

★ "WHILE WE CHASE OUR DREAMS INTO THE STARS,
OUR FIRST RESPONSIBILITY IS TO OUR EARTH." ★

"There is more to Jain Irrigation than Irrigation". Indeed it is probably the only Company in the country which is not only an Agricultural Consultancy Organization or Contracting Colossus or a Pioneer Manufacturer of Hi-Tech Agricultural inputs. It is 3-in-1.

We have the largest pool of Agricultural Scientists, Technicians and Engineers in the Private Sector. Give us a Desert or a Ravine, Saline, Hilly Patch of land where not a blade of grass has grown, we shall give you back a smiling lush green Pasture or Blooming Horticultural Fields or a thick Black Forest.

We do not stop at Library or Laboratory or only Research. We undertake tasks from Conception to Commissioning and can even go a step further and add Operations and Management. We have an enviable track record for developing cost effective, down-to-earth solutions for complex challenges in the field of Agriculture. Our Management is Professional; and our Professionals are Committed. Our core strength is our Global Experience with Local knowledge. We use the best of the technology with the rustic Common Sense, Indians are known for.

**Agricultural Services
Offered by
JAINS**

[A] Preliminary Feasibility Report (PFR) & Studies:

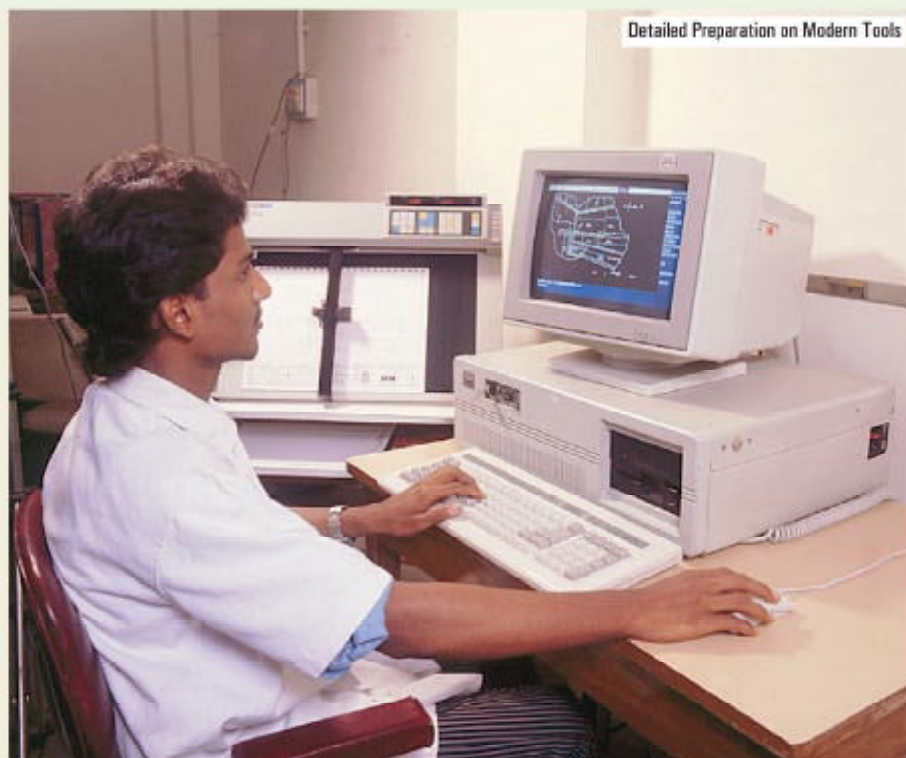
- Land Title Verification, Access & Measurement.
- Soil Type, Land Use Classification & Capability
- Water Resource: Availability, Quantum, Quality, Reliability, Conservation & Recycling.
- Climatology: Rainfall, Temperature, Wind Velocity & Humidity Profile.
- Crop Pattern, Suitability & Suggested Changes.
- Status of critical Agro Inputs & Infrastructure: Power, Labour, Credit, Transport & Markets
- Social Conditions, Constraints & Environmental Aspects.

- Institutional, Legal & Administrative Framework & its Status.
- Preliminary Overall Techno-Economic Feasibility.

[B] Detailed Bankable Project Report:

- Detailed Data, Working & Documentation of the items covered in PFR.
- Scope of our Services : Location Specific Technological Inputs & Product Supply.
- Time Schedule for Implementation.
- Investment Estimates & Cash Flow Statements.
- Benefit-Cost Ratios.
- Administrative & Management Aspects: External & Internal.

Complete Project Planning and Implement- ation



[C] Turnkey Project Capability:

- Available Own Equipments & Machinery.
- Available Inhouse Techno-Commercial Expertise.
- Committed Action Plan for step-by-step Implementation
- Capital Investment & Working Capital Requirement Schedule.
- Other Support Required & Assumed from the Offerer.
- Identified Critical Success Factors.
- Respective Roles & Responsibility Defined.
- Dispute Resolution Mechanism.
- Final Offer & Conditions Precedent.

[D] Post Project Evaluation & Remodelling (For Existing Projects):

- Same as in A, B & C above.



Automation - The future

The complete project planning and implementation in entirety may not be required in some cases. If so, Jains can take up even a part of the project for improving productivity & stability even in low rainfall areas.

The approach calls for an integrated resource management strategy with desirable land use which enables conservation of rainfall, optimum use of water and efficient maintenance of soil fertility. Land & water are inseparably linked like flesh & blood. Land based productive activities are dependent on terrain, soil, biomass & water (surface & ground). The resultant production system will assure greater productivity & more dependable harvest and protects the land, conserve water & improve income.



Seed production - success story begins from here

Partial Project Planning and Implement- ation



Project Fundamentals - The Homework

The success of the project will depend on the appropriate institutional arrangements with dedicated, motivated and resourceful leadership, which commits itself to time schedule and resolves to proceed in a systematic manner nurturing traditional knowledge and integrating it with modern methods of data collection, compilation, interpretation & supply & use of technological inputs.



Project Implementaion - The Hard Reality



(A) Soil & Land Studies:

- Soil survey & mapping, sampling, testing & type determination.
- Soil fertility & capability evaluation.
- Soil conservation, treatment & amelioration.
- Land title, measurement, access & investigation.
- Land form & use, short term & long term planning.
- Land reclamation & rehabilitation measures for optimum use.

Soil and Land Studies

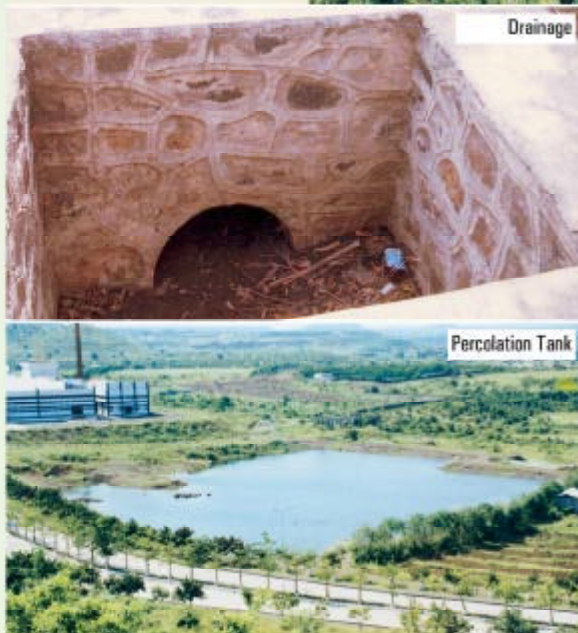
"The nation that destroys its soil destroys itself."



Water Management

(Short Term)

"Water is life's matter & matrix, mother & medium."



(B) Water Management (Short term):

- Water sampling, testing & treatment.
- Surface & ground water investigation & their conjunctive use.
- Water conservation & harvesting measures.
- Water requirement assessment & allocation.
- Choice of irrigation method & source.
- Water drainage system.



(C) Integrated Local Watershed Development:

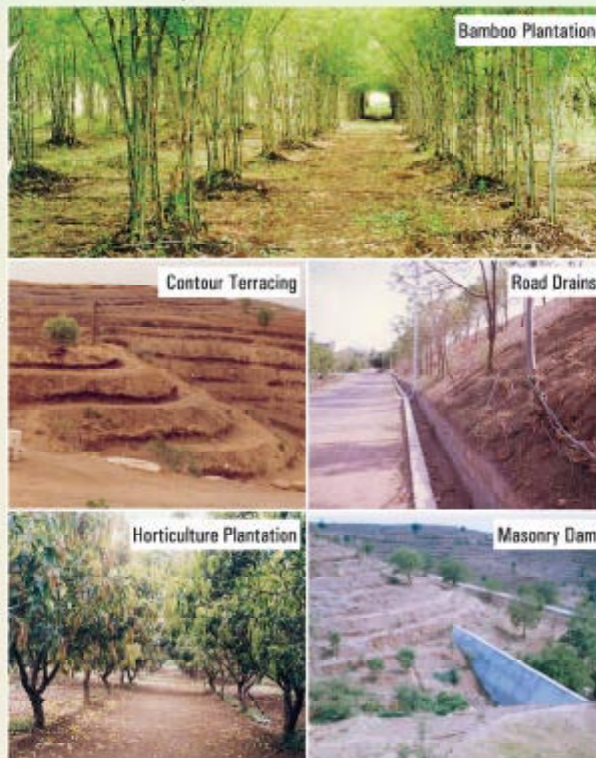
In short term, we work for benefits which are immediate, and in long-term our approach will be for a full-scale assessment of the problems and more practical and permanent solutions to realise the full potential of the natural resources of the region or hydro-geological unit. The steps involved are:

- Preparation of thematic & reliable maps & data base including terrain features, land & water use status and available facilities.
- Socio-economic survey of surrounding areas giving data on human & animal resources, living standards and incomes of each household & corroborating the same with secondary data available from census & different Govt. offices & departments.

Integrated Local Watershed Development

(Long Term)

*"Man makes
deserts bloom &
lakes die."*



Crop

(Selection
Planning &
Development)

*"Trees are live
storage tanks."*

(D) Crop / Plantation : Selection, Planning & Development.

- Even problem soils and land (saline, waterlogged, degraded, sandy, barren or rocky, hilly, acidic & ravines) can be gainfully reclaimed and made productive with plantation of properly selected plants & flora (Vegetation & afforestation).

In addition to its economic value, vegetation / green cover in various forms is also used for stabilisation and / or enrichment as well as conservation of soils, land & water for sustained use.

Mulching, lay farming (crop rotation), staggered planting, alley cropping (food crops grown in rows of trees or shrubs), mixed planting, strip cropping, inter-cropping (with compatible genotype), inter-row gapping & contour cultivation methods

- Appraisal of soils (texture, moisture holding capacity, wilting point & available moisture, infiltration rate, bulk density & porosity, fertility & nutrient balance), Overall land use, its intensity, cover, biomass density & productivity.
- Assessment of Water Requirement as per the selected cropping plan, irrigation method & climatological data.
- Working out Water Balance including surface & ground water potentials, water quality, use & reliability.
- Selection, Design & Construction of Engineering structures: Location specific diversions [ditching, trenching & bunding (staggered or continuous), paved channels, bandharas road drains], bench terracing, grassed waterways, gully plugging (with or without pipes), stone pitching, Gabion structures, silt detention & water harvesting storages (ponds, lakes, tanks), composite check dams & such other conservation, sodding & stabilising structures as may be needed.

are also adopted as rain & soil conservation measures in planning & development of the watershed and/or reclamation of land.

- Farm crops/plants (food, fibre & fuel) and vegetables.
- Energy plants (yielding latex, oils & waxes).
- Forage & fodder grasses, crops/plants, (grazing lands & pastures.)
- Horticultural plantation.
- Herbal, aromatic & medicinal plantation.
- Agro-forestry (including nitrogen fixing leguminous trees & plants) & Bamboo.
- Afforestation with shrubs, bushes & wild trees.

(E) Training, Services Assistance Inputs Available :

Training may include class room training, on-the-farm working experience as well as refresher courses pertaining to entire agricultural operations. All the training inputs are available from in-house team, though external assistance may be sought for a specialised field.

- Land preparation, sowing, planting, cultivation, other routine farm operations, harvesting & storage.
- Crop fertigation & protection.
- Different aspects of agronomy.



**Training
Services
Assistance
Available**



Farm Irrigation

**Specialised
Assistance
On
Demand**

"Investment in knowledge pays the best interest."



Landscape Irrigation



Cultural Events

- Installation & commissioning, operation & maintenance of farm machinery implements, irrigation systems, tools & equipments.
- Water source identification & local watershed development
- Maintenance of farm properties, live-stock, manpower and other infrastructure.
- Vendor development for Agricultural inputs
- Marketing Strategy & planning.
- Selection & provision of library & laboratory inputs.
- Role of government officials, Common Interest Groups (CIG), Self Help Groups (SHG), Water Users Association (WUA), Environment & Social Activists.

- Overall farm management including demonstration, trials, record and book keeping.

(F) Specialised Assistance On Demand:

- Building, construction, architecture and infrastructure.
- Landscape and turf irrigation : planning, design and management.
- Golf course Irrigation : planning, design & management.
- Seed improvement & development planning.
- Educational and / or cultural event management.

A typical Land Reclamation project taken up by us on Turnkey basis shall have following profile & contents for study & implementation:

- Land Title, Measurement & Access: Verification & Investigation.
- Land Type & Use: Present & Future Sustainability.
- Soil Status: Capability, Conservation, Treatment, Planning & Implementation.
- Groundwater evaluation & scope of its use in conjunction with surface water.
- Surface Water Availability, Constraints, Reliability & Price Considerations.

- Long Term Sustainable Water Source Creation, (Reservoir, Storage) Recharging & Reclamation: Integrated Local Watershed Development & Management.
- Climatology Profile & Averaging, Data Collection & Interpretation.
- Study of traditional existing **Cropping Pattern** to devise a new Crop & Vegetation-Green Cover: Drought Resistant / Energy-Crop Plantation & Afforestation.
- Irrigation Water Requirements & Scheduling.
- Choice of Irrigation Methods considering crop requirement, Local Tradition, Social Structure Cost & Water Use Efficiency.
- Water Drainage Planning & Implementation.

**Wasteland
Reclamation
Turnkey
Project**

Planning & Implementation

"If only society and environment could work together, we would have a masterpiece."



- Assessment of **Direct Inputs**: Live Stock, Farm Equipment & Machinery & other Infrastructure.
- Existing status and desired changes needed for **Other Critical Infrastructure**: Power, Transport, Credit & Markets.
- Existing **External Administrative, Institutional & Legal Framework, Structure** and its efficacy / status.
- **Socio-economic** considerations, conditions & constraints of the surrounding region and their impact / contribution for the optimal land & water use.
- **Recommended Approaches & Internal Administrative & Management Structure** including Job Allocation, Education, Experience, Qualification and Training Input Needs.
- **Techno-Economic & Financial Viability**, Cash Flow Statements, Benefit-Cost Ratios, Sensitivity Analysis budgeting & profitability, Break even analysis etc.



(i) Land preparation :

- Soil Moisture Survey Equipment.
- Open well excavation & tube/bore well drilling.
- Farm equipment & machinery operating knowhow.
- Earth work heavy equipment & machinery selection.

(ii) Agricultural Inputs :

- Seeds, Nursery saplings & Grafts, Banana Tissue Culture plants.
- Fertiliser & pesticides.
- Vermi compost biofertiliser & neem based biopesticides products & know-how.
- Water soluble solid & liquid fertilisers.

**Product
and
Technology
Supply**

*"Marvel will be born
only when human
endeavour is
complemented
by technology."*



(iii) Irrigation products :

- Micro & Sprinkler Irrigation Systems.
- PVC / LLDPE / HDPE pressure Piping Systems.
- PVC Non-pressure Piping Systems.
- Sub-soil Drainage Systems.
- Well Casing & Screen Piping Systems.
- PVC Riser & Column Pipes and Fittings.
- Safety & control valves.
- Irrigation automation : hardware & software.

(iv) Training, Services, Assistance on every aspect of Modern & Traditional Farming is being made available routinely.

(v) Others :

- Shade-net houses & Green houses know-how.


Jain Irrigation Systems Ltd.

Key to Prosperity

Jain Plastic Park, P. O. Box: 72, Bambhori, Jalgaon - 425 001.

Tel: 0257-250011/22, Fax: 0257-251111/22,

Visit us at: www.jains.com