

# SAFE-World Project/Initiative Summary

**Country: Nepal**

Project/Initiative Title: UPWARD Potato Wilt - Community approach to the management of potato bacterial wilt in the hills of Nepal  
1993

Scale: Community level      Nos. farmers: 51      Hectares: 50 ha

Agro-Ecological Zone: VI

Improvement types

1x	2	3	4x	5x	6	7	8	9
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Success and Limits to spread

Success	Limits
4b	2b, 5a

## A. Key Impacts

### **A2 – Impacts on natural capital**

- ?? Potato disease incidence/ % of farms down from 82% before project to 2% with project
- ?? Local potato productivity is mainly a function of BW disease control. BW infected farms suffer up to 95% of yield loss.
- ?? Elimination of BW pathogen from the soil and seed

### **A3 – Impacts on local community (social capital)**

Mobilizing community groups to collectively manage the BW disease.

### **A4 – Impacts on households and individuals (human capital)**

Increased farmers' knowledge and capacity to implement integrated disease management for BW.

### **A5 – Key changes in farm / regional system**

*Input changes:* Use of pathogen free, high quality seed, cultivation of potato in pathogen-free land

*Change in local/ regional food security:* Potato is a staple food for hill communities in Nepal. As early as 7 yrs prior to the project, potato could not be grown productively due to high disease incidence and yield loss, resulting in sharp decline in local production and supply of potato as main food source. At the end of the project, BW pathogen has been eliminated from seed and soil, making it possible for farmers to grow potatoes productively again.

The integrated disease management strategy included: use of pathogen-free high-quality seed, 3-yr crop rotation with non-host crops, elimination of infected planting materials and volunteer rouging.

Planting materials for alternative crops during the crop rotation period, and for alternative seed sources (e.g. TPS) for potato cultivation.

In one village where the community management approach was successfully applied, 98% success rate of disease control was achieved. In another village where the approach was not carried out, there was less than 20% success rate of disease control

### **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	3-yr crop rotation with non-host crops
Type 2		
Type 3		
Type 4	x	use of pathogen-free high-quality seed
Type 5	x	Community mobilization spearheaded by farmers' groups with traditional/cultural and legal/political authority to facilitate and monitor implementation of community-agreed IDM strategy
Type 6		
Type 7		
Type 8		
Type 9		

### **C. Key Lessons: Success, Spread and Constraints**

#### ***C1 – Key Lessons Learned***

BW is a soil- and seed-borne disease which spreads through local socio-cultural-economic networks. To successfully control BW, community-level action is fundamental.

#### ***C2 – Aspects of local/national context contributing to success***

Community action remains a strong part of local Nepali culture/tradition.

#### ***C3 – Limitations preventing spread***

- ?? Absence of policy support (e.g. seed system) and infrastructure (e.g. cold storage),
- ?? Remote location of BW-affected communities with little/no access to government extension/research service

***C4 – Policy issues***

Compared to cereals, potato is of low priority in the national research and extension agenda. This is evident in the manpower, financial and physical resources allocated to support potato agriculture

***C5 – Scaling-up***

Training/capacity building to increase knowledge by researchers and extension workers on the nature of the BW disease and its effective IDM, and to improve their skills in participatory research and extension particularly in facilitating community-level processes.

**D. Contact Point for Project/Initiative**

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