

## Introduction

Within canal irrigation systems, micro-irrigation will be feasible where the field application efficiency is very poor. Typical conditions of such system are –low discharge, porous soil and long length of field channel. Poor and marginal households are often bypassed by such irrigation development. Use of small upland water sources can contribute to improve water security in the upland hills. With the use of micro-irrigation technology, large areas of rainfed land can be made more productive. Crop intensification and diversification can be made possible. This, in turn, can improve livelihoods through increased food security, income and local employment.

### Micro-Irrigation Technology adopted to save water at on-farm level



### Cost Benefit Analysis:

#### A: Net Annual Benefit per 1/20 ha

Present (Rs)	Future (Rs)			Difference
Maize & Millet	Winter Veg	Spring Veg	Total	(Rs)
3400	10860	17286	28146	24746

#### B: Net Annual Benefit during Demonstration phase

Crop	Area (1/20 ha)	Net Income /1/20 ha	Total net Income
Winter and Spring Vegetables	120	24746	2969520

#### B: Net Annual Benefit during Post-Demonstration phase

Crop	Area (1/20 ha.)	Net Income (1/20 ha)	Total net Income
Winter and Spring Vegetables	240	24746	5939040

### Conclusion and recommendations:

1. a new initiative for improving on farm water and crop productivity.
2. easier to control water at different part of the command area due to pipe network
3. community is highly encouraged to participate in the project
4. highly social inclusive.
5. no threat of soil erosion
6. Cost benefit analysis indicates that it has a attractive benefit cost ratio
7. project can be replicated in other part of the world in similar condition.

The overall objectives of this project activities are to improve on-farm water management and agriculture practices. At this point, it is intended to establish water distribution network with use of pipes for developing a controlled irrigation system. Particularly, water from existing outlets of canal will be supplied in the water distribution tanks. A pipe network up to the field outlet is planned. There will be 7 inlet points at the existing canal from where water from the canal will be diverted into the distribution tanks. Valve chambers are designed at strategic points to control and regulate the flow of water in the system. Water from the field outlet will be applied to the crops through the use of micro irrigation devices like – drip system, sprinkler, hose pipe or other methods to grow high value vegetables such as cabbage, bitter gourd, egg plant and others.