

SRI in Tamil Nadu : Current Scenario



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- Policies
- Research
- Extension
- Adoption

Policies :

Tamil Nadu Agricultural University

- More scientific understanding of SRI
- Large scale of adoption
- Priority in World Bank funded project on irrigated agriculture

Policies :

Agricultural department

Govt. of Tamil Nadu

- Popularization of SRI
- Large scale of adoption

TNAU : SRI RESEARCH

- Carried out in the research stations at Coimbatore, Aduthurai, Thanjavur, Kumulur, Killikulam and Tirur
- During the year 2006-07: 7 research projects in agronomy and 5 projects in plant protection

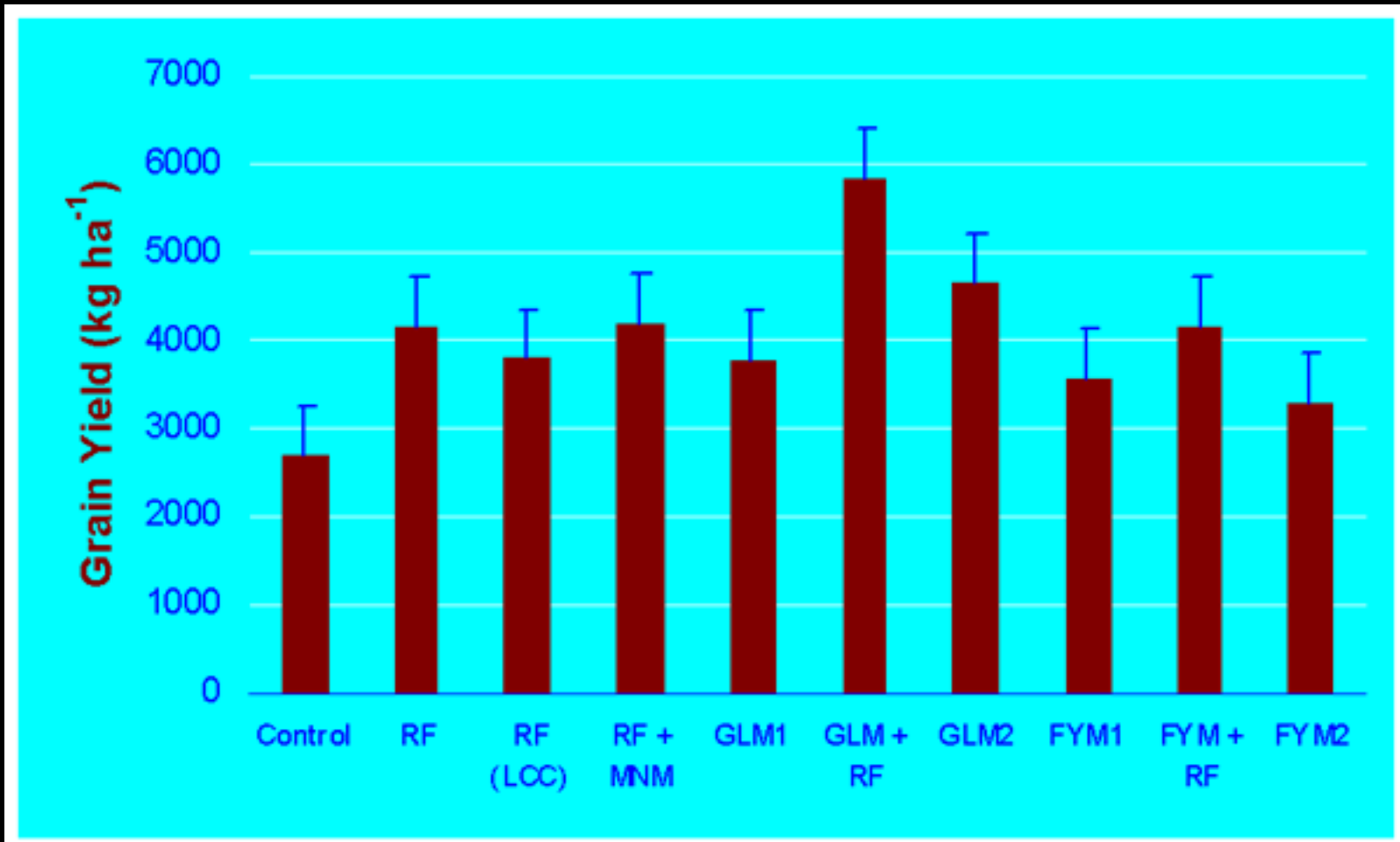
Agronomy Research

- SRI with INM gave significantly higher yield than SRI with fertilizers only
- Hybrid rice yield was significantly higher than variety

(Rajendran, Aduthurai & Anbumani, Thanjavur)

Effect of organic nutrient sources on SRI

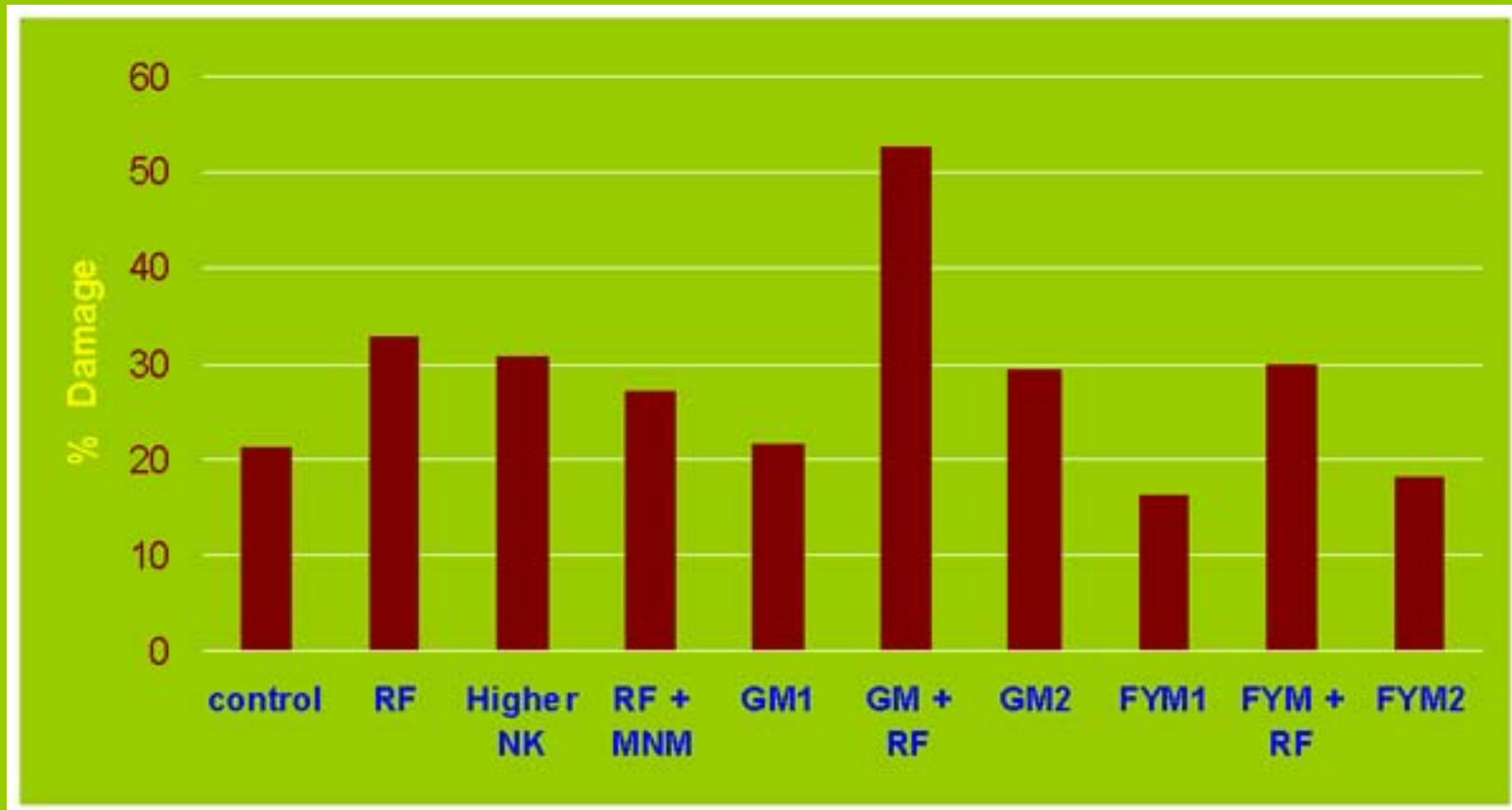
Feb.- May. 2007



Thiyagarajan & Gnanachitra, Tirur

Nutrient Management in SRI : Leaf Folder Damage

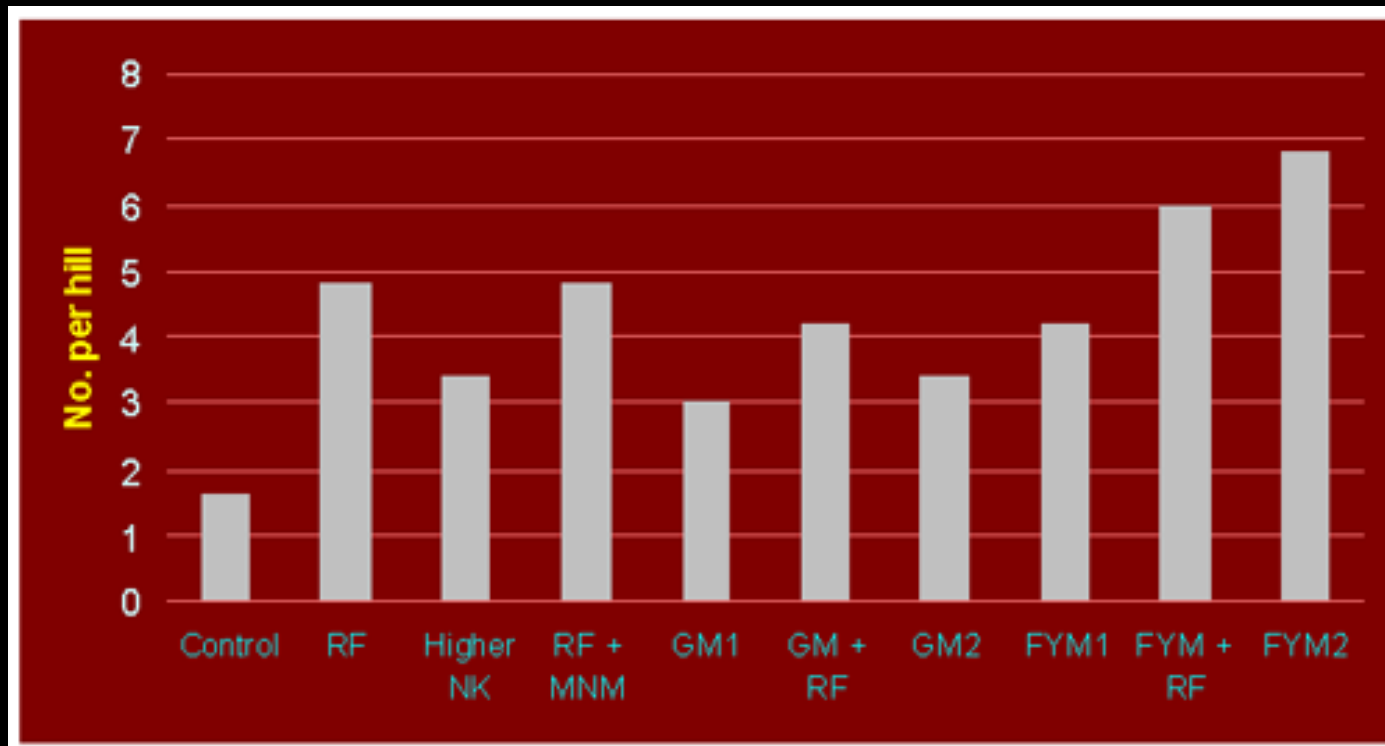
Jul. – Oct. 2007



(Sumathi, Thiyagarajan & Gnanachitra, Tirur)

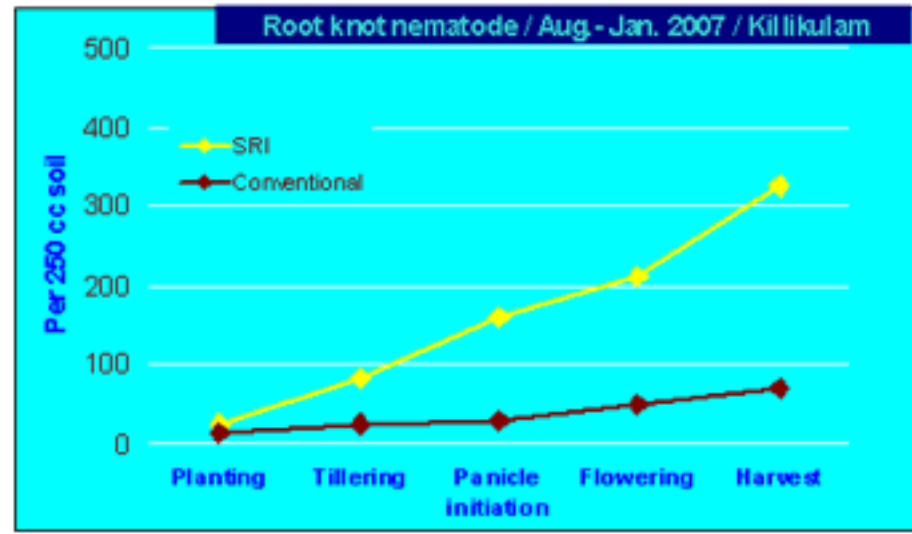
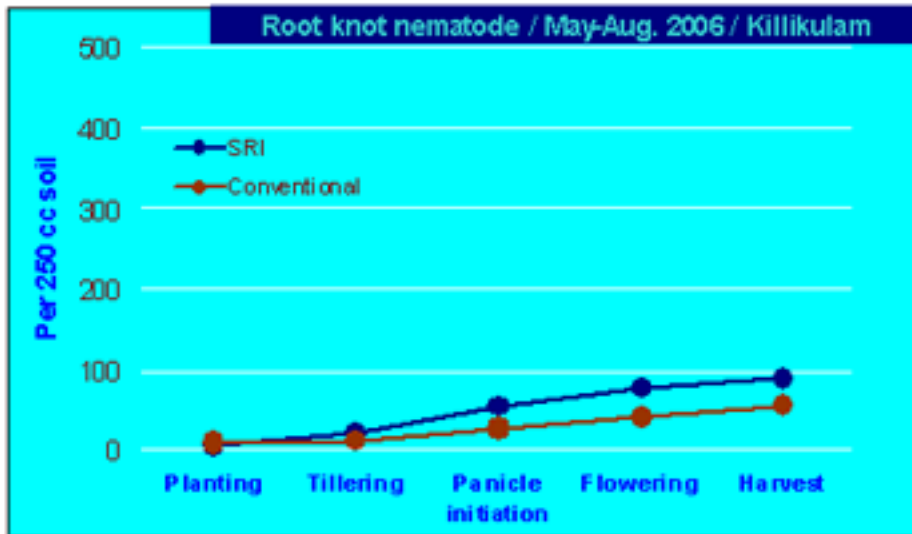
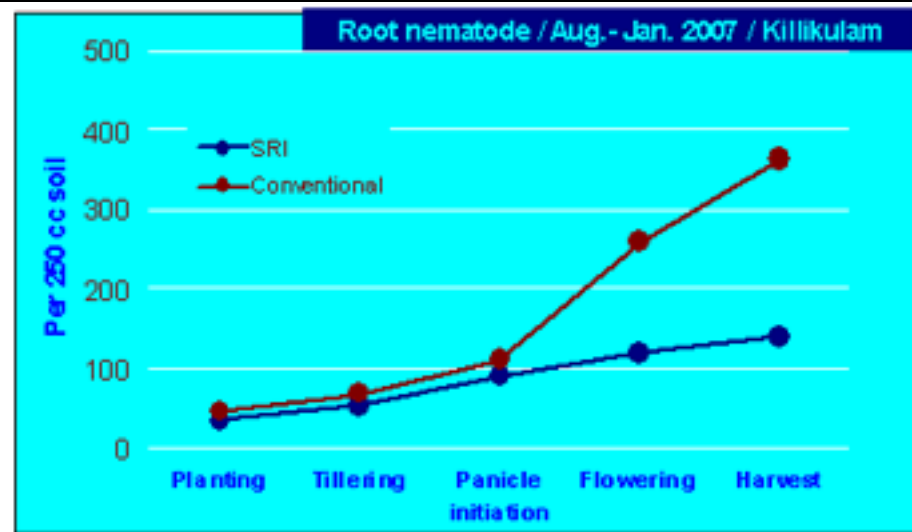
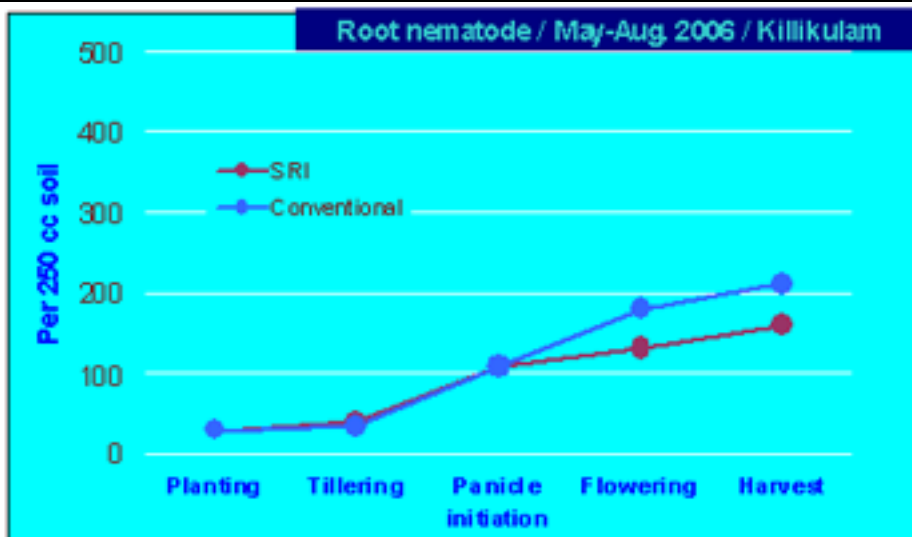
Nutrient Management in SRI : Black Bug Population

Jul. – Oct. 2007



(Sumathi, Thiyagarajan & Gnanachitra, Tirur)

Nematode population & SRI



Plant Protection Research

Application of *Pseudomonas fluorescence* as seed + soil treatment recorded 37.5 and 59.5 % reduction of rice root nematode population and 61.3 and 62.8 % reduction of root knot nematode population in both soil and roots respectively.

(Seenivasan, Killikulam)

Plant Protection Research

- In the reproductive phase (80 to 100 DAT) SRI recorded significantly higher leaf folder incidence (2.95 to 23.95%) than conventional method (1.21 to 13.98%).
- At 100 DAT the borer incidence was less (2.24% WE) in SRI than that of conventional method (5.6 % WE)
- ADT43 showed less incidence compared to Hybrid.
- SRI resulted in significantly higher yield of 8014 kg ha⁻¹ compared to conventional method (6393 kg ha⁻¹).

(Ravi & Karthikeyan, Aduthurai)

Plant Protection Research

- No significant variation in the incidence of blast and brown spot between SRI and Non-SRI.
- False smut and sheath rot incidences were significantly lower in SRI (6.3 and 21.7 PDI respectively) when compared to non-SRI (9.9 and 34.8 PDI respectively).

(Dinakaran, Trichirapalli)

Plant Protection Research

	SRI	Conventional
Stem borer damage	4.68 %	6.09 %
Leaf damage	2.76 %	4.54 %
Silver shoot	9.43 %	13.68 %
BPH	0.56 hill ⁻¹	0.68 hill ⁻¹
Spiders	1.24 hill ⁻¹	1.04 hill ⁻¹

(Nalini, Madurai)

SRI Extension : TNAU

Major thrust in World Bank aided project :

“Irrigated Agricultural Modernization and Water-bodies Restoration and Management (IAMWARM)”

IAMWARM project

Development objectives

- increase in area served by irrigation system in 63 selected sub-basins which are to be rehabilitated and modernized
- increase in agricultural productivity (net benefits per unit of water delivered in Rs. m⁻³).

SRI in IAMWARM project

- 750 - 1000 ha in each basin
- Rs. 10000 subsidy for 1 ha
- Women labourers also to be trained

IAMWARM Project : Unit cost for 1 ha of SRI

	Rupees
Seed + seed treatment	200
Nursery	1000
Marker	1000
Weeder (5 nos)	2500
Fertilizers	4040
Pesticides	1640
Transplanting	4000

IAMWARM Project : SRI in Cooum Basin

Rice area	89092 ha
Area of implementation	750 ha
Period	3 years
Outcome	
Area spread	5000 ha
Increased productivity	1200 kg ha ⁻¹
Additional revenue	Rs. 30 million

SRI Extension :

State Agricultural Department

- Implementation of Integrated Cereal Development Programme – Paddy
- Implementation of National Food security Mission – Rice
- Covering 25 % of First Season (June – Oct. 07) rice area of 1.88 lakh ha
- Covering 40 % of Second Season (Aug.07 – Jan.08) rice area of 5.45 lakh ha

National Food Security Mission : Rice

- **Increase rice production by 10 million tons by the end of 11th Plan (2007- 08 to 2011-12)**
- **SRI Implemented in 133 districts in the country (5 districts in Tamil Nadu)**
- **Target area 5 million ha**
- **Rs.3,000 per SRI demonstration**
- **1 demo of 0.4 ha for every 100 ha**
- **50,000 demonstrations**

Integrated Cereal Development Programme : Paddy

- Cluster approach
- 1132 villages in Tamil Nadu
- 1 cluster = 10 ha
- Demo in each cluster : Rs.20,000 (10 ha)
- Training in each cluster : Rs.5,000
- Budget : Rs.283 lakhs

Survey on farmers' opinion on SRI techniques in comparison with conventional cultivation

- 50 Farms in Thamirabarani Basin
- 25 Farms in Cauvery Delta Basin

Thamirabarani Basin

(Farmers' opinion %)

SRI technique	Hard	Normal	Easy	Not adopted
Land preparation	6	92	2	0
Modified nursery preparation	56	12	30	2
Square planting	68	10	20	2
Mechanical weeding	12	4	78	6

Cauvery Basin

(Farmers' opinion %)

SRI technique	Hard	Normal	Easy	Not adopted
Land preparation	36	64	0	0
Modified nursery preparation	32	28	20	20
Square planting	28	48	24	0
Mechanical weeding	40	4	56	0

Thamirabarani Basin

(Farmers' opinion %)

	Good	Normal	Bad	Not applicable
Availability of mechanical weeder	82	10	2	6
Timely reach of inputs	72	10	18	-
Plant population maintenance	90	8	2	-

Cauvery Delta Basin

(Farmers' opinion %)

	Good	Normal	Bad	Not applicable
Availability of mechanical weeder	92	8	0	-
Timely reach of inputs	28	20	52	-
Plant population maintenance	80	20	0	-

Thamirabarani Basin

(Farmers' opinion %)

	Higher	Normal	Less
Pest and disease problem	2	24	74
Weed problem	10	50	40

Cauvery Basin

(Farmers' opinion %)

	Higher	Normal	Less
Pest and disease problem	4	46	50
Weed problem	4	28	68

Problems in Adoption

(Farmers' opinion %)

	Thamirabarani Basin	Cauvery Basin
SRI requires more labour for planting	68	24
Women labourers reluctant to square planting	36	12

Survey on social suitability of SRI

Survey on social suitability of SRI

- farmers who tried SRI for the first time were generally surprised and positive about the method and its results : higher yield with reduced water usage.

Survey on social suitability of SRI

- Despite the positive reactions and awareness of the advantages, relatively few farmers practice SRI or are motivated to fully switch over to SRI.
- They remain sceptical and perceive SRI practices as relatively difficult compared to conventional rice cultivation practices.
- Most farmers say that they are not familiar enough with SRI technique to practice the system independently.
- They feel insecure about the practices and fear that poor implementation of the practice could lead to crop failure.

- SRI is not popular in areas of labour shortage
- Drum seeding + partial SRI may be successful
- Nursery and transplanting avoided

Drum Seeder



















Grain Yield (t ha⁻¹)

