in two districts Gaya and Nalanda.

Particulars	Plan	Achievement
Number of districts	2	2
Number of blocks	15	15
Number of SRI-Paddy Farmers	25000 households in 12000 acres	26145 Households in 9300.32acres
SRI-Milletts	1000 households in 100 acres	455 Households in 26.05 Acres
Number of Solar project installed and in operation	0	2
Kharif SRI-Other Crops	10000 households in 1500 acres	3418 households in 345.56 acres
Rabi SRI- Other Crops		15,173 households in 2172.76 acres
ongoing Low cost vermicomposting	0	1200 households
Farmers using ITK preparations(Sri Pranamrit and others)	300 old and 400new households	1663 families
No of Common Interest Groups	75 old and 75 new women groups	75 old nurtured and 58 new CIGs formed
Training to common farmers on SRI-Paddy	25000 trainee days	28880 trainee days
Training to common farmers on SRI-Other Crops	10000 trainee days	

Major Interventions

a. SRI method of Paddy cultivation

With great enthusiasm we entered in to Kharif 15-16. The early rainfall also raised our expectation. We put our best of energy in SRI-Kharif. This year we had deliberately left the farmers who had done SRI with PRAN continuously for three years. To manage the target of 25000, we explored new villages to promote SRI. For this we have been planning the process since March-April.

After first shower there was a long dry spell which shattered our hope. Many of the nurseries became old and got destroyed.

Transplanting of SRI-Paddy: 2015-16

We started transplanting and also at some places in a DSR mode of SRI. The farmers transplanted mainly from individual nurseries and collective nurseries raised for the purpose. Though mostly farmers transplanted young age seedlings due to erraticism in

rainfall they delayed also till 18-19 days. We asked farmers to go with two seedlings when they cross 20 days. The farmers learnt and transplanted.

In weekly meeting with village Resource Persons we changed the strategies as per the requirement of field in the given context. The rainfall has not been very consistent. The individual and collective nurseries played a crucial role in maintain the young age seedlings at large. We are working this year in 547 villages, 157 panchayats and 15 blocks spread over Gaya and Nalanda districts of Bihar. We transplanted SRI-Paddy including SRI-DSR with 26145 households in 9300 acres.

Farmers Profile

Total Number of households	Number of SC participating households	Number of OBC participating households	Number of households belong to other categories
26145	8536	17258	351
%	32.6	66.0	1.4

Distribution of area transplanted under SRI-Paddy among SC, OBC and Others

Total Area in acres	SC area in acres	OBC area in acres	Area of others category in acres
9300	2785	6390.3	124.96
%	29.94	68.7	1.3

Table: SRI Paddy in Numbers

PRAN FY 2015-16_Paddy Data	
Total Block	15
Total Village	547
Total Panchayat	157
Total VRPs	550
Total Female VRPs	418
Total Male VRPs	132
Total Nursery	29853
Total Farmers_Transplanting	26145
Total Area_Transplanting(Acres)	9300.32
Total Coverage per Household per Acres	0.36

Yield obtained under SRI-Paddy for 2015-16

This year was a draught year. Our strategies of promotion of suitable varieties worked well and farmers at large in the project area could harvest good Paddy yield. In one of the three locations farmers took HYV and got good average yield. The project average is 6.2 ton/hect. Out of a total of 26145 households who transplanted Paddy with SRI we could not gather data for 3534 farmers and rest lost their crop in want of water. We analysed data of 22111 farmers and result is as follows.

Total No of farmers	Yield data collected for	Less than 4 ton/hect	Between 4-6 ton/hect	Between 6-8 ton/hect	More than 8 ton/hect
26145	22111	592	6921	12245	2353
%age	100	2.68	31.3	55.38	10.64

- 66% farmers got more than 6ton/hect

This year too the farmers in villages realized the importance of SRI. Where the normal cultivation yielded very poor and many farmers lost the crops the farmers associated with PRAN got good average yield. Abhishek variety in particular yielded good where farmers could assist with little irrigation.

2.4.2. SRI-Millet: 2015-16

As asked by Livolink Foundation on SRI-Millets piloting this year in Gaya within the ongoing Project of Tata Trusts-PRADAN-SRI-Project. We started exploring the possibility of SRI-Millets promotion in Gaya district. In adjoining blocks of Jharkhand we explored the possibility. Only the old men could recollect the Finger millets which they cultivated many years back. The younger generations did not know the finger Millets mostly. However in very few villages adjoin Jharkhand some farmers were taking millet though on a very small piece of land.

Taking materials on Finger millets from Livolink Foundation publication and PRADAN manual we extensively used the materials to train the colleagues wherever possibility of sowing millets were observed.

Procuring millets seeds like Birsa Gaurav from Ranchi and also traditional varieties from Soumik Arohan we raised nurseries. Immediately after that first heavy rainfall took place and damaged the just sown seeds greatly. We again raised nurseries and transplanted the SRI millets wherever possible.



We organized one SRI-millet's adhivesan in Dobhi block of Gaya district and sensitized the local community and other stakeholders toward climate change and utility of such low water requiring and nutritive grain crops in coming days. We also need to explore the market for uptake of production in the area. At the same time a strategies need to be worked out to upscale the SRI-Millet's in the area particularly adjoining area of Jharkhand state. The cultural and adoption in food habit of small and marginal farmers in villages also need to be sensitized and strengthened.



On the left it is a traditional Finger millet variety which took long 5 months to mature while on right it matured in 3 months are farmers are excited to scale up



The Finger millet mahotsava drew attention of local MLA, District Agriculture officer and deputy Project Director, ATMA. These officials also went to observe Finger Millet crops in field grown with SRI principles.

Experience on growth of SRI-Millet's

Farmers were excited to see the tillerings in SRI-Millet's and its vegetative growth and enhanced yield. We used Traditional seeds of Finger millets which we gathered from Soumik banergee of Arohan. Another variety Birsa Gaurav we purchased from Ranchi. The traditional variety gave high yield but it took longest period and hence farmers are not interested in sowing this traditional variety. Altogether we piloted SRI-Millet's with 453 farmers in 24.89 acres of land.

In Paraiya block and adjoining areas we faced problem of wild animal blue bull which hampered the crops in many places. However the demonstration drew attention of many farmers of locality.

Yield obtained under SRI-Millets

This was first year piloting of SRI-Millets. The crops in major growing area were highly damaged by Blue bulls. In spite of that the growth and tillering in Millets excited farmers and we hope to go with more number of millets particularly in Gaya and other dry area. The varieties were procured from two sources. From Arohan we collected one traditional variety which gave very high yield but required irrigation and took very long time. In spite of giving very good yield in the test period the farmers are not willing to take this variety in coming year. The variety provided open mouth of the panicles as compared to closed mouth of Birsa Gaurav variety which we gathered from Jharkhand.

However out of a total of 453 farmers who piloted millets in their field we could collect data for 348 farmers. The yield obtained is as follows.

Total No of farmers	Yield Data Collected for	Less than 1 ton/hect	Between 1-2 ton/hect	Between 2-3 ton/hect	More than 3 ton/hect
453	348	18	213	105	12
%age	100	5.1	61.2	30.1	3.44

2.4.3. SRI-Kharif Vegetables in 2015-16

The inconsistency in rainfall and draught like situation prevailing in project area also forced us to put our integrated effort in the changing agro climatic scenario. On few crops we are focusing in SRI-kharif vegetables. The vegetables which will be transplanted within September we consider that as Kharif vegetables. Last year we had taken kharif vegetables in Gaya project area but this time we have included the entire project area after seeing positive output of last year interventions.

The integration of local fertilizers and pesticides through women common Interest groups are bringing positive results in villages.



The Machan vidhi vegetables along with SRI-Vicia Faba

PRAN FY 2015-16_Kharif_SRI_Vegetables Data	
Total Block	14
Total Village	148
Total Panchayat	73
Total VRPs	162
Total Female VRPs	116
Total Male VRPs	46
Total Nursery	1279
Total Farmers_Transplanting	3418
Total Area_Transplanting(Acres)	245.04
Total SC Farmers	275
Total Area_SC Transplanting(In Acres)	24.66
Total OBC Farmers	1529
Total Area_OBC Transplanting(In Acres)	137.61

Rabi season crops

After kharif crops farmers went for rabi season crops like wheat, oilseed and vegetables. Due dry season in kharif there was bad impact on rabi crops also. In most of the rabi season crops farmers had to do the Palewa irrigation. In addition to wheat and rapeseed we promoted vegetables with farmers in rabi season. In most of the cases the local fertilisers and pesticides are being integrated.



A

farmer in her rapeseed plot(left) while Director from Central Potato Research Institute, Shimla along with Director, Central Potato Research station ,Patna interacted with SRI farmers and assured to collaborate in Potato cultivation.



The SRI-wheat plots in its initial stage in project area

Rabi at a glance

S.No	Name of Crops	No of farmers	Area in acres
1	SRI-Wheat	6984	1247.5
2	SRI-rapeseed	1453	170.5
3	SRI-vegetables	6736	754.7
Comm. No	SRI-Other crops	15173	2172.76 acres

Rabi 2015-16: Completion

The mid-season of Rabi crops were very crucial as due to draught in previous Kharif season the normal irrigation was also affected. The Rabi season crops like wheat, oilseed and vegetables gradually started maturing. Due to dry season in Kharif there was bad impact on Rabi crops also. In most of the Rabi season crops farmers had to do the Palewa irrigation. In addition to wheat and rapeseed we promoted vegetables with farmers in Rabi season. In most of the cases the local fertilisers and pesticides were integrated.





The farmers and government officials from the district observing the wheat crops in Biharsarif block of Nalanda district

We also demonstrated 5 rows power tiller drawn seed drill. The engineers of the company came to us and gathered all our feedback. They improved marginally. We demonstrated with the seed drill but the small seed drill available in the market is not effective. All the feedbacks have not been incorporated.

In these powers operated seed drills (inclined Plate tractor drawn seed drill and 4-5 rows power tiller drawn seed drill there is system of changing the spacing and also depth of sowing so these drills are being used by farmers particularly in Rabi and summer crops.



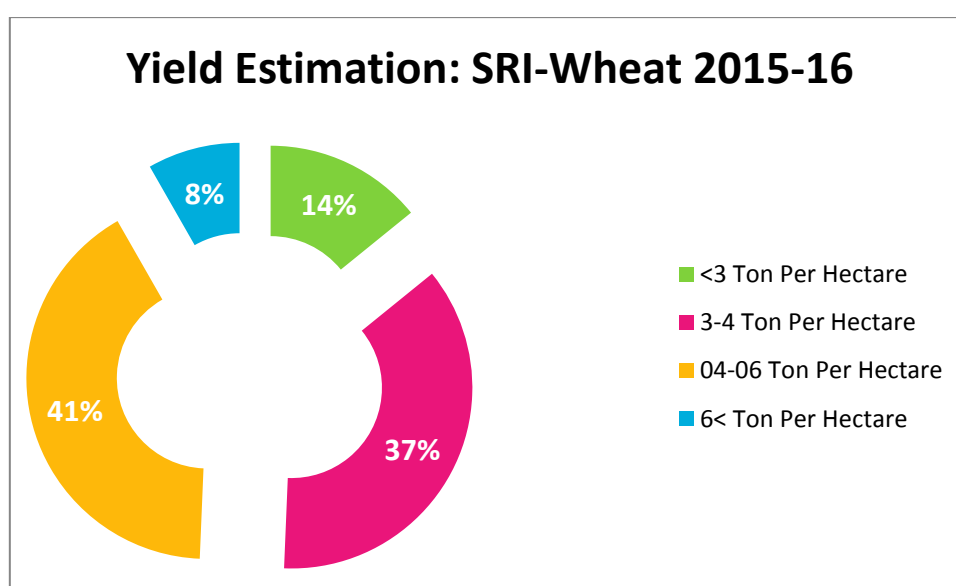
Farmers are using 5 Rows Power Tiller in Dobhi in Pic-5 and inclined plate seed drill in Nalanda district in Pic

After completion of Rabi 2015-16, here is the achievement in numbers in the table

Achievement from Rabi 2015-16

Particulars	Units
Number of districts	2
Number of blocks	15
SRI-Wheat	6984 households in 1247.5 Acres
Rabi SRI- vegetables	6737 households in 754.7 acres
SRI-rapeseed	1453 households in 170.5 acres

The yield estimation of Rabi Wheat 2015-16



- 41% of the families got the yield in between 4-6 Ton/ Hectare
- 37% of families got the yield in between 3-4 Ton/ Hectare
- 14% of families got yield less than 3 ton/hectare
- 8% of families got yield more than 6 ton/hectare

Focus on sustainable interventions

PRAN has been focusing on use of local fertilisers and pesticides use in few villages of all trust project blocks. The training and capacity building of farmers and village resource persons on various products preparation were organized. Among various fertilisers, pesticides *Sripranamrit*, *Srineemastra*, *Srimathhastra* became widely popular among farmers. These locally prepared fertilisers, pesticides are called by farmers' SRI VIDHI fertilisers and pesticides. The demonstrations in few villages of all trust project villages influenced **Bharat Rural Livelihood Foundation, New Delhi** after they visited few villages of PRAN at Gaya. Thereafter our work on SRI cum sustainable agriculture was also identified as better as Centre for Sustainable Agriculture, Hyderabad. Bharat Rural Livelihood Foundation through its partners (Non-Government and government

organisations) in 8 different states (***Jharkhand, Madhya Pradesh, Chhattisgarh, Orissa, West Bengal, Maharashtra, Gujarat and Rajasthan***). PRADAN is also a major partner with Bharat Rural Livelihood Foundation, New Delhi. Similarly many other non-government organisations like BAIF, FES, SRIJAN, WONC, AKRSP(I), PARHIT, YCDA, Digbarur Angikar, Lupin Foundation etc. and government organization like JSLPS (Jharkhand State Livelihood Promotion Society) are also partners in various BRLF project districts spread over eight states excluding Bihar.



The various components of sustainable practices under SRI method of crop cultivation in PRAN project area



A worker of PRAN looks at condition of Azolla and Nadep compost being practiced in project villages

Preservation and Proliferation of Rural Resources and Nature (PRAN)

Crop Data_FY_2015_16

Seasons	Name of district	Names of blocks	No of villages covered	SRI		SMI		SRI-Other Crops		Gross Farmers	Net farmers (Actual no of farmers covered)
				Farmers	Acreage	Farmer	Acreage	Farmer	Acreage		
Kharif 2015	Gaya	Barachatti	49	3054	1155.52	52	2.85	448	58.00	3554	3054
		Bodhgaya	24	1716	680.63	18	0.94	32	2.00	1766	1716
		chandauti	29	1163	407.11	36	2.37	381	46.67	1580	1163
		Dobhi	52	2077	993.85	21	1.59	44	2.81	2142	2077
		Gurua	43	1377	348.11	14	0.89	41	3.37	1432	1377
		Manpur	32	1438	376.93	176	8.39	377	31.59	1991	1438
		Mohanpur	35	1432	442.93	33	2.09	61	3.80	1526	1432
		Paraiya	49	1832	686.52	28	2.85	47	5.22	1907	1832
		Sherghatti	32	1903	611.70	26	0.81	50	3.41	1979	1903
		Tankuppa	51	1606	441.78	25	2.52	113	9.15	1744	1606
		Wazirgang	38	2248	779.19	26	0.74	56	5.44	2330	2248
	Nalanda	Biharsharif	27	1727	709.50	-	-	869	77.66	2596	1727
		Harnaut	35	1844	758.31	-	-	182	13.78	2026	1844
		Rahui	33	1689	608.78	-	-	717	82.66	2406	1689
		Rajger	18	1039	299.47	-	-	-	-	1039	1039
	Total		547	26145	9300.32	455	26.05	3418	345.56	30018	26145

Preservation and Proliferation of Rural Resources and Nature (PRAN)

Crop Data_FY_2015_16

Seasons	Name of district	Names of blocks	No of villages covered	SRI-Other Crops		Gross Farmers	Net farmers (Actual no of farmers covered)
				Farmer	Acreage		
Rabi 2015-16	Gaya	Barachatti	26	940	179.48	940	822
		Bodhgaya	20	723	88.96	723	324
		chandauti	16	1161	129.59	1161	551
		Dobhi	41	923	164.15	923	771
		Gurua	15	470	68.52	470	269
		Manpur	9	721	49.56	721	383
		Mohanpur	16	1049	115.56	1049	678
		Paraiya	22	568	96.67	568	394
		Sherghatti	15	826	129.89	826	636
		Tankuppa	39	2133	292.15	2133	1043
		Wazirgang	25	1398	238.37	1398	820
	Nalanda	Biharsharif	18	1332	222.47	1332	965
		Harnaut	13	913	121.03	913	705
		Rahui	18	1195	201.06	1195	876
		Rajger	7	821	75.31	821	742
	Total		300	15173	2172.76	15173	9979

Development and validation of SRI implements

The trained local blacksmith is now manufacturing Mandawa Weeder, Sri Vidhi Weeder, markers, sugarcane eye extractor and seed drill. PRAN has helped this blacksmith to obtain legal documents like license, TAN, PAN so that they are able to sell to other agencies promoting SRI method of crop cultivation. This blacksmith is supplying Sri Vidhi Weeder to government of Madhya Pradesh and several organisations. There is a limitation with blacksmith to improve the efficiency of wheat seed drill. Further a firm called **Agro Vision** with our inputs has successfully demonstrated 5th generation SRI-Wheat seed drill which helped us in scaling up SRI-Wheat in 2015-16. There has been an effort to develop two rows seed drill by Agro-vision. A large number of changes have been made which are expected to make this machine suitable for many crops including SRI-DSR. The Uttar Pradesh State Rural Livelihood Mission also purchased Mandawa weeders from this blacksmith.

Solar cum drip Irrigation Project

The solar project implemented in village Rajapur is running smoothly. The DC submersible pumps are sophisticated and farmers find that hard to repair locally. With support from Jain Irrigation Systems and Alicia Harley of Harvard University, PRAN implemented community managed solar irrigation project integrated with drip among 7 marginal farmers. The group charges Rs 20 per hour to members using solar water. Earlier the farmers were using diesel pump sets which cost Rs 100 per irrigation in small plot of 200 square metre whereas after installation of solar irrigation integrated with drip the cost for the same area came down to Rs 50 for same piece of land when we irrigate at interval of 7 days. In drip water is required daily even then it is cost effective in case of vegetables. The two SRI-women groups received 30 drip kits from ATMA, Gaya



Mulching integrated bitter gourd crop supported by solar project in Rajapur village at Gaya

In hot summer farmers took SRI-vegetables and practiced mulching using solar irrigation project

In case of plastic mulching/mulching farmers experienced positive learning similar to last year.

- The frequency of irrigation is reduced by 20- 25% and saving of water takes place in hot summer as the mulch trapped moisture from atmosphere which has 30% moisture during summer. Also it reduced the evaporate-transpiration from the soil due to burning sunlight.
- The fruits are fresh and damage is less as the fruits do not get in touch with the soil.

- The leaves of cucurbits remained green while in case of non-mulching the leaves wilted after 2-3 days of irrigation. Due to heat generated in soil, this was happening in areas without mulch.
- The weeds emerged in non-mulching area while it did not appear in mulched area. In non-mulched area farmer had to remove the weeds.

Focus on agro-ecological and sustainable practices

Local fertilisers and pesticides including low cost vermin-composts are being prepared by farmers in villages. Among various preparations Sripranamrit, Srimathhastra, Srineemastra are becoming famous among farmers. As of now nearly 3500 farmers have started using these preparations and have been sharing positive experiences of these products. With few farmers in Wazirganj, Tankuppa and Bodhgaya blocks we are piloting plastic mulching. The experience of farmers using plastic mulching is encouraging us to integrate in our project. We are also integrating feromen traps and yellow and white sticky plates with few farmers.

Capacity Building of farmers and Local Resource Persons

We organised various training events for farmers and Village Resource persons in all our 15 project blocks of Gaya and Nalanda.

Working on thema of SRI

Dissemination of SRI knowledge

PRAN participates in various kisan melas organised by department of agriculture and agricultural universities. It sends various materials on SRI in Hindi and English to various stakeholders including government and civil societies in state of Bihar and elsewhere. in villages and block headquarters PRAN distributes various pamphlets relating to SRI method of crop cultivation and fertiliser and pesticides preparation. Various research institutes also get in touch with us and ask for SRI package of practices.

Awareness Events

This year we were extensively engaged in capacity building of farmers through various events. First of all we spread awareness among farmers in new villages so that they can start SRI. In awareness events a group of 3-4 women in yellow sari go to a hamlet with big fur and pamphlets of SRI. The villagers are informed beforehand. The women of the hamlet gather. These yellow Sari SRI farmers hang the fur on a wall or tree, sit below and start singing SRI-song. They start singing with a few but after listening to the songs the other women also join the SRI cultural event. After one song these yellow sari women discuss on experience and principles of SRI. Again they sing a different SRI song there after they share the SRI methods in other crops. The women sitting and men watching and listening to these women feel excited and ask for help from them in the coming season. The SRI Vidhi songs which are the majorly used tools for campaigning are actually the step wise PoP of various crops and benefits from them. Therefore the awareness spreading events

are in themselves capacity building measures for farmers. Another kind of awareness building event is *Jhanki* on Republic Day parade in District Head Quarters.

Workshops

We were supposed to organize two workshops each in Gaya and Nalanda. We organized these district level workshops in Nalanda and Gaya both. In the district level workshop large number of government officials' participated including Nalanda, Project Director Agriculture Technology management Agency. Around 50 block level agricultural extension workers from department of Agriculture. The workshop in Gaya took place after election and newly elected MLA Mr sarvajeet Kumar along with district officials and ex MLA Mrs Jyoti Devi inaugurated the workshop in Gaya. The new MLA assured to provide all help to such a good work. Large number of participants from NGOs, government, Jeevika, Seed distributors, and farming communities participated in the workshop.



The honourable MLA Mr Sarvajeet Kumar inaugurated the SRI workshop in Bodhgaya

State Level workshop

We organized one state level workshop on System of Root Intensification method of crop cultivation in Bihar Agricultural University, Sabour, Bhagalpur on March 29, 2016. The workshop was inaugurated by honourable vice Chancellor Dr Ajay Kumar Singh. All agricultural scientists in different departments were directed by Vice Chancellor to participate in the workshop.

It was nice to see various scientists from department of Agronomy presented their papers on SRI-wheat and SRI-Mustard. All of these scientists stood in favour of SRI. We had also displayed various natural products and small SRI implements. The Vice Chancellor in particular observed our items very carefully and was very happy to see the innovations useful for farmers.

The Agricultural University had also invited Krishi Vigyan Kendra of different districts. The farmers even not associated with PRAN shared the advantages of SRI in the workshop.



A farmer explaining advantages of SRI method in Paddy and vegetable cultivation. Also the Vice Chancellor along with various officials and scientists participating in the workshop)

Sri Vidhi Jhanki on Republic Day 2016

Like every year this year also PRAN Jhankee on SRI Vidhi drew attention of ministers and officials on 26th January 2016 in Gandhi Maidan, Gaya. Addressing from the stage the honourable minister appreciated the SRI particularly in Paddy. Large number of women Village Resource Persons and PRAN workers along with farmers represented SRI Jhankee.



PRAN Jhankee on innovations and sustainable practices in Bihar

Wall writings to bring awareness among communities

PRAN in its operational villages put wall writings on SRI and local fertilizers and pesticides being promoted among them. These wall writings on SRI principles and Indian Traditional Knowledge (ITK) products are drawing attention to rural communities and people passing by.



(Wall writings in Maranchi village of Paraiya district & in Sonbaarsa Village for creating awareness among communities)



SRI Cluster Adhivesan

In all the 15 blocks under SDTT-PRADAN-SRI project we organized cluster Adhivesan of SRI and other farmers of surrounding area. In all these cluster Adhivesan local representatives, block officials and village Resource Persons along with women farmers participated actively. The better performing farmers were awarded in the cluster Adhivesan. The women farmers were highly involved and organized SRI cultural songs on the occasion. The practicing farmers shared their experiences of cultivating various crops through SRI.

SRI-Cluster Adhivesan: 2015-16										
Location	Block	Events	Male	Female	SC			OBC	Gen	Total Participant
Total PRAN	15	20	308	3392	1216	2465	19	3782		



Panchayat representatives along with government officials participating in SRI-cluster adhivesan in Gaya and Nalanda districts respectively (Pic-25 & 26)

SRI-stall in Bihar Agricultural University, Sabour, Bhagalpur

The Bihar Agricultural University, Sabour, Bhagalpur through its Director Extension invited PRAN to participate in Kisan Mela. The Mela was inaugurated by the chief minister Mr Nitish Kumar. Large number of farmers, officials and scientists interacted with women farmers on all innovations displayed by PRAN.



Large number of women also viewed our stalls(left) and a woman farmer explaining the formulation



A leader with his assistants took interest in our stall.

National Level workshop on NPM by BRLF/PRAN

A national level workshop on Non pesticides management was organized in Gaya by Bharat Rural Livelihoods Foundation, New Delhi. Around 80 participants from 13 partner organisations working in 8 states of central India participated in the workshop. Mr Rajeev Roul and Mr Kuldeep Singh Programme Officers from BRLF, New Delhi facilitated and organized the event. These participants visited 4 of the project villages of PRAN and observed closely the works demonstrated by PRAN in these villages. One day many experts from various cities working on organic farming shared their views. Among three expert organisations PRAN was also one of them. The other two were CSA (Centre for sustainable Agriculture, Hyderabad) and the third Safe Harvest from Bangalore.



The villager and members of SRI women groups explained why they are promoting SRI integrated with Organic/natural fertilisers and pesticides.



The participants observed the growth of crops without chemicals

The Workshop on NPM in progress

Visitors

- Dirk Landsman a phd scholar and Research Associate at Gottingen University, Germany.
- Bharat Rural Livelihood Foundation officials from New Delhi
- 13 partner organisations of Bharat Rural Livelihood Foundation
- World Bank officials
- District Horticulture Officer
- Director, Central Potato research Institute, Shimla
- Regional Director, Central Potato Research station, Patna
- Representatives from NGOs



Mr Dirk landsman observing locally prepared
Gaya
Fertilizer and pesticides
Badilbigha



The District Horticulture Officer,
interacting with farmers of



Soumik and Jacob from civil societies
observing Drip integrated with plastic
mulching

Review and Monitoring Of the Ongoing SRI Project

In all the SRI clusters of Gaya and Nalanda district spread over 15 blocks the weekly review and planning meetings are being held. In these meetings the respective skilled extension worker and village Resource Persons collectively review the ongoing SRI activities/organic manure in the SRI cluster. The weekly meeting in SRI cluster start with a SRI prayer and close with a SRI Song. The contents which are discussed are

- Respect crop status in the farmers' field
- interventions to improve the poorer status
- Diseases and pests if any in the fields
- Strengthening the existing SRI women groups
- Other issues concerning Village Resource persons and the farmers they are accountable for

Challenges faced

- The dry and rain fed area
- Alternate year experiencing draught
- Highly infiltrated with leftist extremism
- Low Irrigation availability
- Changing climatic condition/unpredictable agricultural seasons
- High Fog fall during winter season/night temp falls low during winter
- Early westerly winds affect grain formation in wheat and other rabi crops
- In Rajapur village where all residents are from bhuiyan community. The villagers were deserted by Land Mafia. They had removed all infrastructure of solar irrigation project supported by PRAN through Jain. We dealt it however permanent threat still prevails.

Impact of our interventions

The small and marginal households involved in SRI method of Paddy and Wheat cultivation are getting food grain security while families cultivating Paddy Wheat, Rapeseed and vegetables through SRI method are also getting cash income in addition to food security.

Getting influenced by our interventions Government of Bihar is spreading SRI method of Paddy and wheat in all 38 districts through its agriculture department. The promotion of SWI through agriculture department has started taking back seat as there are no suitable implements developed for sowing of wheat. By 2017 the government of Bihar plans to cover 50% of Paddy area under SRI. The average productivity of Paddy in state of Bihar has gone up after introduction of SRI.

Awards/Seminars

PRAN was invited to share its experience on innovative and sustainable agriculture in Global conference on Development Dialogue. This was organised by Despandey Foundation at Hubli, Karnataka.

PRAN participated in an international conference organised by Harvard University at Boston, USA on access to climate resilience agriculture for vulnerable farmers. PRAN also shared its experience on Scaling up of SRI/SCI in Bihar in Cornell University at Ithaca, USA where large number of rice scientists and students participated.

PRAN presented its experience on a Food Policy workshop organised of Indian association of Rome in New Delhi. Important stakeholders from various sectors participated in the workshop.

PRAN along with Mrs Alicia Harley from Sustainability Science Programme of Harvard University, USA participated in an international workshop on Solar Project organised by ICIMOD, Kathmandu, Nepal.

Human Resource Development

PRAN proposes to have a HR manual for its staffs. A rough Human Resource Manual is prepared for the purpose.

Capacity Building of staffs

During the financial year 2014-15 the following trainings were organized for development of staffs of different category.

- Training on Group building/ Participatory Approaches
- Training on Non Pesticides Management practices
- Training on Package of Practices of SRI method of crop cultivation
- Orientation and training on principles of Development and System of Root Intensification(SRI)

Finance

We are getting support of PRADAN and Sir Dorab Ji Tata Trust, Mumbai to implement the SRI project in Bihar. As PRAN has not completed three years raising resources independently has been a concern for the organization. The government and the non-

government donors including CSR require three years old registration and three years audit reports to extend direct support to PRAN. Now with 12 A and 80 G certificate, PRAN is getting in to Partnership with PRADAN for SDTT, Mumbai SRI project.

Our Donors/Partners

- Professional Assistance for Development Action(PRADAN)
- Sir Dorab Ji Tata Trust, Mumbai
- Livolink Foundation, Bhubaneswar
- Agriculture Technology Management Agency(ATMA),Gaya and Nalanda(Bihar), Simdega(Jharkhand)
- Jain Irrigation Systems, Jalgaon and Ms Alicia Harley, Sustainability Science Programme, Harvard University, USA
- Assefa through ITC, Munger

Board of Trustees:

Name	Designation	Profile
Dr. Ravi Chopra	Chairperson	Dr Ravi Chopra is the Director of People's Science Institute, Dehradun and Managing Trustee of Himalaya Foundation, New Delhi. At PSI, Dr Chopra and his colleagues have developed approaches to put science and technology in the service of India's poorest people. Dr Chopra got his technical education in Metallurgical & Materials Engineering from Indian Institute of Technology (Bombay) and Stevens Institute of Technology, New Jersey.
Dr. B. C. Barah	Trustee	Dr. B. C. Barah is NABARD Chair Professor at Indian Agricultural Research Institute, New Delhi. He was a principal scientist (economics) at NCAP, India leading the theme area of Agricultural Growth, Adjustment and Outlook.
Ms R. V. Jayapadma	Trustee	Ms R. V. Jayapadma is a rural management professional. She is currently the Learning Facilitator at the Local Governance Initiative and Network (LOGIN). Ms Jayapadma has a Master's degree from the Institute of Rural Management, Anand, Gujarat, and a Bachelor's degree in Economics from St Xavier's College, Kolkata.
Mr. Niraj Kumar Verma	Trustee	Mr Niraj Kumar Verma is associated with ATMA, Gaya as Deputy Project Director
Sister Rosita	Trustee	Sister Rosita is a rural development professional associated with Chabij as Director. She is based at Ranchi.
Mr. Anil Kumar Verma	Managing Trustee	Mr. Anil Kumar Verma is the Executive Director of PRAN. He set up the Gaya project of PRADAN, which later was spun off from PRADAN and has founded the new organisation PRAN.
Mr Devesh Kumar Srivastav	Staff Nominee	Mr Devesh Kumar Srivastav works as Executive in PRAN
Mr Pramodh Gorain	Staff Nominee	Mr Pramodh Gorain is Project Manager in PRAN