

The results of SRI in Myanmar (summary)

2003 was the fourth year of SRI practice in Myanmar with more than 5000 farmers trained for practicing its methods in their own fields. Besides these, there are many other farmers who have learned from them. Their number of the latter, which has not been recorded, could be similar to the number of farmers trained or even more. SRI is basically expanding through Farmer Field School (FFS) learning methods, a very popular and effective approach of agriculture extension in Asia, which is being promoted by the Metta Development Foundation, which was started three years ago in Myanmar to strengthen the food security of farmers in the northern states through improving their skills and capacities in farming.

Since, rice is the staple crop in the region and the most important source of income to farmers, in the initial stage of training, the FFS primarily focuses on rice. SRI was introduced to the FFS, along with many other methods, as a promising way of improving the productivity of rice fields. Now after three years, it looks like all FFS have become SRI FFS. The acceptance and popularity of SRI is so high that it has become the centerpiece of attraction of all of the farmers participating in the FFS.

As of 2003, 258 FFS had been established, mostly in Kachin State with some in northern Shan State, and 5202 farmers had been trained in those FFS. In December 2003, the project conducted a thorough evaluation, done by two external evaluators¹, particularly to assess the direct results of the project for its beneficiaries. The report, which was prepared based on the evaluators' extensive field visits and discussions with a significant number of farmers in groups and singly, indicates how farmers are applying the practices in their own fields and benefiting from what they learned in the FFS.

The report mentioned the actual yield increase with SRI for an individual farmer could range from 1200 kg to 3000 kg, based on the number of practices applied and the area cultivated. The use of the complete set of SRI practices, i.e., use of young, single seedlings, wider spacing, application of compost or manure, weeding with a rotary weeder, and intermittent irrigations, could provide on an average a 3,000 kg yield increase from 3 acres of area (1.2 ha, or 2.5 t/ha), while a single practice such as use of young seedlings or compost alone could make at least 600 kg increase (0.5 t/ha) from the same area. It should be mentioned that generally a farmer in these States on an average grows rice in a 3-acre area, and with the usual traditional practices from the whole area he could harvest between 1800-2400 kg (1.5-2.0 t/ha).

Regarding the number of farmers using particular practices, the report mentioned that 100% farmers are using at least two particular practice of SRI. Among the practices, the use of quality seeds and young seedlings, 8-20 days old as against 35-55 days in traditional practice, are most common. The percent using compost is, however, very low. Only 10% of farmers are using the complete set of SRI methods, so there is potential for further increase as more are utilized. This limited adoption of practices is because of the diversity of local conditions, as not all the fields are suitable for applying all the practices. Farmers here grow rice only in the wet season. Therefore, controlling water is a big problem for many fields. A majority of the farmers are using 2-3 practices depending on the conditions of their fields.

¹ Debbie Aung Din, a former UNDP staff member and a member of the 1999 World Bank mission to assess the socio-economic conditions in Myanmar, co-authored a report for the UN country team on food security in Myanmar in 2000. Murielle Morisson, a former UNODC consultant now working with GRET, a French NGO in Myanmar, has had diverse experiences in agricultural extension approaches

The experiences of these yield gains in farmers' own fields are very similar to those in the study fields of FFS, which were recorded very systematically. In every FFS, there is a study field where farmers grow rice together for learning and sharing. The size of the field ranges from a half acre to one acre. The project established 29 FFS in 2001, 66 FFS in 2002 and 163 FFS in 2003, for a total of 258 FFS over the last three years. The recorded data over three years show that the average yield increase of an FFS field ranged from 100 – 300%, based on the types of the soils (see the attached table).

Due to getting such tremendous increases without adding any chemicals (particularly fertilizers), the program is starting to move fast to other parts of the country. Since the middle of 2003, a new five-year project has been begun in southern Shan State and in the northern part of Kachin State. Over 10,000 farmers visited the SRI fields in Shan State, where the project organized its first season-long training of trainers (TOT) for 50 facilitators who will be working in the new site. They are now engaged in initial activities of FFS establishment. Farmers in Shan State are more interested in SRI since they use chemicals and have that SRI rice can grow well without chemicals. It is anticipated that the dissemination of SRI here can proceed much faster.

Rice Yields across FFS Study Fields in 2001

FFS site	Yield of FFS		FFS site	Yield of FFS	
	Baskets/acre	Tons/ha		Baskets/acre	Tons/ha
1. Nawng Hkying	100	5.0	16. 10 Miles	104	5.2
2. 10 Miles	108	5.4	17. Saga Pa	110	5.5
3. Rosana	108	5.4	18. Shang Htawk	110	5.5
4. 8 Miles	108	5.4	19. Yihku Nam Hkam	110	5.5
5. Woi Rawng Pa	150	7.5	20. Mai Hkawng	80	4.0
6. Gat Sha Yang	98	4.9	21. Mung Lu	100	5.0
7. Shadau	98	4.9	22. Mya Ze Ti		
8. N-gan	96	4.8	23. Lawa Yang	100	5.0
9. Sut Ngai Yang	120	6.0	24. Mai Sak Pa	98	4.9
10. Nawng Hkyi	85	4.25	25. Mai Ja Yang		
11. Gara Yang	150	7.5	26. Sut Ra Yang		
12. Ja Pu	156	7.8	27. Labang Kahtawng	100	5.0
13. Awng Mye Tit	60	3.0	28. Nam Sheng	100	
14. Chyahkrau			29. Lung sha Yang	110	
15. Sha-U Yang	158	7.9			

Average for all FFSs reporting yields 5.45 t/ha
Farmers' usual yield is around 2 tons, or 100 baskets per hectare

FFS not reporting yields had not harvested by the time the data were collected; there is no reason to expect that their yields were lower than the others.

Rice Yields across FFS Study Fields in 2002

FFS site	Yield of FFS		FFS site	Yield of FFS	
	Baskets/acre	Tons/ha		Baskets/acre	Tons/ha
1 Nawng Hkying	123	6.1	34. Awng Mye (1)	85	4.2
2 Hka Wang	251	12.4	35. Awng Mye (2)	95	4.6
3 Pung Dung	127	8.5	36. Ja Hkawng Yang	120	5.9
4 Woi Rawng Pa			37. Wuyan	109	5.4
5 Labang Kahtawng	151	7.5	38. N myen	106	5.2
6 8 Miles	113	5.7	39. Tar Law Gyi	95	4.7
7 Jaw Masat			40. Mung Ding Pa		
8 Nam Bawm			41. Mung Hkawng	86	4.3
9 Chyara Pati	166	8.2	42. Mya Zeti		
10 N-gan	110	5.4	43. Awng Lawng Pa		4.8
11 Hkan Yang	126	6.2	44. Da Lak Pa	100	4.9
12 Rosana	98	4.8	45. Prang Hku Dung (1)		
13 Na Yang			46. Prang Hku Dung (2)		
14 Gat Shang Yang	92	4.5	47. Man Dau	68	3.4
15 Ake	113	5.6	48. Manmaw (2) Miles		
16 Hparaw	87	4.3	49. Manmaw (3) Miles	95	4.6
17 Namkoi	60	2.9	50. Lawa Yang	51	2.5
18 Pam Madi	105	5.2	51. Ding Hkung	59	2.9
19 Mali Hka			52. Nalung (Lower)		
20 Lahta Maw Hpawng	125	6.2	53. Nalung (Upper)		
21 Nam Sheng	109	5.4	54. Nba Pa		
22 Sawng Hka	50	2.5	55. Hpak Ma		
23 Dari Pa	103	5.1	56. Zi Un	95	4.7
24 Nam Jun Pa	67	3.3	57. Nloi Yang	98	4.8
25 Maru Gyawk	50	2.5	58. Shing Jai	50	2.5
26 Ang Hku (Nam Ya)	100	4.9	59. Lahpai		
27 Kahtan Yang			60. Chi Hpwi	98	4.8
28 Nawng Hkyi	225	11.1	61. Na Maw Zup	110	5.4
29 Mading	75	3.7	62. Cham Chyaw	100	4.9
30 Gara Yang	93	4.6	63. Ja Ra Yang	98	4.8
31 Katsu	109	5.4	64. Mali yang	111	5.5
32 Ja Pu	125	6.2	65. Kyawk Me	90	4.6
33 Hting Nan Kawng	240	11.9	66. Wai Maw	93	4.4

SRI yield for 50 FFS reporting harvested amounts 5.25 t/ha

FFS not reporting yields had not harvested by the time the data were collected; there is no reason to expect that their yields were lower than the others.

Rice yields across FFS study fields in 2003

No.	Name of facilitator	FFS name	Size of study field (in acres)	YIELD in baskets per acre [50 baskets =1ton] [ital = crop cut]	YIELD (tons/ha)
1	L. Dau Zawng	Man Dung	1.0	150	7.41
		Kawng La	1.0	150	7.41
		Myan Yun	1.0	80	4.0
		Zan Zawng	1.0	90	4.4
2	Zung Sau	Chait Gaw	0.25	242	11.9
		Gaw Yum	0.2	240	11.85
		Htan Shin	0.25	305	15.0
3	G Hkaw Bawm	Shwe Chyan	0.67	200	9.88
		Bwe Lat	0.2	160	7.9
		Gan Hkun			
4	Hka Dau	Man Hkring	0.33	163	8.0
		PLN (2)	0.5	52	2.56
		PLN (5)	1.0	41	2.0
5	Lum Dau	Chyarapti	0.15	133	6.57
		Htiwin	0.5	52	2.56
6	Naw Awn	La Ban	1.0	61	3.0
7	Dau Hkawng	Ying Hkaw	0.25	121	5.97
8	Ah Lay Pha	Mahkaw Yang	0.25	110	5.4
		Mang Hkring Litsu Kahtawng	0.37	98	4.8
9	Kareng Naw Awng	Naba	1.0	100	5.0
		Kung Hpe (Shawng Ba)	1.0	70	3.45
		Hting Ka	1.0	60	3.0
		Thawa Yan	1.0	65	3.2
		Katha Catholic Church	1.0	82	4.0
		Katha Mansi Angilican Lisu	1.0	75	3.7

10	Stephen Tu Ja	Nam Hkam	0.36	60	3.0
		Bung Chyawng	0.51	60	3.0
11	Maran Yaw	Mai H pang	1.0	80	4.0
		Hpa Lat	1.0	70	3.45
		Lung Ja	1.0	80	4.0
12	Labya Naw Awng	Lashap	1.0	80	4.0
		Man Pying	1.0	40	2.0
		Mung Baw	1.0	60	3.0
		Hu Na	1.0	87	4.29
		Win Seng	1.0	54	2.66
		Mung Paw	1.0	43	2.12
13	Zinghtung Naw	Mung Hka	1.0	68	3.35
		Loi Lung	1.0	46	2.27
		Balawng Kawng	1.0	62	3.0
		Hkai Bang	1.0	58	2.86
14	Hp. W Lat Shawng	Daw Hpum Yang, Kaga Lawng	1.0	172	8.49
		Loi Mawk Yang	1.0	181	8.94
		Daw Hpum Yang	1.0	108	5.3
		Dingga Zup Ra Yang	1.0	181	8.94
15	R Dau Lum	Na Lung	1.1	131	6.47
16	D Dau Zawng	Hkin Tau	1.0	75	3.7
		Kap Maw	1.0	75	3.7
17	Tsum Hpawng Zau Tawng	Sut Ngai Pa	0.5	120	5.9
		Nam Sien	1.0	95	4.69
18	M Dau Lum	Myu Haung	1.0	94	4.64
		Hka San	1.17	122	6.0
19	K La Tawng	Ka Tu Nan Pung	0.1		
20	Brang Seng	Belu	0.5	140	6.9
		Namma	0.5	76	3.75

21	Luksing Ying Hkaw	Nam Mawn (Kachin Su)	0.2	100	5.0
		Nam Mawn (Shan Kone)	0.1	138	6.8
22	Dashi Gam Mai	Nadung San	0.5	75	3.75
		Thayet Thone Pin	0.2	100	5.0
		Hka Nan	0.2	105	5.1
23	Zau Tawng	Pamti			
		Mali Kha, Maika Pa			
		Mali Kha, Hu Bawk Pa			
		Kan Hla			
		Nam Nawn Yang			
24	Nawng Lat	Hparaw	1.0	96	4.74
		Nam Koi	0.5	68	3.35
25	Brang Nu	Lahta Maw Hpawng	1.0	125	6.17
		Lawu Maw Hpawng	0.25	83	4.1
		Shadau			
26	Zau Mu	Kadaw Kawng	0.5	88	4.34
		Na Yang	0.25	152	7.5
27	Npawng Zau Dan	Machyang Baw	1.0	80	4.0
		Nawng Hkai	1.0	90	4.4
		Nbu Baw	1.0	75	3.7
28	U Ngwa Si Yaw	Da Ku Shiza	0.5	73	3.7
		Lungmu Dam	0.48	58	2.86
		Mammeshidin	1.0	50	2.47
29	L. Gam Brang	Khindu Yang	1.0	110	5.4
		Hting Nan	1.0	150	7.5
30	MD Yaw Ying	Mading	1.0	30	1.4
		Mung Na	0.5	45	2.2
		Jam Ga	1.4	55	2.7

31	Zung Ying	Ze Hkam	0.1		
		Ngami Pa	0.25	108	5.3
		Nawng Pawng	100'x70'	133	6.5
		Nawng Pading	0.25	108	5.3
32	Yaw Htang	Gaw Set	0.002	97	4.79
		Wa Shawng	0.001	99	4.89
33	Luksing Hkaw Bawm	Wai Yin	0.5	93	4.59
		Tang Bau	0.5	125	6.17
		Hka Kum	1.0	100	5.0
		Labang	0.5	187	9.2
34	Lahpai Sinwa Naw	Sampai	0.8	203	10.0
		Awng Ja	0.5	139	6.8
		Katsu	0.5	176	8.6
		Dabak	0.8	92	4.54
35	Jakan Hka Ze	Nawng Paw	1.0	88	4.34
		U Yang (KBC)	0.45	50	2.5
		U Yang (Lisu)	0.28	55	2.71
36	Hawng Lum	Shwe Nyung Pin	1.0	66	3.2
		Lawu Man Hai	1.0	70	3.45
		Lahta Man Hai	0.5	40	2.0
37	Hpaga Naw	Htingnan Kawng	1.0	130	6.4
		Gang Dau Yang	1.0	187	9.23
		N-pawn	1.0	93.75	4.63
		Nam San Yang	1.0	156	7.7
38	Lalaw Hkawng Lum	Nmyen	1.0	140	6.9
		Aura	.33	310	15.3
		Woiba	.25	91	4.49
		Nam Wa	0.66	156	7.7
39	L. Zau Raw	Kawng Nyawng	1.0	90	4.4
		Nam Yau	1.0	50	2.5
		Nawng Leng	1.0	40	2.0

40	La Awng	Kung Law	0.17	78	3.85
41	Brang Li	Aleng Kawng	0.5	148	7.31
		Hkawan Bang	0.21	187	9.23
		Chyahkan Dap	0.5	150	7.41
		Nazaret	1.0	113	5.58
		Bawda (RCM)	0.5	60	3.0
42	Di La	2 mile Aung Tha	1.76	90	4.44
		Man Gut Yang	1.0	100	4.94
43	Lazing Hpraw Mai	Na Hlaing	0.29	69	3.4
44	Brang Nu	Mansi	1.0	75	3.7
		Maing Hkawng	0.5	38	1.87
45	Lahpai Bawk Di	3 mile village	1.0	65	3.21
		Hku Li	1.0	180	8.89
		Je Ing	1.0	80	4.0
46	Francis Gam Awng	Myitung Kawng	0.87	86	4.24
		Gara Yang	0.95	92	4.54
		Nazareth	1.0	74	3.75
47	M. Zau Nan	Nawng Gam	0.5		
		Lawt Awng	1.0		
		Pang Hkawn	0.5		

CC means that yields were recorded based on *crop cuts*, from the average of 3 places selected randomly in the field, each with 15 square meters. The rest of the yields are recorded based on the total harvest of the plot. Where data are not reported, the harvesting had not been done yet at the time of data collection. There are as far as known no crop failures.