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COVER STORY

MICRO

IRRIGATION SYSTEM

The conventional method of irrigation has meant a tract of land submerged under water. So when it comes to watering the field the farmer pours water throughout the field indiscriminately. "But too much need not necessarily be too good," is what the drip-irrigation theory says. For maximum productivity, inputs need to be optimum and not maximum, is the cardinal principle of this theory. Thus micro-irrigation, or drip- irrigation, as it is alternatively called, aims at providing optimum water to a plant at the right area which is the root zone and in the right quantity which is decided by previous experience and continuous research.

A micro-irrigation system delivers water to the crop using a network of mainlines, sub-mains and lateral lines, which are nothing but pipes, their roots and sub-roots with emission points spaced along the lengths. Each emitter or orifice supplies a small, precisely-controlled, uniform application of water, nutrients and other growth substances directly into the root zone of the plant. In this way, the plant never suffers from water stress brought about by the withdrawals of moisture and nutrients.

Drip-irrigation Systems aims at providing optimum quantity of water at the right area instead of flooding the whole field with water.

Micro-irrigation has several advantages, which justify the investment one may make by installing such a system.

It provides regulated flow of water only near the root zone of the individual plant, as per the daily requirement. Drip-irrigation results in a 30-70% saving of water, increases crop yields by as much as 30% and saves labour costs. It is ideally suited for irrigating different types of terrain and soils. Application of fertilizers and chemicals is also possible through the system.✪

Tea, Coffee?

No, No! Milk, fruits? Yes, Yes!

The late Dr.Herbert Shelton, father of the science of 'naturopathy' would have been pleased to hear this. There is a virtual ban on the consumption of tea, coffee, tobacco and nicotine within the precincts of the Jain companies. Except for a few special visitors like the overseas buyers, these items are a luxury for the rest. That's not to suggest that the Jains are bad hosts. In fact, when it comes to hospitality, it is traditionally Indian at Jalgaon. That's for the outsiders. What about the insiders — the employees and workers? It is stricter. There are no exceptions. Workers get milk instead of tea and coffee. For a person who hasn't seen this live, it is difficult to believe. Especially, if one looks at the co-operation extended by staff members at all levels and all times. Wasn't there any resistance ever to such a policy? "There was," says B.H. Jain. In truck loads. "In the beginning, there was a lot of hue and cry which lasted for about six months. But we were convinced that these things ruin health. And we made our intention clear —that we will not incur any expenditure which spoils the health of our own people."

Despite such stringent policies, the trouble-free industrial climate which the group has enjoyed is commendable indeed. And for this, the company doesn't have a formal HRD wing. Is it possible to run a company with a manpower of seven hundred without a proper Human Resources Department? "We take care of the human aspect ourselves, as it is the most important one for any business in general, and ours in particular. We have tried to maintain a flat organisation structure. I know most of our executives on a one-to-one basis. Whenever I meet them, my first question would be concerning their problems," avers Jain.✪

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For Bhavarlal H. Jain, addressed as 'Bhau' respectfully by one and all knowing him, success has not come the easy way. From a farmer to a government officer to an industrialist has taken three long decades before the seeds sown by him reaped fruits. But he may not have to wait just as long to reap the fruits of the seeds he is sowing now. When will he start reaping them? C M Technicals finds out in an exclusive interview with him.

□ **What prompted you to enter a greenfield area such as micro irrigation systems?**

We had a strong footing in agriculture right from the beginning since I came from a family of farmers. We wanted to take up manufacture of products related to agriculture. We knew about the success of micro irrigation in Israel and we decided to put all efforts into it.

□ **How extensively has this concept spread in India?**

It has spread out faster in Maharashtra, as it is a water deficient state. Since it is a new concept, it has taken a little longer to catch on. But with government assistance plus our own efforts at popularising it, the pace has quickened. These systems are very efficient in crops like papaya, mango, and sugarcane.

□ **How much does it cost to install an MIS in terms of per acre?**

The installation cost of a drip irrigation system ranges between Rs.8,000-13,000 per acre.

□ **Would not such a high cost make it within reach only to the rich farmers?**

Yes, it does. Being an additional investment, poor farmers cannot afford it.

□ **On what basis are you projecting such a phenomenol growth, after growing 100% every year during the past three years?**

Even amongst the upper strata of farmers, we have only scratched the surface. Equally important is the fact that the pay-back period is not long. It ranges from around three months to two years at the maximum. Against that, each system that we sell has a guaranteed life of five years. Last but not least is the help from an unexpected quarter. The Union Government plans to bring one lac hectares of land under this system by 1991-92 and 5 lac hectare by the end of the eighth plan. The government has provided Rs.150 crores for the scheme as subsidy. This scheme will definitely help the small and marginal farmers having land holdings upto four hectares.

B.K. Jain (Left)
"One cannot succeed in this business sitting in air-conditioned cabins."

□ **What is the secret behind the sucess of JISL in so short a span of time? How did you succeed where others failed?**

There are two main reasons. The first is our rural base. One can not succeed in this business sitting in air-conditioned cabins. It is imperative to know the nitty-gritty of farming. Second, we have a committed workforce. Take for instance, our engineering talent. We have got four extrusion lines of which one is imported. The other three were fabricated by our engineers in-house. The cost of all the three taken together was less than the cost of one imported machine for which we had paid about Rs.1 crore. Similarly, for our PVC foam sheets, we developed technology in-house instead of relying on foreign know-how. This has surprised almost everybody in the industry.

□ **Now that you have succeeded in the domestic market, what are your future plans for the company?**

We plan to enter foreign markets firstly by tying up with foreign collaborators and then exporting the output. We have obtained a license for use of advanced technology from Chapin Watermatics Inc, U.S., to manufacture superior drip-irrigation systems and components than what we are manufacturing today. We are also setting up a joint venture with Plexite (U.K.) to manufacture "Timbron" which is a wood substitutable plastic material. We also plan to introduce solar water heating systems in the domestic market in the near future.

□ **Where would you like to see Jain Irrigation three years down the road?**

The ongoing expansion-cum-diversification programme would be implemented over the next eighteen months. When fully operational, which could be 1995-96, we expect a turnover of around Rs.275-300 cr. Half of that should come from exports. I would like our company to be amongst the top three micro irrigation companies in the world.✪