

Results Summary

World Education SRI Seminar

June 2003 - Handoko Widagdo

Farmer experiences

Number of farmers and locations

The number of farmers testing SRI with World Education assistance were 82 - from 9 villages, 7 sub-districts, 5 districts, and 3 provinces. This included: North Sumatra, 20 farmers in Desa Karang Anyar and 12 farmers in Desa Sukamandi, Deli Serdang District. Lampung: 2 farmers from Ramayana Village, Lampung Tengah District and 6 staff of Jaringan Wakak Jukuk (local NGO). Central Java: 48 farmers from 6 villages.

Topics studied and results

North Sumatra:

Nursery techniques. The study was held on November 2002-February 2003.

Conducted by IPM Alumni Farmer Group, Karang Anyar Village, Beringin Sub District, Deli Serdang District (20 participant)

Nursery Treatments:

1. bamboo basket
2. coconut shell
3. banana trunk bag
4. banana leaf bag
5. dry seedbed
6. flooded seedbed

All seedlings were planted at 10 days old.

Spacing 35 X 35 cm.

Objectives: to find the easiest, local material and cheapest, most practical technique of nursery establishment.

Result:

Number of productive tiller

Bamboo basket	= 23
Coconut scalp	= 23
Banana trunk polybag	= 32
Banana leaf polybag	= 35
Dry seedbed	= 21
Flooding seedbed	= 15

SRI nursery experiment was done on 400 m² (divided into 6 plots). Banana leaf bag¹ is the most appropriate nursery technique because banana leaves are easy to find in villages. Plants prepared in the banana leaf bag nursery produce more tillers than other techniques (35 tillers).

Comparison between SRI, IPM practice and farmer practice.

Conducted by Supardi (farmer from Karang Anyar Village, Beringin Sub District, Deli Serdang District) on November 2002-February 2003.

Two treatments, no replication (each plot = 400 m²)

SRI

- 10 days old seedling
- single seedlings were planted
- spacing = 35 X 35 cm
- fertilizer: 200 kg cow dung, applied during plowing time; 4 kg urea applied 20 days after planting
- weeding 15 days after planting

IPM Practices

- 25 days old seedling
- 3-4 seedlings per hole
- spacing = 20 X 20 cm
- fertilizer: 25 kg (Urea, ZA, SP-36)

Production was increased 36.6% comparing with farmer practice and 28.1% comparing with IPM practice. SRI produces 5,125 kg/ha, IPM practice 4,000 kg/ha, and farmer practice 3,750 kg/ha. SRI can reduce cost. SRI cost was Rp 2,834,125/ ha; IPM cost was Rp 3,453,750 and farmer practice was Rp 4,353,750. The reduction was mostly from seed cost and manpower (SRI was cheapest on transplanting and weeding).

Lampung:

Comparison between SRI

Conducted by 2 farmers FFS alumni from Desa Ramayana, on February - May 2003.

Three treatments and three replications

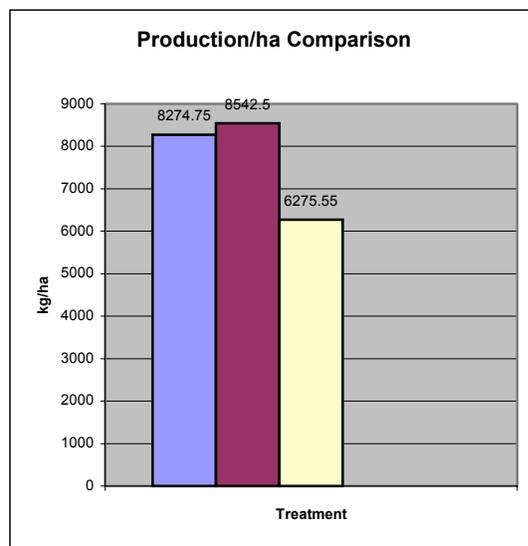
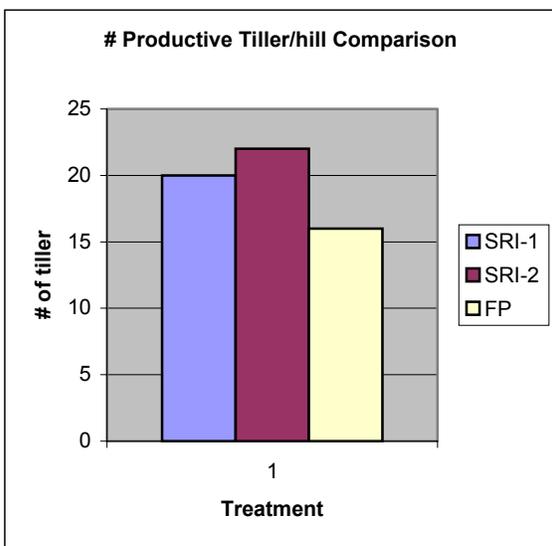
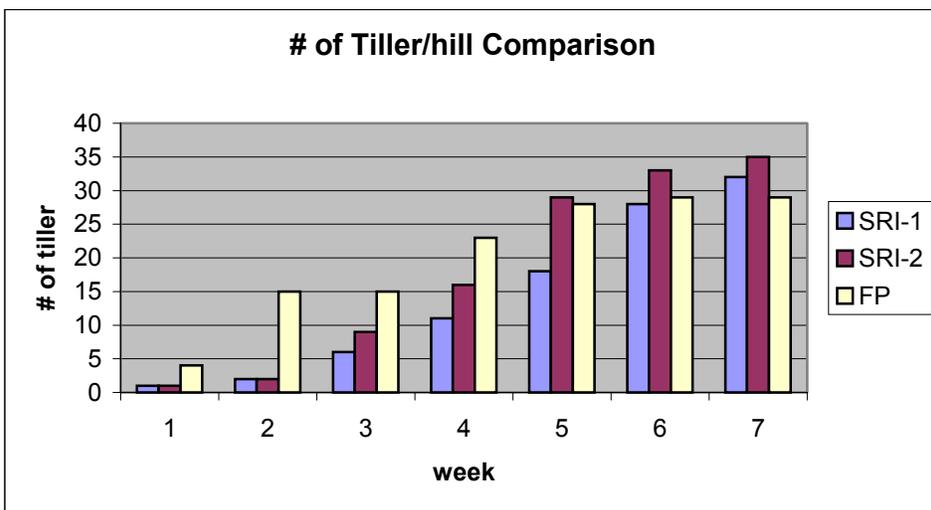
297 m² divided into 9 plots (3m X 11m)

Treatment:

- Local practice: 25 days old seedling; 20 X 20 cm
- SRI I: 7 days old seedling; 20 X 20 cm
- SRI II: 7 days old seedling; 25 X 25 cm
- Variety Ciherang
- Fertilizer per plot: 2.5 kg Urea; 1 kg SP-36; 1 kg KCl; 224 kg compost.
- Nursery using bamboo basket for SRI and typical seedbed on farmer practice
- Weekly observations were used.

¹ Polybag made from banana leaf

SRI I (20 X 20) produces 8,275 kg/ha, SRI II (25 X 25) produces 8,543 kg/ha and farmer practice produces 6,276 kg/ha.



* Charts above summarize results of SRI experiments in Lampung. FP=Farmers' Practice.

Central Java:

Variety and Spacing Study

Conducted by Ngudi Makmur Farmer Group (8 farmers), Pengkol Village, Karanggede Sub District, Boyolali District. Size of land was 950 m² divided into 4 plots, without replication.

Comparison of two varieties with two different spacing.

Variety	Production	
	20 X 20	25 X 25
Memberamo	8.1 ton/ha	7.5 ton/ha
Pandanwangi	9 ton/ha	9.6 ton/ha

Comparison between SRI and farmer practice.

Conducted by 40 farmers in 5 villages, on February - May 2003. Size of experimental area varied from 200-950 m²; all were divided into two plots.

Treatment:

- Local practice: 25 days old seedling; 20 X 20 cm
- SRI: 14 days old seedling; 25 X 25 cm

The result was consistent with experience in North Sumatra and Lampung: SRI produced more than local practice. Farmer practice in Central Java produced on average 6 ton/ha while SRI produced on average 8 ton/ha.

Family and community reactions

Most farmers were challenged by their spouse at the beginning of the study. For example, in Boyolali, Central Java, the wife of one farmer replanted the land with more seedlings in the trial plot. Many neighbors could not comprehend why participants were planting only one seedling per hole. However, after 3-4 weeks, when the tillers began growing vigorously, the neighbors were respectful.

Weed management

All farmers who tested the SRI method had no difficulty on weed management. It is because they used a traditional Javanese hoe (landak) to control the weeds. Most of them were cultivating 15 days after transplanting compared with normal practice of 21-28 days after transplanting. Because of wider spacing it was easier to control weeds using the 'landak' hoe.

Farmer plans

All of the farmers who tried SRI this past year will implement this method on all of their land next year, especially the practice of using young seedlings (10-14 days) and wider spacing. They also encourage and assist their neighbors to use SRI method.

NGOs experiences

Reasons NGOs experimented with SRI in their program

- Expect that SRI is a good practice in cases where the irrigation infrastructure is damaged and/or the water supply is unreliable
- Expect that SRI can reduce the cost, by reducing seed demand and chemical inputs.
- Expect that SRI will reduce labor demand
- Bring fresh ideas to the sustainable agriculture program that they are participating in

Sources of information

- LEISA magazine
- World Education network
- International advisor
- Cross visits with other NGO programs, which have tested SRI already

Immediate response from farmers when NGO introduced SRI

Most farmers were not interested initially because they did not believe that SRI method would give a good result. SRI is too controversial for them, especially planting young seedlings and wider spacing.

Strategies used by NGOs to attract farmers to SRI

- Tried with only few farmers who really welcomed the challenge
- Cross visit to location where SRI had already been tested
- Invite SRI-experienced farmer to meetings to share his experience

Dissemination strategy

- Use farmer meetings/forums
- Assisting farmers' neighbors to follow SRI
- Integrating SRI method into FFS curricula
- Using high-performing SRI farmers/farms as “learning centers”

Best result

- SRI can increase the yield in each location
- SRI can decrease the cost in some locations
- In the damaged irrigation rice block, SRI is an appropriate rice-planting method
- Landak is an effective tool for weeding, especially for SRI system

NGO plans

- Disseminating the results of SRI studies to other locations
- Promoting SRI methods to other NGO networks
- Further refine SRI training module for farmers
- Improve skills of staff for facilitating SRI
- Expand SRI network in country and in the region
- Discuss the possibility for a national SRI program