

SUMMARY OF FINDINGS FROM THESIS RESEARCH ON S.R.I.
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Research conducted on west coast of Madagascar, near Morondava, 1998-1999

SAVINGS OF SEED -- 18-80 kg/ha, with average about 40 kg/ha.

Value of the average seed saved = half the price of a *sarcleuse* (pp. 17-18).

LABOR REQUIREMENTS:

LAND PREPARATION -- 151 hours/ha for SRI vs. 107 hours/ha with usual practices.

19 days/ha for SRI vs. 13.5 days/ha with usual practices.

Difference is 44 hours/ha, or 8.5 days/ha -- a 40% difference.

Per are this amounts to .44 hours, or less than half an hour per are.

TRANSPLANTING -- 323 hours/ha for SRI vs. 142 hours/ha with usual practices.

41 days/ha for SRI vs. 17 days/ha with usual practices.

Difference is 181 hours/ha -- 24 days/ha -- significant.

BUT difference can be only 90 hours/ha (11 days/ha) with experience.

Beginners on small plots had a 4-fold range in transplanting time.

WEEDING -- 413 hours/ha for SRI vs. 221 hours/ha with usual practices

52 days/ha for SRI vs. 28 days/ha with usual practices

Data were for 86 farmers, where	no weeding =	3
	1 weeding =	20
	2 weeding =	51
	3 weeding =	7
	4 weeding =	3

WEEDING can be just 100 hours/ha (12.5 days) or 25 days for 2 weeding.

TOTAL REQUIREMENTS about **500 hours/ha** more for SRI, or 62.5 days/ha.

Wage rate is 1000 FMG/hour, so the **added labor cost** is 500,000 FMG/ha.

This amounts to **500 kg/ha of paddy at harvest**, or **250 kg/ha sold 3 months later**.

SRI methods usually about **2 tons/ha** or more -- so SRI gives high returns to labor.

YIELD ANALYSES -- 150 samples (each 4 m²), 71 paired samples with usual methods.

<u>SRI yields</u> (N = 152)		<u>Control yields</u> (N = 71)	
< 2.5 t/ha	6%	1.5-2 t/ha	30%
2.5-3.5 t/ha	22%	2-2.5 t/ha	27.5%
3.5-4.5 t/ha	26%	2.5-3 t/ha	22.5%
4.5-5.5 t/ha	28%	3-3.5 t/ha	13%
5.5-6.6 t/ha	12%	>3.5 t/ha	7%
6.5-7.5 t/ha	4%		
> 7.5 t/h	2%		
Average	4.4 t/ha	Average	2.5 t/ha

The range of SRI yields was 1.9 to 9.2 t/ha; SRI average yield was 77% higher. 66% of the SRI yields were between 3 and 5 t/ha, compared to 80% of the yields with usual methods between 1.5 and 3 t/ha.

AGE OF TRANSPLANTING -- Small but steady decline in tillering between 4 and 16 days -- from 420/m² to 390/m² (p. 36).

EXCESS OF WATER -- Reduced production of tillers and yield (p. 37).

WEEDINGS --
 1 weeding = 4.1 t/ha
 2 weedings = 4.4 t/ha
 3 weedings = 5.1 t/ha

Doing a 3rd weeding raised value of yield compared to doing 2 weedings by \$210. The cost of additional weeding < \$20, so **return to additional weeding is >10 times**.

None of the SRI parcels visited after harvesting showed much weed infestation (p. 38).

YIELD GAIN DISTRIBUTION 25% got 19-53% more than usual average
 25% got 53-97% more than usual average
 25% got 97-117% more than usual average
 25% got 117-270% more than usual average

95% of farmers using SRI got increase in yield with SRI practices.

Note: "There could be some overestimate in weighing and calculating, but against this, there is also the peasant reticence to declare their whole production."

VARIETAL DIFFERENCES	SRI Practices	Traditional
2787	4.65	2.5
Ambanivavy	4.75	2.5
Mangavody	3.6	2.05
Mazatoa	3.85	4.35*
Diverse local	3.6	2.2
Diverse HYVs	3.9	2.7

RELATION BETWEEN TILLERING AND GRAIN FILLING

The number of grains/m² and the weight of grains were positively correlated with SRI practices for both HYVs and traditional varieties.

The correlation was negative with conventional practices for both HYVs and traditional varieties (p. 42).

YIELD DIFFERENCES

Yield differences are attributable to multiple factors: variety, SRI practices, and natural conditions for farmers -- climate, pests and diseases, and soil quality. SRI is just one factor, but it is a large factor, and one under farmers' control.