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Micro Irrigation, Macro Benefits

Changing its portfolio from just providing irrigation systems to farmers, to offering them integrated farm solutions, is what propelled Jain Irrigation Systems (JISL) into the black, disclosed B H Jain, Chairman, JISL, in his last interview to Smart AgriPost before he passed away earlier this year. We re-produce the interview as a tribute to him.

How did you enter the agricultural sector?

My mother is my biggest source of inspiration. When I ventured out, her advice to me was: “Do something which will not only fill the stomachs of you and your family but do something that will enable you to feed even the birds

and the animals who do not have words to speak. There is no one to attend to their woes.” Hence I forayed into agriculture as it was the only vocation that could meet such a mandate.

What is the current business portfolio of JISL?

There is more to JISL than just

irrigation. It has other divisions such as Solar, Food Processing, PVC Pipes, PE Pipes, PVC Sheets and Plumbing Products. Its total exports amount to ₹1000 crore while its annual turnover is a billion dollars. We have over 10000 employees, including 1000 scientists. JISL offers a wide range of precision irrigation products



more water-efficient systems which yield water savings of 30-65 per cent over the traditional surface irrigation systems. In response to its major buyers' concerns about food safety and increased interest in farm-level practices and traceability, JISL helps farmers meet international standards. Its own farms are globalgap certified.

Do you also offer customised solutions for Indian farmers?

The company has developed with IFC, the Jain gap standards for its small farmer suppliers, who supply fruits for processing, which helps the company meet its buyers' concerns without significantly increasing costs for low-income farmers. Globalgap is an internationally recognised set of farm standards dedicated to good agricultural practices or gap. Under global gap, farmers adopt safe and sustainable farm practices and use prescribed quantity of water, fertilisers, pesticides and other inputs for their produce. JISL trains farmers and helps them adapt to these norms and get the certification, which helps them sell their produce to global buyers. At present farms of around 10,000 farmers who are providing mango, banana and onion to JISL are Jaingap certified.

suitable to various agro-climatic conditions and crops, which also include rice. At Jalgaon, the company has a high-tech agriculture institute spread over a 2,500 acres. The institute, equipped with technology demonstration farms, houses a full-fledged training and extension centre. The company, with its diversified offering and services, has emerged as an integrated farm solution provider.

When you say integrated farm solution provider, what do you mean by it?

Our scientists and technologists provide various extension services including soil and engineering surveys and agronomic support to farmers and, accordingly, offer them the right kind of irrigation solutions. They work in the field with the farmers, who are the customers for micro-irrigation systems. They go to the field, carry out surveys of farms and collect details related to crops and their spacing, water source, field dimensions and other agro-climatic information. Soil and water samples are collected and tested

to ascertain various parameters. Then, depending upon the agro-climatic data, such as rainfall and temperature, as also crop details such as variety, age and root system, a system is designed and prescribed for irrigation, which should not only be effective, but also economically viable in the long run.

Over the years, the company's efforts have enabled farmers to switch from flood irrigation to



What in your view could be done to strengthen India's irrigation system?

The first is the ability and willingness of the farmer to make the initial capital investment. Traditional cost or no cost way of using the irrigation water, lesser awareness of the benefits of technology and poor realisations of the farm produce of farmers continue to defer decision of adopting micro irrigation technology. Other challenges include relatively smaller land holdings, cropping patterns & crop rotation issues, availability of power and dealing with dispensation of subsidy by the government.

Moreover, it is true that Micro irrigation has already covered over 5% of the irrigated cultivable land in India, in percentage terms, this is no great achievement. The US, Israel and some parts of Europe pioneered the use of micro irrigation in the early sixties. We in India adopted MIS in late eighties or to be sure early 90s. All said and done, we already have the 2nd largest land under cultivation through MIS. The no.1 slot is occupied by US.

We can take a number of steps to increase the penetration. First and foremost the government must change its ways to help the farmer by way of capital subsidy. It must be paid to the farmer online on first come first served basis. This will cut avoidable delays and host of malpractices in subsidy distribution on some water guzzling crops such as sugarcane and banana. The use of MIS needs to be made mandatory. The government under PPP scheme must embark on a nationwide campaign for adoption of MIS for field crops such as rice and wheat. The MIS manufacturers also need to provide after sales service and the quality of their products needs to improve. MIS is location specific and must be tailor made for every



farmer and its farm geometry. The agronomic services by the manufacturers have to be made compulsory on online basis. The artificial differentiation on the ground such as small scale versus large scale have to be dispensed with in the interest of the farmer. Additionally, proper training to them has to be made obligatory on the part of the manufacturer. Wherever power is not there or it is difficult to be provided or wherever the farmers are using diesel powered pump sets, the government ought to provide substantial capital assistance to acquire the Solar agri pumps. These measures can increase the penetration dramatically.

What's your view on agriculture subsidy?

The subsidy given to farmers should be treated as an investment for creation of infrastructure and assistance for empowerment of marginal farmers, rather than financial aid or assistance. When the government can treat the investment on irrigation storages as a "grant", why cannot the drip Subsidy also be considered as an Investment in infrastructure for agriculture rather than a Subsidy?

How much of a challenge does the size of land holding pose in adoption of MIS?

Nearly 80% of the 140 million farming families hold less than 2 acres of land. Large land holdings enable the farmer to implement modern agricultural techniques and boost productivity. Small land holdings restrict the farmer to use traditional methods of farming and limit productivity.

As land holdings are small, more people invariably work on the farms in the rural areas and coupled with the obsolete technology, farm incomes come down. We can however adopt contract farming on large scale and minimise the need for corporate farming with large areas owned by the companies. This model will probably suit the psyche of the Indian farmer because he is very much attached to the land.

JISL went through a tough period in 2009-10. How did you turn it around?

The company disposed off its unrelated, non-core businesses. Finance was deployed to improve the revenues of its core activities. In addition, we sold part of our equity to an equity fund and raised about ₹200 crore to settle the accumulated debt burden and thereby reduce the corporation's burden of interest payments. We also brought about operational



efficiencies in all of our activities including purchase, manufacturing and marketing.

The future growth plans include organic growth as well as expansion through acquisition. We envisage vast scope for our Food Processing and Green Energy Divisions. We are also planning to introduce integrated projects which offer resource to root approach for enhanced productivity of per unit of land, water and other resources employed in agro activities.

Do you think private participation in agriculture sector should be encouraged?

Yes, private investment is essential if agriculture is to fulfill its vital function of contributing to economic development, poverty reduction and food security. Agricultural production needs to increase by at least 60 per cent over the next 40 years to meet the rising demand for food resulting from world population growth, higher income levels and lifestyle changes. Given the limited scope for net area expansion, agricultural growth will rely mainly on new increases

in productivity, supported in particular by innovation and private investment in physical, human and knowledge capital. Agricultural investment can help contain upward pressure on food prices in a context of rising land and water scarcity, thereby enhancing global food security.

What are the interventions required to transform agriculture sector in India?

While the government repeatedly states that agriculture is a priority sector, it has paid only lip service to the farmers' cause. The capital formation by the government and private sector has been consistently and constantly going down over past six decades.

On the contrary, Jain Irrigation as a public corporation has invested a significant amount (over ₹4000 crore) in the past three decades in agriculture and agri business including agri produced processing activities. The climate change, proverbial debt ridden saga of the farmer makes it difficult even for the government to do much about the farm and farming. The

government knows that agriculture only accounts for 18% of the nation's GDP though it continues to provide employment to over 55% of the population.

Moreover, the crop and food distribution as well as marketing policies of the government do not support the farmers or they are not designed to offer him a fair deal. The communication and digital revolution have somehow bypassed the agriculture sector. Despite policies and pronouncements to the contrary, the government's financial support in real terms is much less than desired. The farmer suicides cannot be stopped without making the credit roll to the farm sector smooth and timely. The private moneylenders continue to have a field day and usurp the farmer's hard earned money and incomes. Lack of education is another factor which does not allow the farmer to adopt new technologies in the area of better seeds, superior planting material, water management and judicious use of chemical and organic fertilizers and other nutrients.