STATUS OF AFFORDABLE MICRO-IRRIGATION IN INDIA

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International Development Enterprises

Some Facts

- India has 16 % of the World's Population.
- 2.45 % of the World's Land Resource
- 4 % of the World's Water Resource
- 1000 Km3 is usable water against the demand of 600 Km3 annually
- By 2050 the usable water and demand will be equal

Water Stress (Malin Falkenmark)

- Annual Water Resource per capita (AWR)
- AWR - 1700 m3 – Occassional & Local Stress
- AWR < 1000 m3 – Stress Condition
- AWR < 500 m3 – Serious constraint
- India between 1 & 2 for present
- Future demand will lower the AWR

Variation

Huge Temporal and Spatial Variation

100 mm in Rajasthan to 11000 mm in Cherrapunji (Still Cherrapunji is dry)

Limited Rainfall Season

River Systems concentrated in limited area (71 % water resource in 36 % area). Balance 29 % for 64 % area.

North & East are water rich and West & South are water short

Irrigation

- Around 80 % of harvested water is used for irrigation by flood.
- Actual irrigated area is 70.64 mha as against 88.72 of created potential (32.20 is Major Projects, 12.10 is Minor Projects & 44.42 is ground water)

Maikaal

- Maikaal Bio-Cotton.
- Water Scarce Area.
- Advancing cotton plantation by 6 to 8 weeks.
- Low Cost Drip Irrigation
- Pepsi Drip

The Market Creation Approach

Product

Price

Supply Chain

Promotion

Sustainability

AMIT STATUS IN INDIA

- More than 15000 drip systems with small holders
- 4 AMIT manufacturers.
- More than 100 Dealers / Assemblers
- Covering 5 states viz. Gujrat, Maharashtra, Karnataka, Andhra Pradesh, Himachal.

Case Study No. 1

Small Holder with 1 Acre of Land

No water Source

Cultivates neighbor's Land for 25 %

Daily wage Labor @ US$ 1.5/day

Vegetable Kit 100 sq.m 5 month old

Mainly home consumption

Saves around US$ 7 to 8 / month

Surplus given to relatives

Plans round the year production

Case Study No. 2

Widowed Woman with 17 year son

Small Piece of land without water Source

Son works in nearby town for US$ 40 per month

She works as cook for US$ 10/month

Vegetable Kit 100 sq.m

Sales around 50 Kg/month

Makes around US$ 8 per month.

Viewed as life changing system

Case Study No 3

Vegetable Kit 100 sq.m

Wife and Daughter fill the barrel and look after the plants

The produce is mostly for home consumption

Save around US$ 6 to 7 per month

Surplus is given to friends and relatives

Case Study No. 4

Daily wage labourer

Wife maintains the vegetable kit

Never grown vegetables in the past

Produce mostly for home consumption

Vegetable consumption is almost daily as compared to twice a week earlier.

Surplus given to friends / relatives

Case Study No.5

Farmer family of 7 people

Use vegetable kit 100 sq.m

Produce for home consumption and surplus for sales

Vegetable consumption has increased in daily diet.

Save around US$ 7 TO 8 per month

Case Study No 6

Farmer with 3 acres land

Open well with diesel pump

Horticulture Kit for 3000 sq.m of Lemon

3 Cement barrels of 1000 liter of capacity

Fills the barrels with pump and operates by gravity

Claims that saving in fuel cost itself pays for the drip system

Case Study No.7

Small holder with 3 acres of land

Daily wage labour for sugarcane factory

Open well with limited water

Pomogranate plants with drip system on 2000 sq.m

Earns more than US$ 500 as net income

He will go for expansion in pomogranate plantation