

# More Crop Per Drop

Effective Utilization of Water to Promote  
Productive Agriculture

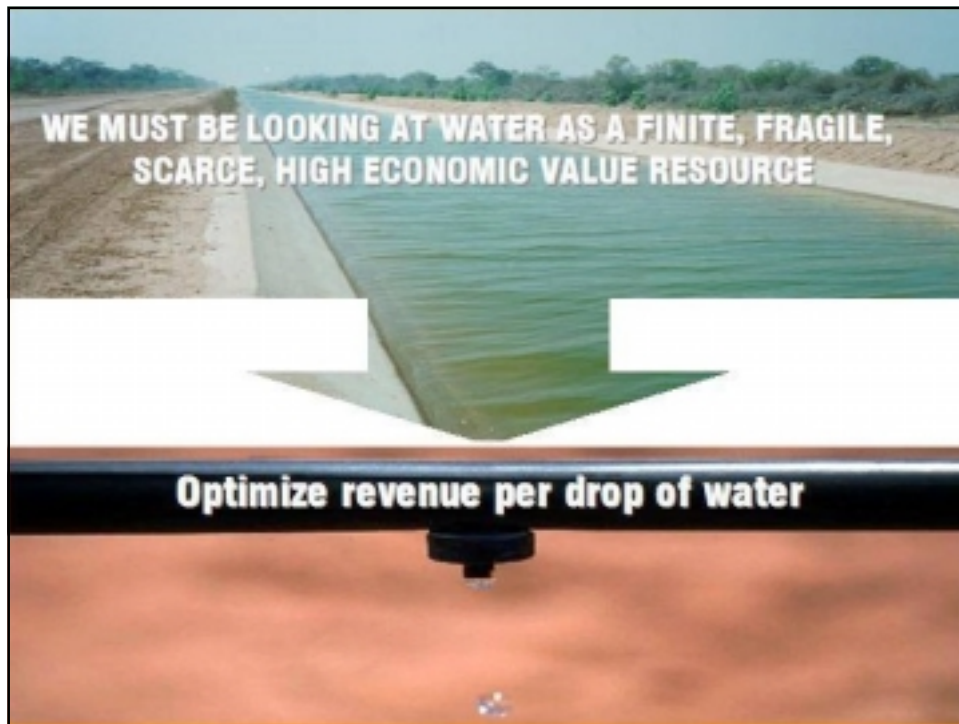
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## Where We Are

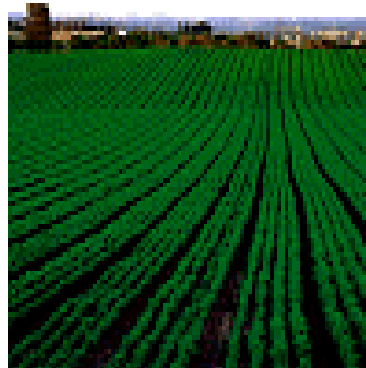
### Pakistan Agricultural & Irrigation Scenario

- **Agriculture:**
  - Contributes 25% to GDP
  - Employs 46% of Labor Force
  - Earns 60% of Forex
  - Agro-ecological conditions are suitable for growing diverse crops
  - Increasing cost of production, declining yield & farm income
  - Rapid population growth (more domestic demand for food)
- **Irrigation:**
  - Low irrigation efficiency (30 - 40%)
  - Depleting ground water reservoirs
  - Variable water supply (low and erratic rainfall)
  - Water logging & Salinity issues in command areas
  - Increasing water demand from other sectors (municipal, industry etc.)



## Where To Go

More Crop per Drop  
of water through  
Microirrigation  
for an  
**Ever Green Revolution**



## What is Microirrigation

- Microirrigation is a production tool which delivers water, plant nutrients & plant protection chemicals:

- In the right place
- In correct amounts
- At the right time
- Frequently

Microirrigation enables the grower to help crops achieve higher crop yield and premium quality, and hence greater profits!



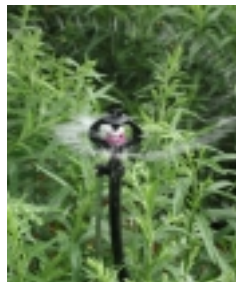
## Water Application Efficiency



Surface (30 - 40%)



Sprinkler (60 - 70%)



Micro Sprinkler (75 - 80%)



Drip ( > 90% )

## Benefits

- Incremental annual income to farmers.
- Savings to farmers in shape of less water, power, labor and fertilizers
- Higher Crop Yields: Pay back period 1-3 seasons.
- GOP benefits in shape of high water productivity.
- Saving in Electricity supplied to Agriculture sector.
- Quality produce for Export hence establishment of marketing channels.
- Establishment of agro-industries in view of availability of raw material on a sustained basis at one place round the year.
- Increased employment for the agriculture sector.

## Drip vs. Conventional Surface Irrigation – Yield & Water Requirement

Crop	Yield (ton/ha)		Yield Increase (%)	Water use (m3/ha)		Water Saving (%)
	Surface	Drip		Surface	Drip	
<b>VEGETABLES</b>						
Tomato	25	63	155	4,700	2,500	47
Capsicum	13	22	67	5100	2900	43
Ladyfinger	36	48	33	4200	2600	38
Brinjal	13	21	70	6200	3720	40
Beans	6	10	82	4440	2800	37
Cucumber	16	23	45	3860	2400	38
Cauliflower	17	27	60	3900	2600	33
Cabbage	21	38	75	3760	2540	32

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	Surface	Drip		Surface	Drip	
<b>FRUITS</b>						
Banana	58	88	52	17,600	9,700	45
Grapes	20	30	50	8,800	5,800	34
Mango	8	14	80	12,750	8,310	35
Papaya	13	23	77	22,800	7,300	68
Watermelon	24	39	61	4,200	2,500	40

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	Surface	Drip		Surface	Drip	
<b>COMMERICAL CROPS</b>						
Sugarcane	75	175	133	24,500	12,400	49
Cotton	2	4	88	9,000	4,200	53
Onion	37	56	54	5,200	2,800	46
Potato	15	27	80	6,000	2,750	54
Chickpea	3	6	75	4,520	2,620	42
Popcorn	4	7	53	5,500	3,020	45
Peanut	4	6	44	8,900	4,700	47

## Way Forward: Strategic Approach

- Treating Microirrigation as an integral part of National water management policy with focus on **more revenue per drop of water**.
- Planned coverage under microirrigation.
- Assistance for microirrigation treating it as an **investment in infrastructure development**.
- Fiscal and tax incentives to promote microirrigation.
- Technological interventions.
- Quality system components – Devise a comprehensive strategy
- Selection of technically sound companies who can provide complete agriculture package with quality material and backup services.
- Extensive farmer training programs.



# THANK YOU