

## B.H. JAIN - A DOYEN OF DRIP SYSTEM - SETS THE EXAMPLE

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**F**uturologists are necessarily inspired persons of pragmatic vision. They can be cool, rational, calculating and even having absolute faith in God. H.G. Wells, George Orwell, Nietzsche, Burckhardt, Spengler, Toynbee and Sorokin were people who had the wisdom to foresee what is going to happen. These people had a special talent which others did not have. One such person in India, who could see far ahead of his time, is Dr.N. Mahalingam.

He has been tirelessly piloting the concept of diverting every drop of rain water that drains into the sea for irrigating the water-starved millions of acres of land in our country to boost up the economy to the levels of Israel. The strategy propounded by Dr.N. Mahalingam for Macro Economic levels has caught the attention of our planners. Serious efforts are being taken for inter-linking the river basins for easy transfer of surplus waters from one surplus basin to a deficit basin. Shri Bhavarlal H. Jain has been spear-heading the task of implementation of the efficient water management system at Micro level i.e., at field level. The efforts of Dr.N. Mahalingam at Macro-level and that of Bhavarlal Jain at Micro level are sure to enable us to catch up with the levels of Israel. The opportunity knocks at the doors of the people and it is upto them to make use of the same.

Mr. Bhavarlal H. Jain of Jalgaon rose from rags to riches through hard work, perseverance and intelligent use of knowledge to convert a barren area into a prosperous zone. What was a beginning, with Rs. 7000 in 1963, blossomed into a turnover of Rupees 142 crores in 1992 and provided employment to thousands with potentials to stabilise indirect employment for millions. His effort was a case of million dollar miracle which requires to be appreciated, applauded and emulated.

Born in the family of a small trader-farmer in a tiny village situated under the foot-hills of the Ajanta caves, Mr. Bhavarlal Jain took a B.Com., LL.B., got a Gazetted Officer's post but turned it away to commence a business career in which he has risen to laudable heights by sheer dint of merit. What really catapulted Mr. Jain to prominence was the concept of Drip Irrigation, the significance and relevance of which to Indian conditions has been brought out by Dr.N.



*Bhavarlal H. Jain*

Mahalingam from time to time. Here is a man who pioneered an integrated approach to Drip System in a manner worthy of approbation.

Mr. Jain, ably assisted by a self-motivated professional team, spread the message and created an awareness throughout the country. The growth of the Drip System has been phenomenal from a meagre 1500 acres in 1987 to cover 65,000 acres of 32 different crops in 1992. He proved that the contribution which the drip technology can make towards National Agricultural Productivity is no longer under cloud. In 'Drip', he has persistently declared that he is producing and propagating something of value not only to his own mission, but also to the entire nation. The need for an economy to emulate his example to achieve a higher per capita, more employment and rural development will be revealed if we take a peep into the development of our economy in the past forty-five years.

After 45 years of independence, our economy has been liberalised and allowed to play an active role in the world market. During the past we have



# The micro-irrigation miracle

ing the machinery, the plant was made operative for the processing of 'papain', an agro-based industrial enzyme derived from the latex of half-mature papayas. It is used in breweries in the prevention of crystallisation of beer in deep-freezers; in the food industry as a meat tenderiser; and in the pharmaceutical industry.

Bhavarlal offered the farmers a guaranteed price for their latex and raw fruits. Centres for the collection of the latex were set up in the region, and spot payments were made after the latex was checked for purity, fat content and quality. This established an identity of interest with the farmers, and at the same time established papain as an export-oriented industry.

Since its inception, the unit has been a 100 per cent foreign exchange earner. For his outstanding innovativeness and export performance of papain, Bhavarlal received several awards and recognition at the hands of presidents, vice-presidents and other dignitaries in the country.

In 1980, two years after starting the manufacture of papain, Bhavarlal diversified into the manufacture of PVC pipes, yet another item primarily needed by the farmer for irrigation. The production increased rapidly from a shaky initial 200 tonnes in the entire first year to 25,000 tonnes per annum. He believed in high turnover at low profit; and was able to build up a team of dedicated professionals who agreed with this credo.

But what really catapulted the Jain group into prominence was the drip-irrigation concept. The growth of the drip systems has been phenomenal—from a meagre 1,500 acres covered in 1987, to over 65,000 acres in 1992, covering 32 different crops. The cost of installing a system ranges between Rs8,000 and Rs15,000 per acre, and is a non-recurring expense. The farmers have been shown that drip-irrigation can save them thousands of rupees a year, as well as precious water.

Avers Bhavarlal, "The contribution that the drip technology can make towards national agricultural productivity is no longer under a cloud. In drip-irrigation, I believe I am producing and propagating something of value, not only to my own mission, but to the entire community."

Today, the Jain group is a medium-sized industrial house with a turnover of more than Rs150 crore, and with several interesting new projects on the anvil. It manufactures a diverse range of products all leaning towards agriculture directly or indirectly—micro-irrigation systems, chemicals and enzymes, extruded and moulded plastics, and electrical transformers.

There are several 'firsts' against the Jain name. They were the pioneers of the micro-irrigation concept, which delivers an optimum quantum of water to the crop, without wasting any of the precious natural resource. They are No. 1 in the processing of PVC in India, and also the largest producers of de-odourised, ultrapurified papain in the country. In fact, they rank second in the entire world in the production of refined papain. The Jain group meets about 15-20 per cent of the global demand for papain.

The Jains have full-fledged facilities for the manufacture of food products; and their factory processes and spray-dries various products such as calcium caseinate, protein hydrolysate, sodium lauryl sulphate, sodium benzoate, etc. There is a proposal to revive the production of spray-dried banana powder, and extend the idea to mango. The fruit powders, which are used in ice cream and soft drink manufacture, have vast export potential.

The rigid PVC pipes made by the

They are designed to withstand pressure and fit any Jain pipe accurately for easy installation.

The group also makes speciality pipes, e.g. the well casing and ribbed screen pipes, plumbing pipes and corrugated coilable PVC pipes, with or without drainage perforations. Most of these, made from quality PVC compound for strength and durability, are a replacement for the standard G.I. pipes.

These achievements have won for the Jain group enviable collaborations with some of the most distinguished names in the USA, Australia, Austria, Italy and Switzerland. The world-renowned Australian inventors Rib-Loc joined hands with Jain to give the country Rib-Loc pipes, a great technological breakthrough in the world of PVC pipes. These spirally wound PVC pipes are extremely light, yet exceptionally strong and cost-effective; and suit a number of applications.

For the last three years, the Jains have

Emco's manufacturing range extends upto 150 MVA 220 KV class transformers. The company has recently entered into a collaboration with General Electric of the USA to manufacture high-voltage on-line automatic step voltage regulators.

Custom moulding is a new concept. It enables the Jains to provide the customer with a total range of services, from engineering and design to making a prototype and the finished product in desired quantities. With 16 microprocessor-controlled moulding machines (with slot capacities ranging from 3 gms to 1.5 kg), the mould shop is fully geared to process any thermoplastic where high dimensional accuracies are required.

And finally, for the last six years since 1987, the Jains have been identified with micro-irrigation systems.

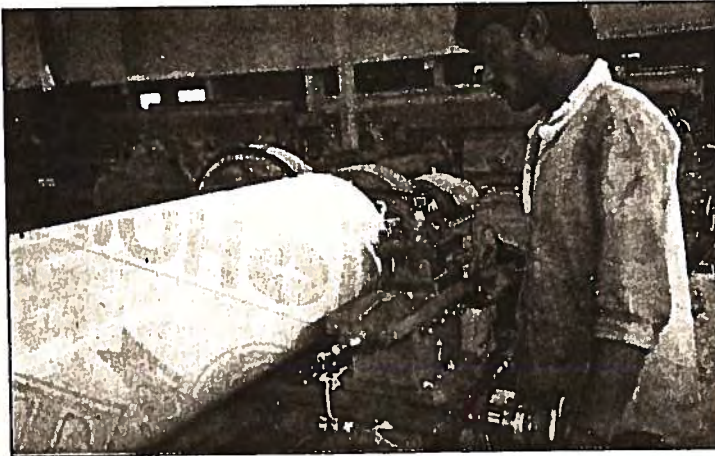
Apart from being in ever-increasing demand within the country, Jain Irrigation's micro-irrigation systems have been accepted in over ten advanced countries; and the export of these products is gaining the company precious foreign exchange as well as international renown.

In order to further improve the overseas acceptance of the systems, Bhavarlal has deployed the eldest of his four sons to the USA. Anil, based in New Jersey, has been a non-resident Indian (NRI) for the last couple of years; and has been in charge of contacting and dealing with the steadily increasing list of foreign collaborators that the group has.

Son No. 2, Ajit, looks after the day-to-day running of the pipes plant, while the third son, Ashok, is in charge of the irrigation plant and all domestic advertising and marketing. The youngest, Atul, has been given the portfolio of popularising the micro-irrigation systems in the Middle East.

Various experiments connected with irrigation are routinely conducted on the farm. Bhavarlal is planning to construct a manmade lake in the vicinity. "Jalgaon was my birth-place, farming is in my blood; and I am most happy here," he claims.

That is why they speak of Jalgaon as being synonymous with the Jain group. There is the vast industrial complex of the pipes division spreading out adjacent to the railway tracks, half-hidden by a row of towering trees. There is the distinctively styled (by Banaji Associates, the well-known Bombay architects) Jain Irrigation complex, situated bang on the main state highway. And there is the verdant, breezy Mohadi R&D farm, sheltered on three sides by hillocks—a real heaven on earth.



Grooving of PVC pipes

group have outstanding resistance to almost all acids, caustics, salt solutions and other corrosive liquids and gases. They do not rot, rust, scale or pit inside or outside. They are resistant to the growth of bacteria, algae and fungi that could cause offensive odours or create sanitation problems. And most importantly, they are non-toxic, which is a key consideration in food, drug and chemical processing, where fluids must be protected against contamination.

The pipes can be fabricated and joined by a variety of methods—solvent welding, fusion welding, threading, flanging, with each method hav-

ing a special advantage for specific plastic materials and particular jobs.

Similarly, the PVC pipe fittings are made by injection moulding and fabrication to the same exacting standards.

also been experimenting with various designs, materials and manufacturing practices for plastic foot-valves. The company has produced foot valves which produce higher discharge by 15-25 per cent and save energy of over 20 per cent. Ball-valves with true union and compact design, which are easy to instal, assemble and maintain trouble-free over long periods, are also being made from uPVC.

Another uPVC product is EX-Cel, the lightweight, low-density chemically expanded rigid foamed sheet that has an exceptionally fine and homogenously closed cell structure.

Emco transformers, made in collaboration with the world-renowned S.A. Ateliers De Secheron of Switzerland (a member of the Asea Brown Boveri group of companies), incorporate the latest developments in transformer technology.