

## Rice is life for the majority of the world's poor people.

Rice is staple food for about 3.5 billion poor people in the world most of whom are from Asia. It is the world's largest irrigated cereal, covering 47 percent of irrigated cereals area and is also the single user of water which receives about one third of total world's irrigation water. (FAO AQUASTAT).

## Saving water from irrigating rice is overall saving of fresh water for agriculture and other purposes.

It has been estimated that a 10% decrease in the water use for irrigated rice could lead to water saving of approximately 150,000 million m<sup>3</sup>, almost one-fourth of all the fresh water used world-wide for non-agricultural activities. (<http://nora.nerc.ac.uk/3182/1/N003182CP.pdf>)



Wasteful use of irrigation water for land preparation and continuous submergence:

## Can water be saved from irrigating rice ?

In developing countries, apart from the excessive use of irrigation water on the farm level, a sizable amount of water is lost through the conveyance system which are mostly unlined. Cost effective as well as hydraulically efficient lining technologies are imperative to bridge the gap between water at the source and at the field.



Plastic Lining



Semi tunnel section with stone masonry lining



Polythene sheet laid to check seepage loss



Pipe conveyance

Conveyance efficiency can be improved by lining canal with the use of appropriate materials and technology, example: remote hills of Nepal.

## Field level efficiency can be improved by constructing farm ditches to offset field to field irrigation practices



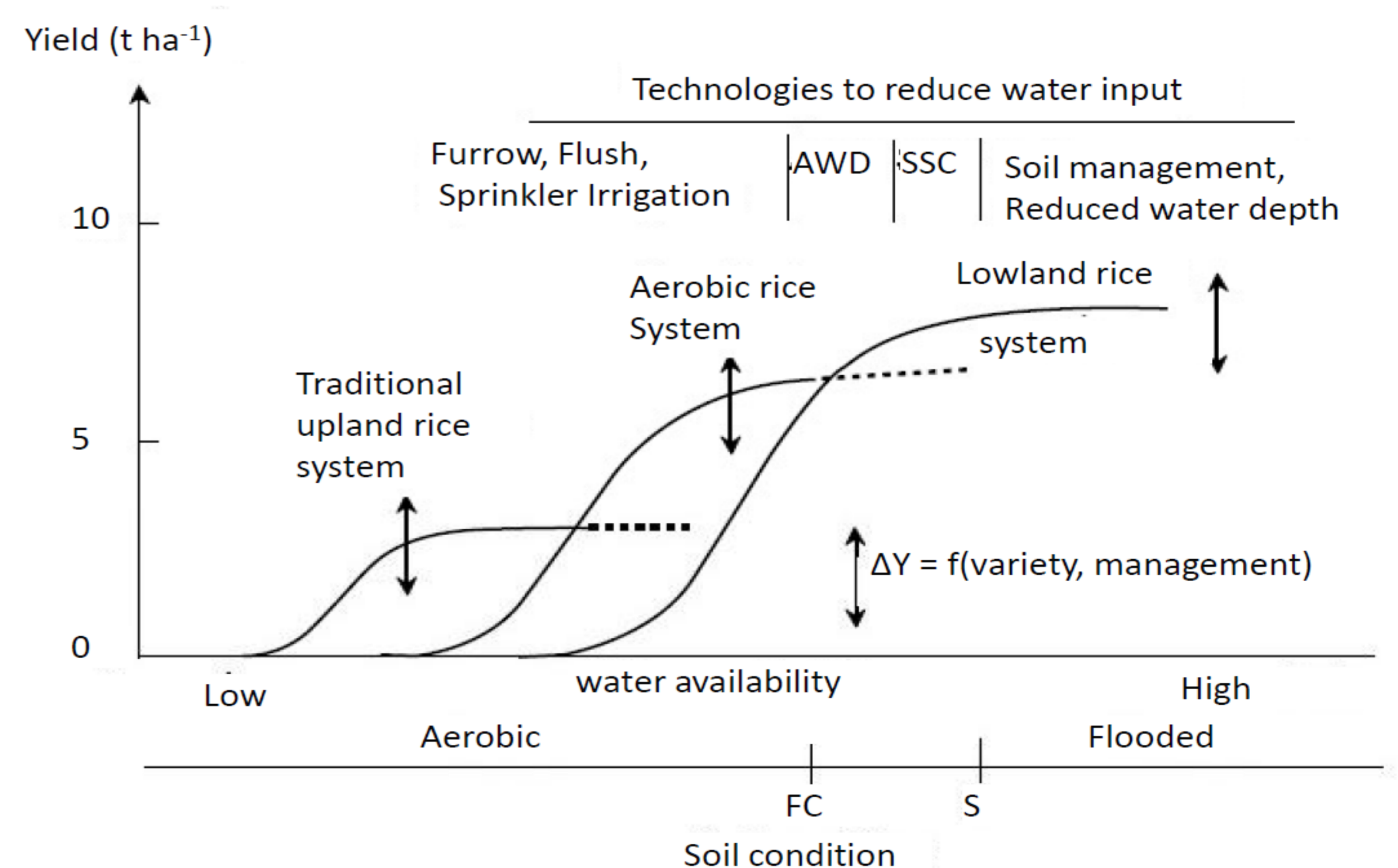
Efficient section canal lining on the farm level in remote hills of Nepal.

## Farm Level management interventions are also equally important as well.



Water saving potential rice irrigation techniques: AWD, SRI and Furrow/Raised bed.

## Water Productivity of rice can be enhanced by applying appropriate irrigation management options suited to particular rice system.



Schematic presentation water saving technologies in different rice production systems and their respective impact on rice yield. AWD = alternate wetting and drying, SSC = saturated soil culture, FC = field capacity, S = saturation point,  $\Delta Y$  = change in yield. Adapted from Tuong et al (2005).