Welcome

Command Area Development with Micro Irrigation

By

Jain Irrigation Systems Ltd.

Small Ideas. Big Revolutions.

Jalgaon

Product Divisions

Agriculture Division

- Agricultural R&D
- Farming
- Tissue Culture
- Vermi-compost
- Organic Manure
- Bio Gas

Applications:

- Agriculture
- Horticulture
- Nursery
- Domestic Gas

MIS Division

- Drip Irrigation
- Sub soil Irrigation
- Sprinkler Irrigation

Applications:

- Open Field Irrigation
- Control Irrigation
- Landscape

Pipe Division

- PVC Pipes & Fittings
- PE Pipes & Fittings
- Well Casing & Screen Pipes

Applications:

- Drinking Water
- Farm Irrigation
- Plumbing
- Sewerage
- Effluents
- Cable Ducting
- Gas
- Dust suppression

Sheet Division

- PVC Free Foam
- PVC Celuka
- PVC Rigid
- PC Compact
- PC Corrugated

Applications:

- Advertising
- Interior Designs
- Industrial
- Building & Construction
- Marine Industry
- Transport
- Greenhouse
- Stadium Roofing

Food Division

- Onion & Vegetables Dehydration
- Fruit Puree, Pulp and Concentrate.
- IQF

Applications:

- Processed Food
- Soups
- Salad Dressing
- Juice
- Baby food
- Ice cream
- Confectionary

Solar Division

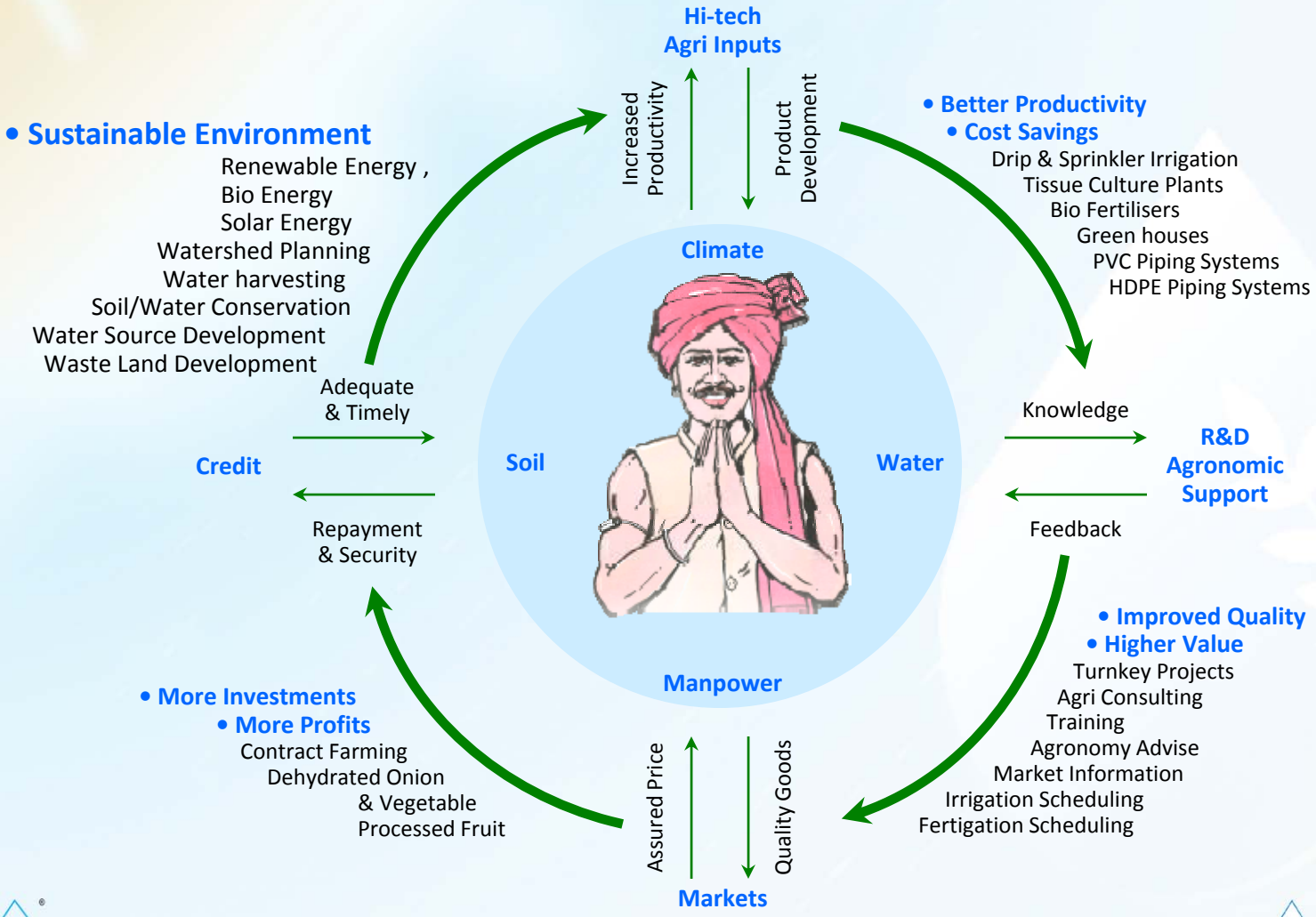
- Solar Water Heating
- Solar Lighting
- Solar Inverter
- Solar Pump
- Solar Dryer
- Solar Fencing

Applications:

- Domestic
- Commercial
- Industrial

Jain Integrated Model

The Jain Self Sustaining Agri Cycle



More Crop Per Drop™

Jain Irrigation Systems Ltd.

Micro irrigation - Complete Product-Service Package of JISL

A] Pre-sale counseling	B] Survey and Sampling	C] Designing the system
• Understanding the farmer's need and preferences. • Providing broad advices to the customer on cultivation choices.	• Detail engineering survey. • Soil & water analysis. • Agro-climatic data collection. • Water source assessment. • Collection of crop data.	• Interpretations of soil water and agro-climatic data. • Choice of right component and designing the system factoring in the crop, soil, water, and climatic data.
D] Installation of the system and support to the farmer	**E] Agronomical advisory and extension service**	**F] R&D Services**
• Installation of the system in the farmer's field. • Training of the farmer to use the system properly. • After sales service.	• Providing complete irrigation & fertigation schedule. • Providing complete package of practice for cultivation. • Repeat visits by the company's agronomists for advising the farmer from time to time. • Seminars on productivity increase for specific crops by experts from JISL.	• Farm R&D • Lab R&D • On-field trials • Publication of literatures, leaflets and catalogues. • Publication of Manuals containing good agricultural practices.

Advantages of Drip Irrigation for different crops

Crop	Yield (MT/ha)			
	Conventional	Drip	% Yield increase	Water Savings (%)
Banana	57.5	87.5	**52**	45
Grapes	26.4	32.5	**23**	48
Sweet Lime	100	150.0	**50**	61
Pomegranate	56.0	109.0	**98**	45
Tomato	32.0	48.0	**50**	31
Water Melon	24.0	45.0	**88**	36
Chilies	4.2	6.1	**44**	63
Sugarcane	128.0	170	**33**	56
Average	53.51	81.01	**54.75**	48.12

Source: Report of Task Force on Micro Irrigation, 2003

Sprinkler Irrigation Systems - Benefits

Crops	Yield (t / ha)		%	Water Used (mm/ha)		%
	Conventional	Sprinkler	Increase	Conventional	Sprinkler	Decrease
1. Wheat	1.5	3.0	100	600	450	25
2. Maize	1.5	2.5	66	600	450	25
3. Vegetable	6.0	10	66	600	450	25
5. Wheat*	3.84	3.84	--	303	167	45
6. Groundnut*	0.77	0.855	11	475	225	52
7. Coffee**	4.0	7.8	95	600	300	50

** These are result of experiment conducted on various research station viz. Hanumanagr, Brore and Loonkaransar in Indira Gandhi Canal Area. Paper presented by S.K. Mathur & M.S. Shekawat, Krishi Bhavan, Bikaner, Rajasthan during June 1996 at Institution of Engineers, Bangalore - Sprinkler workshop.*

*** Result of the experiment conducted at Regional Coffee Research Station, Chundale, Wynad, Kerala.*

Problems in Conventional Flow Irrigation System

1) Excessive Use of Water
2) Infertile soils
3) No Water at Tail End
4) Less Water Use Efficiencies
5) Land Acquisition issues
6) More Time required to construct canals

Integration is the Key

Linking of Drip Irrigation Systems with pressure pipeline or Gravity Pipeline scheme instead of construction of conventional canal network can solve the problems

Advantages of Integration

i. Increase in Water Use Efficiency

ii. Irrigation On Volumetric Basis

iii. Increase in Crop Yields

iv. Cluster Approach

v. Generation of Local Employment

vi. No or very less land acquisition issues

Technical Issues

- Cropping Pattern
- Water Requirements
- Head / Pressure Requirements
- De-silting, Filtration and silt disposal
- Power Availability
- Hardware and Software Availability
- Training Needs of Farmers

Commercial Issues

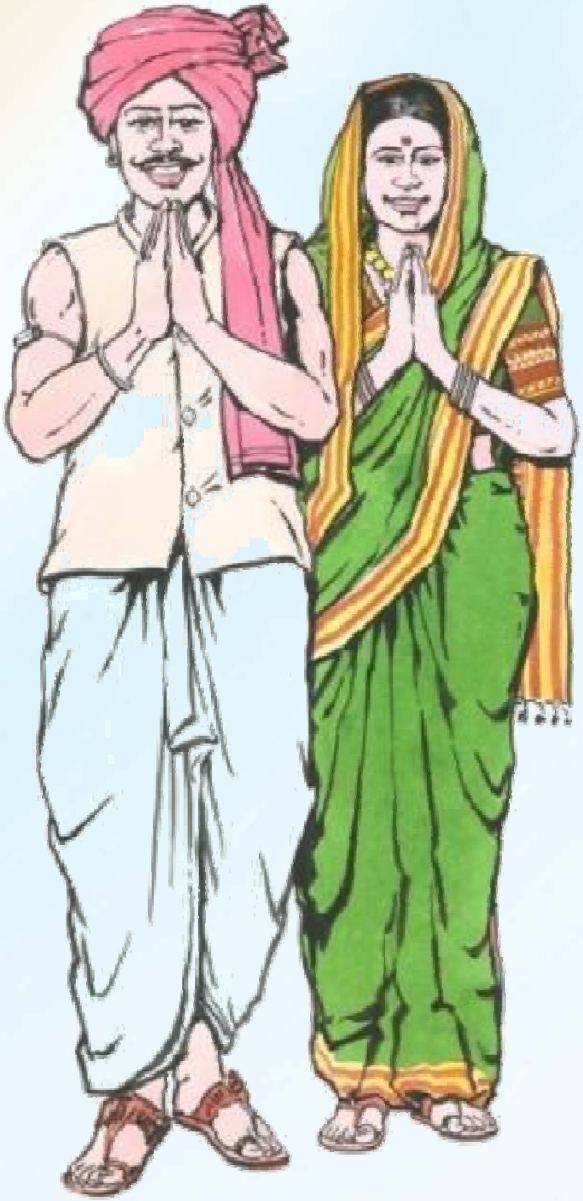
1. High Initial Costs (CAPEX)
2. Availability of Central & State Subsidies
3. Bank Loans
4. Recovery of OPEX issues

Social & Operational Issues

1. On Demand Approach
2. Mind Set of Farmers
3. Co-operation among the farmers
4. Awareness Among Farmers
5. Training to Farmers

INTEGRATED MICRO IRRIGATION – JAIN MODEL(MAJOR PROJECTS EXECUTED BY JAIN)

Sr.No.	Project Name	State	Type of Project	Focus	Approx. Area, acre	Estimated Cost, INR Million
1	Balh Vally Medium Irrigation Project	Himachal	IMI	Sprinkler	6000	650
2	Shiggaon Lift irrigation Scheme	Karnataka	IMI	Sprinkler	25000	1680
3	Narmada Canal Project, Sanchor	Rajasthan	IMI	Sprinkler	350000	2770
4	Indira Gandhi Nahar Pariyojana	Rajasthan	IMI	Sprinkler	37000	220
5	Sardar Sarovar Narmada Nigam Ltd	Gujarat	IMI	Drip	2000	50
6	Purna Medium irrigation project	Maharashtra	Gravity Piping	Piped	15000	110
7	Chandrabhaga Medium Irrigation Project	Maharashtra	Gravity Piping	Piped	15000	100
8	Pulivendula Canal Project	Andhra	IMI	Micro	15000	510



Thank You

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Water is life . . .

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