

AMEF-BEST SRI programme in Tamil Nadu, 2007-2008

The **Agriculture-Man-Ecology Foundation** (AMEF) has been promoting SRI in Tamil Nadu since 2004, primarily through Farmer Field School methodology. In 2007, to have wider spread, AMEF trained a pool of facilitators who could take SRI forward through the FFS mode, through Short-Term Training of Facilitators (SToF).

As an NGO in Pudukkottai district, **Bharath Environment Seva Team** (BEST), showed interest in taking up SRI in its working areas in Illupur and Kulathur taluks of Pudukkottai district, AMEF teamed up with BEST, whose 450 Self-Help Groups interested in farming provided a ready-made institutional base for promoting SRI.

AMEF trained 30 people in the district, including staff and farmer volunteers associated with the BEST NGO. The 15-day SToF was spread over 2 months (August to September 2007), with intervals during this period for selection of villages, baseline data collection, FFS group formation, collaborator selection, and mobilization of critical inputs. The trained facilitators in turn promoted SRI in 30 villages.

Around 105 farmers across 30 villages practiced SRI. The total area of 88 acres was made up of farming areas ranging from 0.05 to 4 acres. This was achieved in a span of about 7 months covering 2 seasons. Farmers adopted quite a few of the SRI practices. While some carefully followed the promoted practices, other farmers adopted partially. Seedlings were transplanted at ages ranging from 11-50 days, with an average age of seedlings being 22 days. This was considerably older than the recommended maximum of 15 days. It was, however, almost a halving of the previous age as farmers earlier farmers were transplanting seedlings 39 days old. All the farmers went in for planting single seedlings although the labourers were not familiar with planting of single tender seedlings

Spacing of 25 cm was maintained across the plots, and some ranging up to 30 cms too. Maintaining the straight lines with rope was difficult, and farmers in some villages came up with innovations to overcome this by using a double-row roping method for planting seedlings. Regular weeding was done using cono-weeders. However, some women found the use of cono-weeders a bit difficult owing to its weight.

Along with SRI practices, farmers adopted certain sustainable agriculture practices for better water management and improving soil fertility. These practices included: quality seed selection, seed treatment with biofertilizers and bio-agents, application of higher quantity of FYM/compost/green leaf manures, use of Azolla, vermicomposting, raised-bed nurseries, application of bio-pesticides and growth promoters such as NSKE, pest repellants, *amirtha karaisal* and *panchakavya*. All these practices helped farmers to look at their crop's growth in a holistic way and reduce the use of external purchased inputs and chemicals.

The programme resulted in multiple benefits. In general, it has helped to strengthen the capacities of farmers, farmer facilitators and NGO staff for making agricultural improvements. It helped in the promotion of SRI by empowering farmers with knowledge. It also resulted in scaling-up of SRI on a larger extent. There has been an immense impact on farmers' attitudes towards not only SRI but also favoring an ecological way of farming. Farmers are equipped with knowledge on using their own farm resources, understanding the utility of recycling resources.

Eco-friendly alternatives have helped farmers to reduce their costs of production significantly. The data from 105 farmers show that production costs were reduced by 55%, from an average of Rs. 7983 per acre to Rs. 3544 per acre. Farmers had hands-on experience on producing more rice with less inputs. In SRI plots the yield improvement was to the tune of 28% on an average. Yields increased from 13.5q/ac to 17.5 q/ac (3.375 t/ha to 4.375 t/ha). Data given in table below.

Farmers involved in FFS also helped in spreading SRI to other farmers in their own villages and relatives/friends in other villages. Farmers adopted some of the SRI principles, with modifications, according to their will, like going for line planting to facilitate the use of cono-weeder, lowering the number of seedlings/hill to 2-3 against the conventional planting of 6-10 seedlings/hill. FFS group farmers organized field days on SRI to share and disseminate SRI experience to the larger farming community in each village, which covered around 1,500 more farmers.

Table 1 – Comparative data of Conventional vs. SRI

	Conventional		SRI		
Sample no.	30		30		
Total area (ac)	8.68		10.7		
Varieties used	Ponny (10), Culsor (15), ADT (5)		Ponny (4), Culsor (8), ADT (17), IR-50 (1)		
Parameters	Average	Range	Average	Range	% change
Plot size (cents)	29	5 - 100	36	5 - 150	
Age of seedling at TP (d)	39	13 - 57	22	11 - 51	
Spacing	6	4 – 10	25	25, 27, 28, 30	
No. of seedlings/hill	8	7 – 10	1		
No. of tillers/hill	11	8 – 32	39	14 – 95	254.5
Productive tillers/hill	11	5 – 22	29	7 – 72	163.6
Length of panicle (cm)	15	9 – 20	17	8 – 22	13.3
No. of grains/panicle	113	47 – 250	168	80 – 248	48.7
Height of plant (cm)	55	30 – 90	61	23 – 131	10.9
Grain yield (q/ac)	13.58	6 – 24	17.48	8 – 36	28.7
Straw yield (q/ac)	9.31		9.33		0.2
Total cost (Rs/ac)	7,983	4,010 - 28,666	3,544	1,314 - 21,600	-55.6

From a report drafted by Radha
AMEF, Bangalore