

SAFE-World Project/Initiative Summary

Country: Pakistan

Project/Initiative Title: Sindh Rural women's Uplift Group :Organic Fruit Production: 1989

Scale: Individual farm

Nos. farmers: 5000

Hectares: 2500 ha

Agro-Ecological Zone: V

Improvement types

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

Success and Limits to spread

Success	Limits
1a,3c	1b,3a

A. Key Impacts

A1 – Productivity

	Before/Without	After/With	% change
Mango	7500 kg/ha	22500 kg/ha	200
Citrus	12000 kg/ha	30 000 kg/ha	150

A2 – Impacts on natural capital

- ?? Mulch is attacked by fungus and bacteria and dry grass eating insects and their dead bodies and eggs are swallowed by earthworms. Earthworms excrete vermicasts which are rich in N,P,K and also contain iron, copper ,zinc manganese boron molybdenum in chelated forms. In addition vermicasts contain terramycin, erythomycin and streptomycin these are environmentally friendly.
- ?? Irrigation water application is reduced by 40%
- ?? There is no erosion and soil becomes very rich and fertile
- ?? Decomposition of mulch does not produce methane
- ?? Doubling and tripling the rate of tree growth
- ?? First crop in 20-30 months
- ?? Yield tripled

A3 – Impacts on local community (social capital)

- ?? Employment is increased due to mulch handling, extra harvest
- ?? income of the farmer is increased manifold.
- ?? Since mulching is light work, the employment of women is increased
- ?? Natural resources are better managed
- ?? Quality of produce is superb and market prices are 50-60% more

A4 – Impacts on households and individuals (human capital)

- ?? Food is more plentiful and does not contain chemicals and is therefore more healthy
- ?? Main beneficiaries are farmers whose incomes are raised considerably
- ?? Other beneficiaries are marketers who sell extra farm products from the same land
- ?? The new technology involves new farmers who want to experiment as new leaders

A5 – Key changes in farm / regional system

- ?? Labour input is 3-4 folds in mulching operations and double in harvesting, packing and marketing
- ?? Increased food security especially in fruits can be 2-3 fold increase

The adoption by farmers is limited to mulching only. Approximately 10% farmers involved in mango and citrus fruits are adopting mulching but not regularly

Mulching process:

1. Beds 2m wide, 300mm high and at distance of 4, 4.5 and 6 m apart; tree planted at 2, 3, 4.5, and 5m apart along the rows on the beds and irrigation water applied in the furrows
2. Weeds growing on the furrows and ridges were cut down and thrown under trees as mulch
3. Mulch digested in 2-3 months and weeds cut again for mulch

Other farmers, universities and government officers have visited the site but have been slow in adopting

First commercial crop in year 4

Yields three times those of conventional methods for the first 8-10 years

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	Mulching, No till organic production, composting
Type 2	x	Double Dug beds for fruit trees
Type 3		
Type 4		
Type 5		
Type 6	x	Adult education at the site
Type 7		
Type 8		
Type 9		

C. Key Lessons: Success, Spread and Constraints

C1 – Key Lessons Learned

This mulching technique controls weeds, reduces fertilizer inputs, reduces pesticide applications, increases yields three times and produces healthy pesticide-free food

C2 – Aspects of local/national context contributing to success

- ?? Cheap labour
- ?? Easy technology
- ?? Intensive supervision by trained farm managers

C3 – Limitations preventing spread

- ?? Initial input for 3 years to produce first commercial crop and then have to wait for a further 2 years to break even
- ?? Although ultimate financial benefits are high using this system, many farmers do not have the funds for this input

C4 – Policy issues

Need more funds for training

C5 – Scaling-up

Training of more farmworkers ie. Farmer, farm managers, foremen, supervisors etc

D. Contact Point for Project/Initiative

M H Panwhar and Mrs Farzana Panhwar
54-D Block 9
Clifton
Karachi 75600
Pakistan
