IFA INTERNATIONAL WORKSHOP on Effective Last-Mile Delivery

10-12 February 2010, New Delhi, India

CEREAL SYSTEM INITIATIVE FOR SOUTH ASIA (CSISA)

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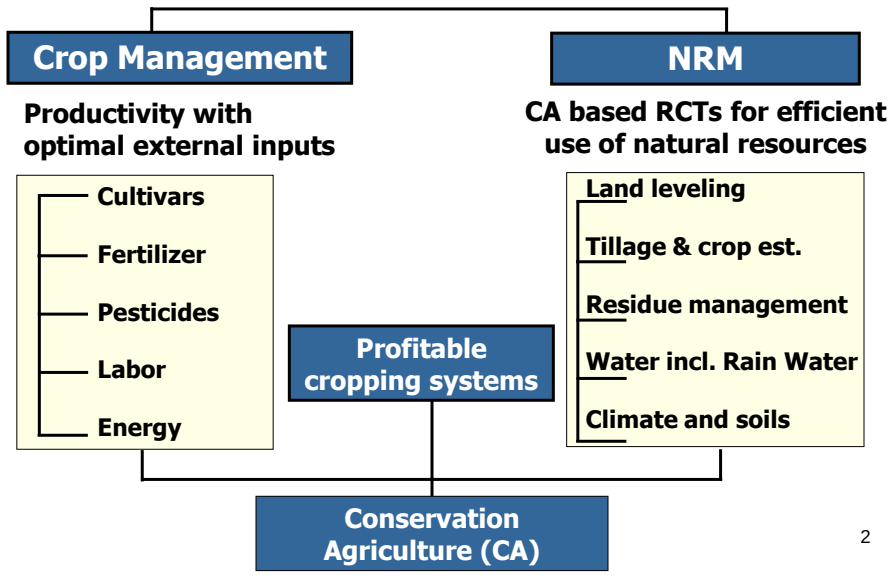
Integrated Crop and Resource Management "Ecological Intensification"



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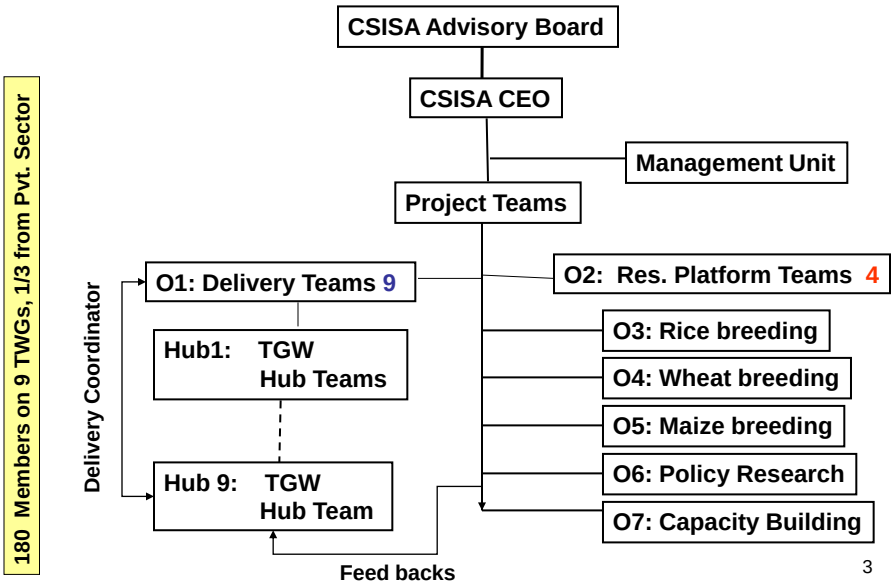
CSISA Oraganogram



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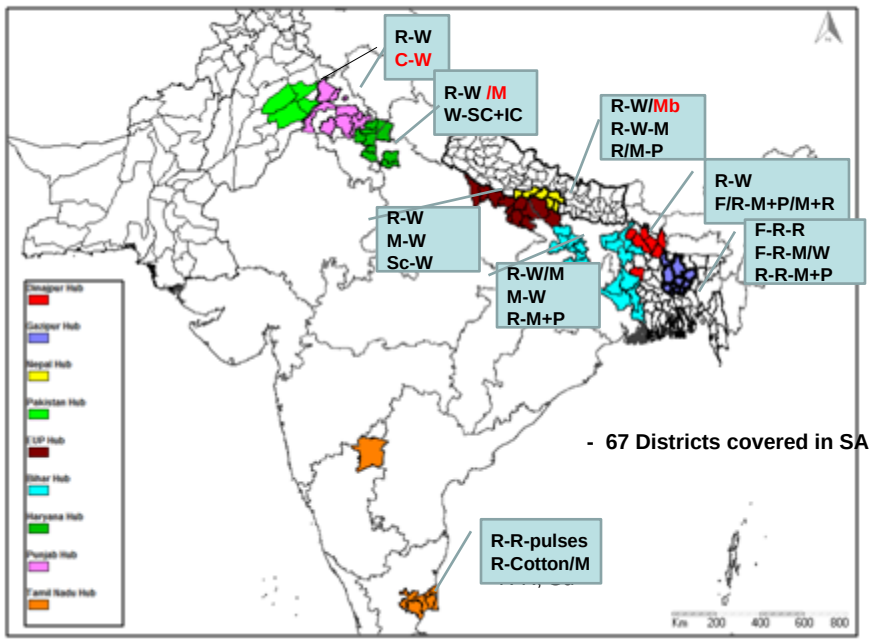
Hub domain areas



Challenges in Agriculture in South Asia

- Water, labor and energy shortages
- Plateauing crop yields
- Yield gaps due to poor crop management
- Factor productivity declines
- Resource and Policy fatigues
- Weak public extension systems
- Weak public- private partnership net works

- Climate changes

Conceptual Framework of CSISA
Strategic Entry Points and Potential Interventions?

1. Water shortages	2. Rainwater Management	3. Nutrient Imbalances	4. Terminal Heat tolerance/ Seed
• Laser land leveling • Raised beds • DSR & remove puddling	•In-situ moisture conservation • Groundwater recharge	• Conjunctive use of nutrient inputs • LCC/ SPAD/GS • Super granules	• Cultivar choices • Seed increase • Water schedules • Residue manage.

5. Labor, Energy shortages, High production cost	6. Diversification and 'Fallows'	7. Herbicide resistance / Weed mgt.	8. Net works and Capacity Building
• Minimal tillage • Zero tillage • Raised bed • Double no-till system • New Machines	• Relay/Para cropping • Crop substitution • Cotton –wheat) • S.Cane –wheat) • Rice Fallows	• Test new molecules • Integrated weed management approach	• Public –Private partnerships • Trainings • Traveling seminars

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CSISA Focus of Last-Mile Delivery

Generate options- 'take it or leave' approach not helpful.

Cut back production costs and save water

Strengthen public-private partnerships.

Improve input delivery – seed inclusive, Prototypes for planting.

CA Technologies Co-evolving with Farmers and other Partners

Professional training on Conservation Agriculture.

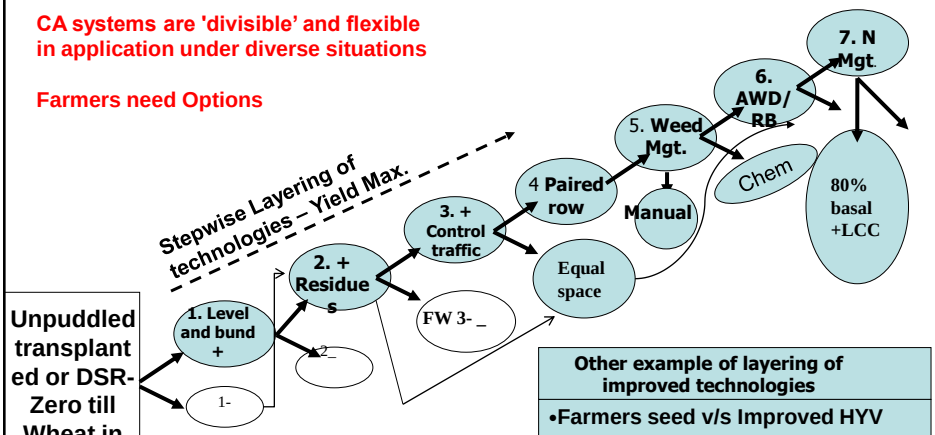
Work in farmer participatory approaches

Extend the reach of new information on CA based technologies.

Improve livestock productivity- route is through cereals

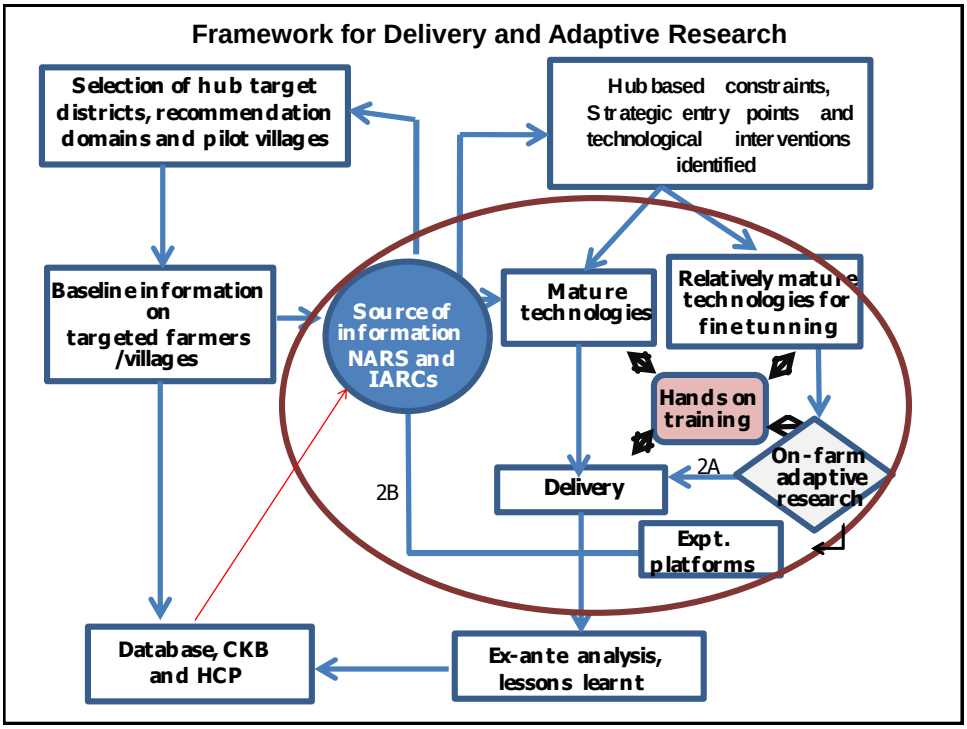
CA systems are 'divisible' and flexible in application under diverse situations

Farmers need Options



Other example of layering of improved technologies

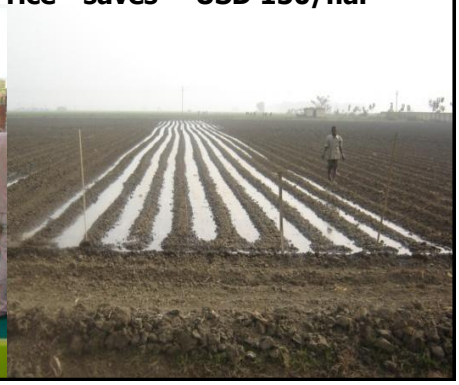
- Farmers seed v/s Improved HYV
- Flat v/s Raised bed Planting
- Planting time - late v/s timely
- Aged v/s Young seedling of rice
- # of seedling/hill (1 v/s 3-4)
- Manual v/s Mechanical transplanting



Salient Accomplishments
Laser Assisted Land Leveling: Impacts

- More than 5200 Laser Units (investment ~ USD 9.0 Million).
- More than 1.0 Mha area laser leveled upto 2009.
- Estimated saving in irrigation waters ~ 1 Km^3 water in RWCS.

- Saved 800 $Kwhr^{-1}$ units /ha (Power worth USD 55M).
- Employs 4 persons/unit for 125-150 days / year.
- DSR and unpuddled transplanted rice - saves~ USD 150/ha.



Improved Productivity of Cotton-Wheat

- Relay planter reduces seasonal labor shortages
- Improve cotton yield 8-10% (an additional picking)
- Timely wheat planting (Potential yield gains up to 1.5 ton/ha)

New Implements

Mult-crop Turbo seeder/ PCR Planter

Rotavator – Destroys soil health
A popular implement for Subsidy

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Dual Purpose Wheat: Impacts

Berseem + wheat

- 18t/ha of Green fodder ($ 400 /ha)
- 100 kg seed of Berseem ($ 270/ha)
- Wheat yield penalty at best 100kg/ha
- Livestock productivity gains ?

Seed Systems

800 tons seed of elite crop cultivars for Eastern Gangetic plains

Salient Achievements (Year 1)

CA based RCTs evaluated in farmer participatory mode	•19 RCTs inclusive of elite cultivars
Area coverage	>75000 ha
Household benefitted	>50000
Number of trainings on CA practices	95
Participants in training program (Farmers)	5000 (15292)
Adaptive trials	>700
Technology roll-out demos	3300
New machinery development/ refinement	6
Seed Increase of elite germplasm	800 tons
Public-private partnership forged in 9 hubs	180

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