Farmers Participatory Extension: A Case Study of SRI Technology Adoption in North Western Agroclimatic Zone of Tamil Nadu

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Objective

- To compare whether the recommended SRI techniques have given higher production and profitability against farmers' own practices, and
- To know the level of increase of yield and income so as to enable planners, researchers and extension functionaries to further refine and adaption SRI so as to mitigate poverty and to provide food security to all

Methodology

- Data were collected among rice farmers in all agricultural divisions of Krishnagiri and Dharmapuri Districts of Tamil Nadu
- Agriculture is the main source of livelihood with a wide variety of crops grown – cereals, millets, pulses, oilseeds, tomato, and mango
- Rice is grown in about 57,000 ha of land in 3 distinct seasons: *Kar* (Jun-Oct.), *Samba* (July-Nov.) ,and *Navarai* (Dec.-March)
- Rice farmers who are involved directly in SRI methods of rice cultivation were selected from different villages in all agricultural divisions of these two districts
- Most of the cultivators are small farmers (0.1-1 ha), and some who have more land (>1ha) live in clusters
- Canal and well irrigation systems are fairly common
- Through a well-structured interview schedule, data were collected on yields and profits from all farmers
- Analysis was done comparing SRI results with traditional farmers' practices

Yield and net income realized by adopting SRI vs. farmer methods - Krishnagiri District

Agricul-tural Divisions	No. of Farm-ers	Grain yield (Kg/ha)			Net income (Rs/ha)		
		Farmer Practice	SRI	Yield Increase (%)	Farmer Practice	SRI	Yield Increase (%)
Krishna-giri	5	5.63	7.35	30.6	13,725	19,540	42.4
Uthangarai	5	5.97	7.17	20.1	13,293	16,468	23.9
Hosur	25	5.47	6.61	20.8	14,756	20,843	41.3
Total/Mean	*35*	*5.69*	*7.04*	*23.7*	*13,924*	*18,950*	*36.1*

Yield and net income realized by adopting SRI vs. farmer methods - Dharmapuri District

Agricultural Divisions	No. of Farm-ers	Grain yield (Kg/ha)			Net income (Rs/ha)		
		Farmer Practice	SRI	Yield Increase (%)	Farmer Practice	SRI	Yield Increas (%)
Dharmapuri	37	6.32	7.39	16.9	21,490	27,726	29.0
Pennagaram	23	5.75	7.20	25.2	16,032	22,591	40.9
Palacode	7	6.35	7.88	24.1	20,211	25,746	27.4
Harur	10	4.89	5.50	12.4	16,870	19,454	15.3
Total/Mean		*5.83*	*6.99*	*19.9*	*18,651*	*23,879*	*28.0*

Yield and net income realized by adopting SRI vs. farmer methods - Integrated Dharmapuri District

District	No. of Farmers	Grain yield (Kg/ha)			Net income (Rs/ha)		
		Farmer Practice	SRI	Yield Increase (%)	Farmer Practice	SRI	Yield Increase (%)
Krishnagiri District	35	5.69	7.04	23.7	13,924	18,950	36.1
Dharma-puri District	77	5.83	6.99	19.9	18,651	23,879	28.0
Combined Mean		*5.76*	*7.02*	*21.9*	*16,288*	*21,415*	*31.5*

Results - Productivity

- In terms of productivity, SRI method of rice cultivation recorded higher yield than traditional farmer practice in all agricultural divisions
- SRI methods produced higher mean grain yield of 7.04 and 6.99 t/ha compared with farmer practice of 5.69 and 5.83 t/ha in Krishnagiri and Dharmapuri districts, respectively
- This meant yield increases of 23.7 and 19.9% with SRI methods over farmer practice in these districts
- The pooled mean grain yield increase for both the districts by SRI methods of rice cultivation was 21.9% over farmers practice

Thus, it was evident that SRI method of rice cultivation was superior to farmers practice

Results - Profitability

- Net income with SRI methods of cultivation was higher than with farmer practice
- Higher net income was realised from 23.9 to 42.4% in Krishnagiri and from 15.3 to 40.9% in Dharmapuri districts, respectively
- Overall, SRI methods of rice cultivation recorded higher net income of Rs. 21,415/ha over farmer practice (Rs.16,288/ha); thus income increase with SRI was 31.5%

Conclusion

- **Accordingly, it was concluded that to mitigate poverty, providing food and nutritional security, both directly and indirectly, SRI methods offer the best opportunity for enhancing productivity and profitability of rice cultivation**