



## Drops Against Drought Jain Irrigation, India

### Challenge

One quarter of the world's population lives in regions that will be suffering from severe water shortage by 2025 due to more frequent droughts, dry spells and heat waves. Farmers in developing countries usually depend on rainfall to water their crops. To alleviate the drastic effects of depleting water tables, an alternative to weather dependent flood irrigation is needed for agriculture in the worst hot regions, the Middle East, Asia and sub-Saharan Africa.

Jain Irrigation Systems (JISL) serves markets facing a water-strapped future. The company is the world's second largest producer of drips, sprinklers and other forms of micro-irrigation systems (MIS) targeted towards small-scale farmers. JISL enables farmers to prevent crop shortages and losses due to lack of rainfall – helping them adapt to the effects of climate change. MIS allow Indian farmers to minimize the use of water and energy by delivering the water directly to where it is needed (drips on the root zone of the plant) at frequent intervals and specific quantities.

### Business Model

70% of the India's population depends on incomes from agriculture. The founder of JISL, Mr. B.H. Jain, has provided sustainable water management systems in the Indian market for over 40 years.

The business benefits from a network of partners: since 2007, the International Finance Corporation (IFC) has invested USD 60 million in debt and USD 14.47 million in equity in JISL. The Indian government provides a subsidy for farmers to purchase MIS. The size of the subsidy for a farmer depends on the size of the land cultivated. Farmers working on less than five hectares of land are eligible for a 50% subsidy on MIS. The subsidies reach the farmers through banks in some states, while others are dispersed by government-sponsored, special mobile units. Farmers finance the rest of the cost through savings or loans from the banks. The average loan for MIS equipment per farming household is about USD 817.

JISL also maintains a network of more than 2,000 dealers who raise awareness among farmers. They also conduct surveys on the terrain, soil and crops in order to adapt irrigation solutions to the farmer's needs. In addition, JISL provides training through JISL's engineers and agronomists on site and in the field for more than 60,000 participants per year.

JISL also includes farmers as producers in the value chain. The company procures fruits and vegetables from 4,150 contract farmers directly and from another 25,000 indirectly through traders.

### Company Background

Jain Irrigation Systems is a multinational organization founded in 1989 by Bhavarlal H. Jain in Jalgaon, Maharashtra, India. JISL operates in the Middle East, India, Europe, Australia, Central and South America and the United States. In India, JISL is the largest provider of MIS with a 55% market share. JISL is listed on the Bombay Stock Exchange and employs 6,000 people in India at this time. The Jain family remains the majority owner of the company. In 2010, JISL reported sales of USD 820 million.

### Partner

International Finance Corporation (IFC), a member of the World Bank Group, provides financing and advice for private ventures in developing countries. IFC is the largest investor in JISL and supports the project design, implementation, knowledge-sharing of international good practices as well as the dissemination of information about the benefits of MIS.

On behalf of

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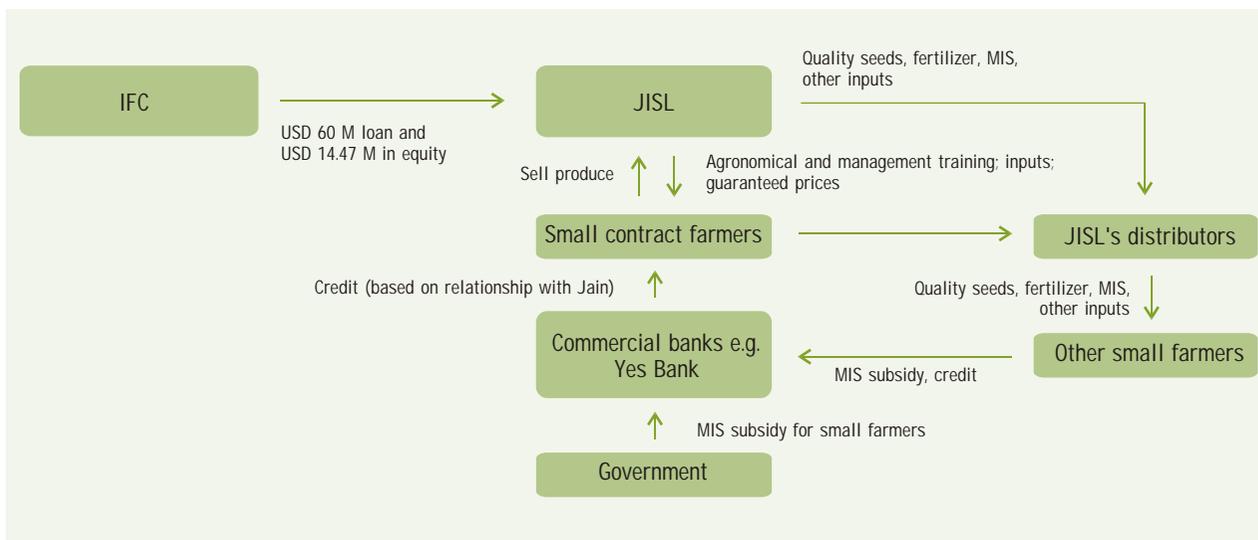


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## Benefits

Globally, agriculture consumes 70% of water resources. The sector is both heavily affected by climate change related water scarcity, and competes with other uses. MIS reduce the total amount of water used for farming. Water savings of up to 50% compared to traditional flood irrigation systems have been reported. Thus, MIS can alleviate intermittent water shortages and ensure high yields even in water-stressed regions. Furthermore, agriculture with MIS requires less energy for pumps and less fertilizer. Reduced use of fertilizer not only improves soil quality, but also avoids greenhouse gas emissions.

JISL outperforms its industry peers on financial results. The company recorded an annual revenue growth of 40% and an EBITDA margin of 18% from 2006 to 2010. Half of all revenues were generated from MIS.

Farmers benefit significantly from cooperating with JISL. Selling to JISL provides them with additional income of USD 300-400

per acre on average. Working with JISL's MIS goes along with efficiency gains, access to input finance, agronomic support, high-quality seeds and reduced dependence on rain-fed irrigation. As a result, farmers have raised net incomes by as much as USD 1,000 per acre, depending on the kind of crop harvested. This results in a complete return on investment in usually less than one year.

As of October 2010, 260,000 farmers have implemented Jain's MIS. The biggest hurdle to growth continues to be access to finance. Only 50% of farmers in India have access to institutional finance and private banks continue to regard lending to small farmers as risky. As a result, JISL is considering new models for farmer finance, including a complete set of services such as financing to fit farmers' needs in addition to providing irrigation equipment and productivity advice.

Currently, JISL has extended operations beyond India into South Asia and Turkey with sights set on targeting markets in Africa in the future.

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