

SAFE-World Project/Initiative Summary

Country: Pakistan

Project/Initiative Title: Rice-wheat Zero Till - consortium for the Indo-Gangetic plains
Tillage and crop establishment work – Punjab Pakistan
[And year] 1990s

Scale: regional Nos. farmers: 690 farmers Hectares: 1000 ha

Agro-Ecological Zone: IV

Improvement types

1x	2	3	4	5	6x	7	8	9
----	---	---	---	---	----	---	---	---

Success and Limits to spread

Success	Limits
3d	

A. Key Impacts

A1 – Productivity

	Before/Without	After/With	% change
Wheat	1900 kg/ha	2090-2375 kg/ha	10-25%

A2 – Impacts on natural capital

An equal or up to 25% increase in yields with the new tillage options depending on how much earlier we plant the zero-till plots. But we save considerably on cost (1000 Rs per acre) and use of fuel (40-50 litres per acre). Also savings in water (20-30%), less herbicide use, more fertilizer efficiency. A very green technology. so saves natural resources. Erosion is not a problem in the rice-wheat areas of South Asia

A3 – Impacts on local community (social capital)

Households better off - Increases profits since costs of production are reduced

A4 – Impacts on households and individuals (human capital)

Yields are increased at less cost so food is more available
we save considerably on cost (1000 Rs per acre) and use of fuel (40-50 litres per acre)
reduced wear and tear of tractors and accessories

A5 – Key changes in farm / regional system

zero-tillage meant earlier, timely planting and therefore higher yields and input efficiency at lower cost.

Changes in input use: Reduces use of fuel and tractor parts. Increases efficiency fertiliser and water.

Change in local/ regional food security: Increased food security by increasing production. Less weeds and so less herbicide use.

The technology was accepted by farmers once he had a chance to see it and get the equipment needed to adopt it. We are just starting to see results and acceptance and it will take a few more years before the full impact can be assessed.

B. Types of Sustainable Agriculture Improvements

Type 1: Better use of available renewable natural capital

Type 2: Intensification of single sub -component of farm system

Type 3: Diversify by adding new productive natural capital and regenerative components

Type 4: Better use of non-renewable inputs and technologies

Type 5: Social and participatory processes leading to group action for making better use of natural capital

Type 6: Human capital building through training-learning programmes

Type 7: Access to Finance

Type 8: Add value by processing to reduce losses and increase returns

Type 9: Add value by direct or organised marketing of produce to consumers

	Yes/No	Narrative
Type 1	x	Reduced and zero-tillage establishment of wheat after rice
Type 2		
Type 3		
Type 4		
Type 5		
Type 6	x	Farmer participatory and local machinery manufacturer participation. Village level groups.
Type 7		
Type 8		
Type 9		

C. Key Lessons: Success, Spread and Constraints

C1 – Key Lessons Learned

The need to get the NARS as full partners in the process. They must be convinced of the benefits that can accrue to them by collaborating. Farmer participation a must. Local manufacturers needed to be involved. The technology must be evaluated and fine tuned through farmer feedback directly in farmer fields.

C2 – Aspects of local/national context contributing to success

Partnership with NARS scientists after they agreed the technology was good.

C3 – Limitations preventing spread

Availability of more equipment needed to practice the new tillage options. Extending the technology to more clients

C4 – Policy issues

Mainly availability of the equipment and farmers seeing for themselves the benefits

C5 – Scaling-up

More local manufacture of equipment and making it available for farmer experimentation.

D. Contact Point for Project/Initiative

Contact person: Peter R. Hobbs Address/ Email: P.Hobbs@cgjar.org
--