

Promotion of SRI under National Food Security Mission (NFSM)

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National Food Security Mission (NFSM)

Launched in 2007, the Mission aims at increasing the production of :

- Rice - 10 million tons
- Wheat - 8 million tons
- Pulses - 2 million tons

by the end of the eleventh five year plan (2011-12).

Mission Objectives

1. **Increasing production of rice**, wheat and pulses through **area expansion** and **productivity enhancement** in a sustainable manner in the identified districts of the country;
2. **Restoring soil fertility and productivity** at the individual farm level;
3. **Creation of employment opportunities**; and
4. **Enhancing farm-level economy**, i.e., farm profits, to restore confidence among farmers.

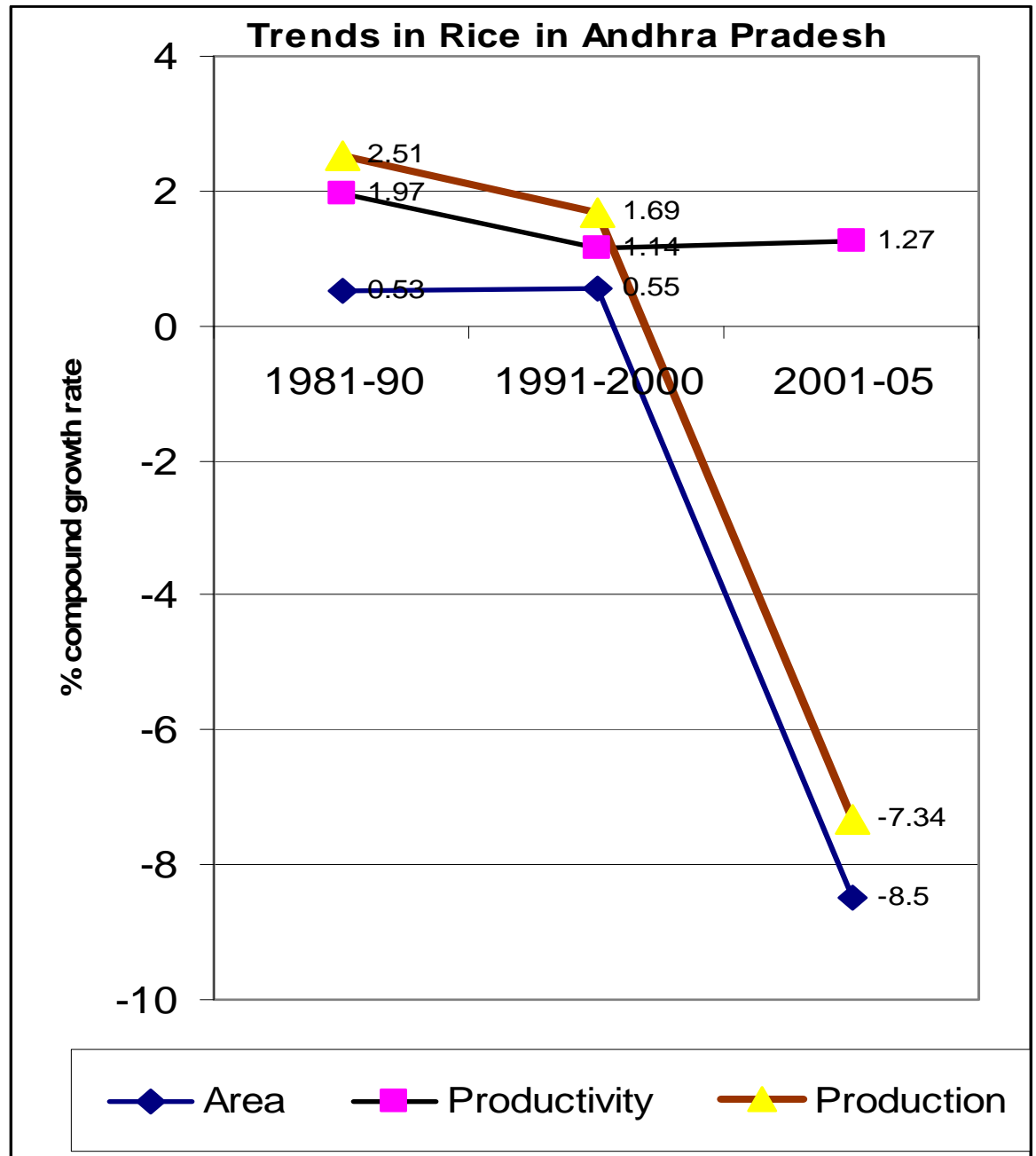
National Food Security Mission (NFSM)

Focus areas for investment:

- Hybrid rice and seed interventions
- System of Rice Intensification (SRI)
- Micro-nutrients & soil amendments
- Improved management practices

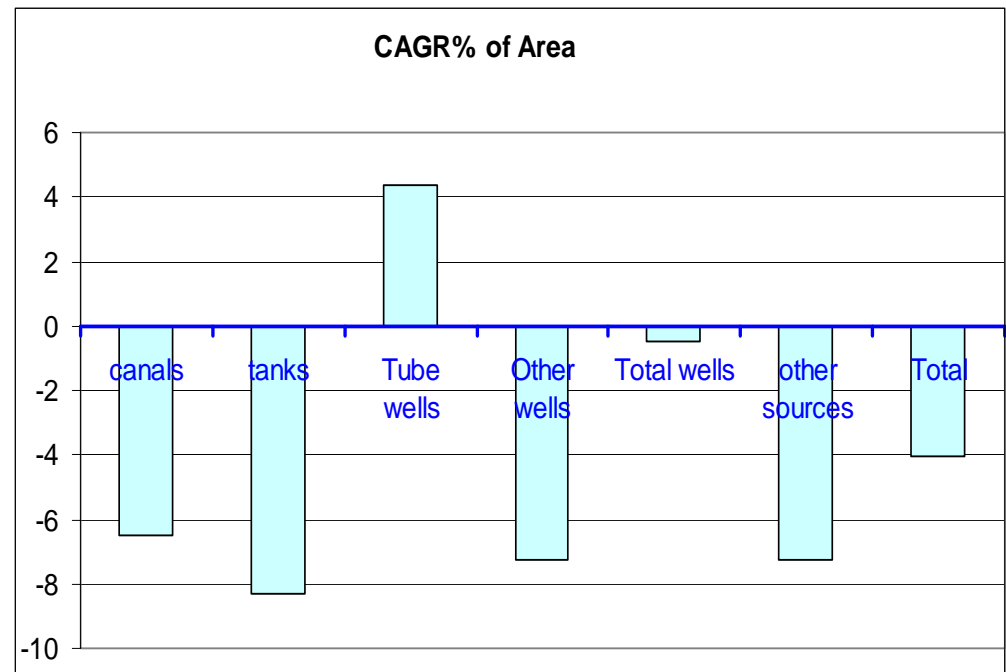
Demonstration' through farmer field schools (FFS)
is the key approach.

What is
ailing rice
production?



Compound annual growth rate (CAGR) of net area irrigated by different sources, A.P., 1999-2005

Source	CAGR%
Canals	-6.48
Tanks	-8.33
Tube wells	4.39
Other wells	-7.23
Total wells	-0.50
Other sources	-7.23
Total	-4.02



Source: Rama Rao *et al.* (2008)

Diagnosis..

- Area under rice is declining
- Area under irrigation is declining
- Shift towards borewell irrigation

**What does this mean
for NFSM Strategy?**

What it means..

- Production improvements cannot take place with productivity improvements alone
- Intensive water use in rice production expansion may not be possible as in the 'Green Revolution' (e.g., ban on 'rice' is an ideal that watershed programs proclaim – hardly enforceable)
- Expansion into areas with 'water shortages' and 'groundwater crisis'
- **Criticality of water management** as more rice area is brought under borewells

Important that NFSM builds water management as a key area of focus

Soil health..

- Acute soil distress
 - Expanding salinity / alkalinity / problem soils
 - Decreasing soil fertility
 - Micro-nutrient deficiencies

Important that the same history of exhaustion of soils, seen with the Green Revolution, not be repeated with new NFSM – Rice focus

SRI – as an opportunity:

- Reduction in water use
 - Less requirement of seeds
 - Improvement of soil health
 - Greater possibilities of dealing with micro-nutrient deficiencies
 - Reduction in electricity consumption (with more rice area under ‘borewells’)
- Possibilities of expanding rice area

SRI best contributes to the production, soil health, and farm income objectives of NFSM

Allocation proposed under NFSM (crore Rs.) for the XIth Five-Year Plan period (all-India)

Year	Rice	Wheat	Pulses	Total
2007-08	70.8	234.6	96.9	402.3
2008-09	348.1	682.7	285.9	1,316.8
2009-10	366.3	290.8	287.2	944.2
2010-11	428.3	341.5	286.4	1,056.3
2011-12	508.8	370.8	283.4	1,163.0
Total	1,722.3	1,920.3	1,239.9	4,882.5

<http://indiabudget.nic.in/es2007-08/chapt2008/chap73.pdf>

**What should be the share of SRI
in the NFSM-Rice allocations?**

Cause for concern....

The case of Andhra Pradesh (2008-09)

- Total allocation for NFSM-Rice → Rs. 2,639.8 lakh
- Allocation for SRI → Rs. 50.40 lakh to cover 1,680 demonstrations, i.e. **only 1.89% of total**

This amount may be even less than the investments being made in the NGO sector on SRI!

Inclusion of SRI in NFSM may not automatically result into investments on SRI

Question is why so little investment?

Package of Support for Hybrid Rice and SRI under NFSM

Sl. No.	Components	Amount (Rs.) per ha
1	Cost of critical inputs (seeds, fertilizers/ manures, PP chemicals and herbicides)	2,325
2	Organizing Farmers' Days	200
3	Distribution of publicity materials and display boards	125
4	Visits of scientists, excluding TA & DA of any kind, but for hiring taxi/ POL, etc.	250
5	Contingencies/typing of results/minutes etc.	100
	Total	3,000
	Only additionality is support for weeders	

- Input subsidy-based extension approach used for promoting hybrid rice is NOT appropriate for the promotion of SRI!

Since hybrid rice responds to increased inputs, its promotion can be input-centric

SRI, however, depends on better management, making use of lesser external inputs but requiring timely operations and labour skills

Thus, it is inappropriate to promote SRI in an input-centered manner

Re-strategize extension approach..

- Can **demonstrations** lead SRI promotion?
 - 0.4 ha demonstrations for every 100 ha is the key extension strategy under NFSM
 - We need focused & intensive work in a compact area over a period of 3-5 years, so that all of the systems (farmer management, labour, irrigation, etc.) get adjusted to SRI requirements
 - Farmer-level facilitation (agency requirement)
 - Initial & tapering-off incentives for farmers in terms of subsidising labour inputs
 - Intensive ‘science’ sharing/ knowledge inputs
- These are the requirements for SRI extension system

Possible ways ahead in NFSM:

- Allocate more financial outlays for SRI at state level
- Redesign institutional mechanisms:
 - Field level ‘agency’ is important to establish partnerships with civil society organisations (CSOs)
- Restructure the investments and incentive systems; build labor & management-based incentives for farmers
- Geographically-focused program for at least 4 years (in selected high-potential SRI districts)
- Promote strong soil health and sustainable agriculture components, instead of chemical-based approaches (SRI responds well to good soils but also poor ones)
- Build extension strategy around ‘practitioner-farmer pool of extension workers’
- Promote and publicize farmer innovations

Large-scale partnership with civil society:

- Space for CSOs in the national and state-level executive committees
- Promote Regional Resource Centers for SRI (following the examples of ‘learning alliances’) formally operating under NFSM
- Partnership with state-level coordinating agencies
- Partnership with proper financial support to civil society organisations at the district level with ATMA.
- Create a research backbone on SRI involving KVKs and NARS/ SAUs with a strong capacity