

Report on “State Level Workshop on Sustainable Sugarcane Initiative”



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Organised by:

NIRMAN,

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Supported by:

AgSri, Hyderabad

The State level workshop on Sustainable Sugarcane Initiative (SSI) was successfully organized by NIRMAN with the support from AgSri, Hyderabad on 12th January 2012 at DRTC, CYSD in Bhubaneswar. The aim of this workshop was to develop a roadmap for Sugarcane cultivation through much lower input cost technological intervention ways: Sustainable Sugarcane Initiative (SSI) in the State. The programme was attended by 20 representatives of various Civil Society Organizations, 60 farmers from 6 districts of Odisha.

Among the invitees, Prof. Radhamohan, eminent Environmentalist and former Information Commissioner; Dr. Ambika Prasad Nanda, State Program Officer-UNDP; Shri Aurobindo Behera, IAS Member of Board of Revenue-Govt. of Odisha; Dr. P.K. Nayak, Officer-in-charge, Sugarcane Research Station, Panipola, Nayagarh; and Dr.G.N. Mohanty, Jt. Director, Dept. of Agriculture-Govt. of Odisha shared the dais addressing the mass.

With the objectives to develop a mass awareness on SSI through continuous interaction with both the government and farmers from different districts, the workshop was designed with experiences sharing by leading farmers from various districts. Their ideas, locally appropriate innovations and findings ensuring the norms & standards as prescribed under SSI principles have been discussed on the platform.

Rationale behind the State level SSI Workshop

NIRMAN have long played a crucial role in bridging the gap in technology transfer in agriculture in the Odish, especially in districts like Nayagarh, Bargarh, Ganjam and Cuttack. As on date, 365 farmers have successfully brought 205 acre of land under SSI through direct intervention and in association with Govt. run programmes.

After success from System for Rice Intensification (SRI), the low-cost technology & management aspects in rice cultivation, the similar principle have been in application in sugarcane cultivation. NIRMAN with support from technical support provision agencies like ICRISAT and AgSri has been running the agricultural extension programme.


In this backdrop, this workshop aimed at consultation among the CSOs, NGOs, Govt. agencies, farmers, media personnel etc. on the perspectives of SSI. This has also planned to fix a roadmap for a facilitative engagement with the government in effective implementation of the low-cost technology enabling the farmer economically secured and environmentally sound as well.

Process Report

The inaugural programme started with the welcome address by Prasant Mohanty Executive Director, NIRMAN. He threw a warm welcome to the honorable guests to the dais and participants of the workshop.




Ag Sri, Hyderabad was supporting NIRMAN for the extension of SSI in the state across 6 districts. On its absence, Pratap from NIRMAN represented the donor and presented few slides sent by the AgSri. AgSri stands on its quote "*More (sugarcane) with Less (inputs and water)*" with an approach to "*improving the livelihoods of smallholder sugarcane farmers by enhancing*

productivity of land and minimizing usage of water and reducing footprint of sugarcane cultivation.” It spells SSI as an innovative agronomic set of practices to increase the cane yields significantly which involves using (1) less seeds, (2) raising of nursery, (3) following new planting methods, (4) with wider spacing, (5) better water and (6) nutrient management.



Basic Principles of SSI

1. Raising nursery using single budded chips
2. Transplanting young seedlings (25-35 days old)
3. Maintaining wider spacing (5X2 ft) in the main field
4. Avoiding inundation of water and providing sufficient moisture
5. Encouraging organic method of nutrient and plant protection measures
6. Practicing intercropping with effective utilization of land

www.agsri.com

“Sustainable Sugarcane Initiative (SSI) is inspired by SRI and born to improve productivity in sugarcane...as part of WWF-ICRISAT Project. SSI is an innovative agronomic set of best practices that uses less

seeds, less water and optimum utilization of fertilizers and land to achieve more yields.”, presented by AgSri.


While, explaining various standardized steps in SSI practice, Purna & Devendra, two staff from NIRMAN volunteered in demonstrating the steps. AgSri presented photographic slides of different bud chippers and SSI steps. It explains very specifically the water management aspects in SSI. **Emphasis has to be given on sufficient moisture, rather than inundating the field with water.** About 40% of water is saved in this method by following measures like raising of nursery, following furrow/alternate furrow irrigation, optimum application of water by reducing quantity of water.



Different models of Bud chipper







2-3 Budded setts & Bud chip

- 2-3 budded setts are normally used for propagation
- In SSI, single budded chips from 7-9 months old healthy canes used

In addition, it provides ample scope with simultaneous promotion of ‘Organic methods of cultivation in SSI’. “In SSI, inorganic practices like application of chemical fertilizers and pesticides are discouraged. Farmers are encouraged

to practice organic method of cultivation like incorporation of organic manures, application of bio-fertilizers and use of bio-control measures etc. it encourages better and timely cultural practices like earthing up, propping, detrashing etc.” adds AgSri.

The company also briefed that adoption of SSI, also provides space for intercropping, especially legume crops can be incorporated into the cane fields during the early stages of growth. Enhancing the land utilization pattern, crops like cow pea, french bean, chick pea, water melon, okra etc. can be intercropped with the sugarcane.

AgSri summarized its presentation stating its SSI extension in states like Punjab, Uttar Pradesh, Orissa, Andhra Pradesh, Tamil Nadu, Karnataka and Maharashtra. However, it has plans to vertical integration in all these states along with horizontal expansion in other states like Madhya Pradesh and Kerala.

Mr. Prasant Mohanty, Executive Director of NIRMAN shared the Organization’s vision, mission, objectives and various activities taken since its inception. His 25 minutes long deliberation aimed at developing a platform for strengthening the efforts of government and non-governmental organizations targeted for effective multilateral development agriculture plan and programmes. He especially stressed upon the importance of developing, transferring and implementing of low-cost & eco-friendly methods of cultivation through enhancing capacity of the farmers, CSOs, govt. functionaries etc.

Mr. Prasant Mohanty emphasized SSI as a low-cost, eco-friendly, farmer-friendly best way of cane cultivation enhancing economical strength of the growers’. He briefed the gradual trend in progress of SSI by NIRMAN in Odisha. NIRMAN began the technology transfer in the year 2009 just over 4 acres with 20 farmers in Nayagarh district only. With the continual support from ICRISAT-WWF Project, Hyderabad, it stepped in over 29 acres with 56 farmers in 2010. The popularity of the method of cultivation among the cane growers and with enhanced support from AgSri, Hyderabad, it further scaled up to 205 acres with 365 marginal-small farmers. The technology adoption in sugarcane cultivation has benefited the growers’ many-fold.

Material/Particulars	Cost
Processed Coco-pith (Rs 14/kg for 1 Qntl/Acre)	Rs 1400/-
Raw Coco-pith + Vermicompost (80 Kg + 20 Kg)	Rs 260/-
Raw Coco-pith + FYM (80 Kg + 20 Kg)	Rs 210/-
Raw Coco-pith + FYM + Vermicompost (70 Kg + 20 Kg+ 10 Kg)	Rs 240/-

He further described the methodological changes that NIRMAN brought in association with the farmers. The farmers experimented and adopted the “Raw Coco-pith + FYM + Vermicompost (70 Kg + 20 Kg+ 10 Kg)” as input material instead of the standard ‘Processed coco-pith (100 kg/acre)’. Similarly, the organization promoted organic ways of seed (the cane bud) treatment replacing the chemical methods. “These changes have further

minimized the cost of cultivation and brought lost smiles to the farmers”, adds the ED, NIRMAN.

benefits experienced...

Particulars	Conventional	SSI
Seed	76,800 nodes Rs 14400 /-	5,600-6,500 buds Rs 1300/-
Water	24 hrs/day for 4 days: 8 times in a crop cycle	8 hrs/day for 3 days: 4 times in a crop cycle
Labour (including irrigation)	1190 person-days/ 1776 hrs in a crop cycle	136 person-days / 648 hrs
Per Acre Cost	Rs 21,244 /-	Rs 7200/-
Intercropping	Nil	Possible (Bonus for Farmer)

The farmers sharing:

Duryodhan Champatray, a progressive SSI farmer from Nayagarh district shared his experiences from the inception of the method of cultivation since 2009. He faced social challenges: people around him start mocking at him, receives handful comments & critics from other villagers...he simply replies 'wait & watch'.

He used to plant 3000 cane pieces in one *mana* (one-fourth acre or 25 decimil). However, it is now 1000 seedlings. Similarly, the 16 numbers of labour inputs comes down to 6 numbers only. In addition, NIRMAN facilitate me with organic ways of farming and I found it easier & cheaper to adopt and get benefited", he adds. NIRMAN suggested maintaining plant row distances of 5 feet and he adopts 3 feet distance; for straightness of the cane during its growth period, he used to tie at middle and top of the plant. SSI adoption increased his per *mano* cane yield from 12 to 14 ton to 18 to 22 ton. That means per acre yield has been increased from 48 to 56 ton per acre to 72 to 88 ton per acre.

Nishakar Pradhan, a young educated farmer from Ganjam district shared his pleasure and appreciation towards the method of cane cultivation. He too thanked NIRMAN taking this method to him: timely guidance & training. He recalled the previous days of cane cultivation costlier, lengthy, (sometimes) difficult to manage & maintain the fields and the yields were always at average. Increasing labour cost, input cost, seed cost etc. had been bothering him. Adoption of SSI has relieved him from such costly affairs with simultaneous higher yield.



Moreover, the organic approach in SSI being promoted by NIRMAN has further helped him to understand the soil, plant and the environment as well. They used to set fire over the land after cane harvest. Now, he understood that the fire destroys the soil biota, earthworm & other plant friendly insects. These are important in plant growth. He shared with dignity that the sugar value of his sugarcane has been tested by agencies of Aska Sugar Mill. They got the percentage of sugar is 22 whereas the area percentage is 17 only. He emphasized organic ways of management in SSI for higher sugar value.



Photo: Farmer Dhaneswar explaining his experiment of organic SSI

Dhaneswar Sahu, a migrant youth turned to farmer from Bargarh district reflected his experiences of cane cultivation since his childhood. His father was cultivating sugarcane about 20 years ago. After series of crop loss, water scarcity in the locality, bad weather etc. had driven them away from farming, especially cane cultivation since it was costly, labour intensive and uncertain market. Recently, with the help of NIRMAN & Ahinsa Club, he started again the cane cultivation through SSI method and felt that his past glorious days are back again.

“With no chemical input, less seed, less seed, less water etc., the cost of cane cultivation is acceptable”, Dhaneswar approves. In SSI method, coco-pith is always advisable. But the supportive material is very difficult to get in their region. Thus, he brought innovation of successfully using roughage rice bran and wood dust replacing coco-pith for raising nursery. He found that the substances are as effective as coco-pith.

Honoring to Successful SSI Farmers

Duryodhan Champatray of Nayagarh, Nishakar Pradhan of Ganjam and Dhaneswar Sahu of Bargarh was honoured with certificates for their contributions towards SSI adoption, promotion, extension and mobilizing other fellow farmers setting an example for themselves within and outside of their districts.

Deliberation by Guests

Prof. Radha Mohan, an eminent environmentalist & former Information Commissioner emphasized on organic practices in farming. Adopting SSI, as an innovation in cane cultivation has enormous ability to withstand in vagaries of climate variation. SSI has been proved to be economical benefited for the farmers. Intercropping has an additional practice that serves both to environment and the farm-family. These potential benefits of SSI should reach to the farmers strengthening their economy base, so that larger goals of food & livelihood security can be fulfilled. In addition, he threw importance upon strengthening farmers through either union or association like structures, so that farmers’ voice can be transferred to practical.

Dr. Ambika Prasad Nanda, State Program Officer-UNDP briefed his experience of growing a pumpkin plant with his son in his backyard. From planting the seed to plucking the fruit, they enjoyed each phase of growth of the plant. In summary, he saluted the farming community, as they nourish the consumer world. However, he pointed out frequent & phenomenal problem with the farmers such as lack of support provision, distress sale of products, lack of storage places, unorganized market linkage, increased input costs, loss due to unpredictable weather conditions etc. all these factors either alone or together put the farm & farming community in vulnerable conditions. He continued saying that today, farmers are cut in between political conflicts of both at regional & larger level. He emphasized on farmers union and mass voice in order to tackle the problems in agriculture. He also appreciated the innovative experiment of SSI in Odisha.



Mr. Aurobindo Behera, Member of Board of Revenue-Govt. of Odisha addressed the farmer mass with short-n-brief words, encouraging the SSI practice. He found the SSI in cane cultivation new, innovative and will touch farmers across region & socio-economic conditions. He suggested Joint Director-Agriculture, Govt. of Odisha to adopt the technology, support NIRMAN in order to replicate the technology and make it reach to farmers' from of districts.



Dr. Gyanendra Nath Mohanty, Jt. Director, Dept. of Agriculture-Govt. of Odisha expressed concerns over distress sugar production in the state. He expressed concern over low productivity of sugarcane & milling capacity of the sugar mills in the state. He voted for SSI adoption. He put a hope that through mass adoption of SSI method of cane cultivation, the per acre cane production will be increased, in turn will help the other two mills. "If this happen, the state will be sugar sufficient", he added.

The govt. is planning for package allocation for SSI with certain exposure visits within the state across districts or outside the districts, so that farmers will learn and adopt the methodology.

The final address was by Dr. P.K. Nayak, Officer-in-charge, Sugarcane Research Station, Panipoila, Nayagarh. The scientist appreciated NIRMAN for extension of SSI across Nayagarh and other potential districts. He informed that there are plans to extend SSI to Bolangir and Dhenkanal districts at first phase. The research station works for developed varieties of cane which will be field trial at various locations.

The day long workshop was well concluded with vote-of-thanks by Ramesh Chandra Naik, Secretary, NIRMAN.

Annex-1

Photographs of the workshop:



Mr. Aurobindo Behera, IAS, Member Board of Revenue and Administrator, Western Odisha Development Council, Govt. of Odisha, Prof. Radhamohan, Ex. Information Commissioner, Govt. of Odisha, Dr. Ambika Nanda, State Program Officer, UNDP sitting in the dais

Photo: Participants in SSI workshop



Annex- 2

Participants List of State Level Workshop on SSI

Sl.No.	Name	Organisation/ Address	Phone No.
1	Ramesh Ch Naik	Nirman	9938523768
2	Dhaneswer Sahoo	Kandhamuda, Bargada	9777911260
3	Nabin Bariha	Kandhamuda, Bargada	
4	Hrusikesa Mahanty	Biradishi, Nayagarh	8093375152
5	Gobardhan Naik	Karadabani, Nayagarh	9556422698
6	Kilasha Nahak	Muthagadia, Nayagarh	
7	Kuna Gochayata	Bhatashi, Nayagarh	9178531008
8	Pitabas Dalei	Sunalati, Nayagarh	9938765788
9	Basanta Ku Pradhan	Kaluchiapali, NGR	9937315452
10	Gokul ch Dalei	Sunalati, NGR	
11	Ramakanta Mahanty	Ramchandrapur, NGR	8895756569
12	Chandrasakher Mehena	Titiridi,	9777368130
13	Rajendra Mahanti	Titiridi,	
14	UpndraSahoo	Biruda, NGR	
15	Sadhu Barada	Jahnipada, NGR	
16	Kasinatha Jena	Titiridi, Ganjam	
17	Bhagaban Mahapatra	Titiridi, Ganjam	9178957155
18	Sudrasana Behera	Diapada, NGR	
19	Drujadhan Champtara	Biruda, NGR	
20	Basudeba Pal	Sikharapur, NGR	
21	Chakradhra Prusty	Biruda ,NGR	
22	Niranjan Sathapati	Angisigi, NGR	
23	Prafull ku Sahoo	Khirapati, NGR	
24	Golekha Sahoo	Sankuda, Ganjam	
25	Nabakishor Das	Khirapati, NGR	
26	Anita Das	Nirman	7377683512
27	Anita Kumari Jena	Nirman	9439848705
28	Sasmita Dash	Nirman	9777000156
29	Bharati Mahananda	Bhutibahal	9777764658
30	Debendra Ku Sahoo	Nirman	9237419885
31	Siba prasada Sahoo	Ahisa club, Bhutibahal	9437918498
32	Susanta Kumara Jena	Nirman	7377664236
33	Alok Kumara Patra	Nirman	7873505152
34	Pratap ch Panda	Team membar Nirman	9861399267
35	Purna ch Mandal	Nirman	7873870912

36	Manmath Mandal	Nirman	7873726223
37	Aditya pr Singdo	Nirman	9938261551
38	Gobinda ch Sahoo	Biruda, NGR	9938396737
39	Satyajet Jena	Deputy Manager, FES BBSR	9437752318
40	Nishakar Pradhan	Karasingi, Ganjam	9238350883
41	Prfull Sethi	Rohibanka, Nayagarh	
42	Mochiram Nayak	Nirman	9937828663
43	Prasanta Kumara Behera	Nirman	9938063356
44	Prasanta Mohanty	Nirman	9438294417
45	Ashutosh Pal	SRI Secretariat	9937771394
46	SK Parija	BBSR	9439381735
47	Bishnu ch Behera	Konark	9777220494
48	Radhamohan	BBSR	
49	Rajashree Purohit	CWS BBSR	9437408088
50	Sadanada Sethi	Nirman	9937948757
51	Sharat Pradhan	YUVA Mahasanga	8895595559
52	G.N.Mohanty	JDACF	9437227087
53	Pradeep Ku Routa		9238690427
54	Ugrasana Jena	Digha	
55	Pabitra Mohana Swain	Kasarda	9937362606
56	Deepak Ku Rout	Puinchada	9864289901
57	Santosh ku Bastia	Puinchada	
58	Pranaya ku Swain	Puinchada	8763160676
59	Bidesi Sahoo		
60	Prasanta Ku Pradhan	Kandhamal	9438364019
61	Bikunthanatha Mohanty	BBSR	
62	Dr P. K. Nayak	Sugar Research Station, Nayagarh	9937140810
65	Prof. Radhamoha	Bhubaneswar	
67	Dr. Ambika Nanda	UNDP, Odisha	
68	Aurobindo Behera	Govt. of Odisha	
69	Sikha Sahoo	Bhubaneswar	
70	Matia Jena	Biruda, Nayagarh	
71	Nigamananda Swain	Bhubaneswar	
72	Lingaraj	Boudh	
73	Suryakant Mohapatra	Surakabadi, Ranapur	
74	Sadhu Barada	Jahnipada, Nayagarh	
75	Purna Chandra Roul	Tipura, Nayagarh	
76	Ramesh Pradhan	Kirianlanji, Nayagarh	
77	Bighneswar Sahoo	Ganjam	

