

Initiating Coverage  
 Sector: Agriculture  
 BSE Sensex: 17,482

## JAIN IRRIGATION SYSTEMS

 BUY  
 CMP Rs116  
 TP Rs185

03 November 2011

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We initiate coverage on Jain Irrigation System (JISL) with a 'BUY' rating (upside of 59%). We like JISL for (1) leadership position in Micro Irrigation (MIS) with 55%/35% market share in drip/sprinkler irrigation respectively, (2) huge MIS growth potential with only 5 Mha (of 69 Mha) covered under MIS and long term Government commitment with launch of National Mission on Micro Irrigation (NMMI), (3) robust growth expectation in the piping segment driven by demand from agriculture and construction along with margin improvement, (4) CAGR of 23% in Agro processing driven by strong demand for processed food, (5) Emerging cash flow positive with FCF of Rs1.1bn in FY13 & improvement in debtor days and (6) Acquired overseas businesses likely to grow at 12% over FY11-13 with expansion in operating margin. We initiate coverage with a 'BUY' recommendation on the stock with a target price of Rs185.

**Government thrust on MIS:** JISL is the biggest player in MIS in India with 55%/35% market share in Drip and Sprinkler irrigation respectively. Post launch of NMMI (Jun'10) we expect faster processing of subsidies and more farmers adopting MIS thereby helping JISL register a growth of 19.7% over FY11-13.

**Piping business demand to grow at an 8% over FY11-13:** Piping business (29% of standalone revenue) has shown a CAGR of 12.6% over FY09-FY11 driven by demand from the construction and agriculture sectors. We expect an 8% CAGR in demand in PE and PVC pipes for FY11-13. Increasing application of PE pipes and introduction of new products is likely to help JISL capture further market share.

**Food dehydration & Solar:** Food processing & solar businesses together contribute ~17% of the total standalone revenues. We expect the food processing business to show a CAGR of ~25% over FY11-13 mainly driven by Mango processing. We expect solar business to clock a CAGR of 50% over FY11-13.

**Overseas subsidiaries to help improve margins:** The operational subsidiaries performance has improved over the years and contributes approx 20% of the overall revenue. The consolidated margin is likely to expand by 59bps from 19.1% to 19.7% over FY11-13 due to a 74bps improvement in subsidiary margin.

**Free Cash Flow to increase:** We expect JISL's operating cash flow to improve in FY13 led by better management of debtor days which we expect will improve from 164 days (FY11) to 157 days (FY13e) due to better subsidy disbursement from Government. FCF is likely to be Rs1.2bn in FY13e as against -ve Rs3.9 in FY11

### VALUATIONS AND RECOMMENDATION

JISL has historically traded in a band of 18x-32x 1 year forward P/E. We assign a 1-year forward P/E of 17x on FY13 EPS of Rs10.9 to arrive at our TP of Rs185. We believe that if JISL is able to improve its working capital cycle, the stock could get re-rated and would deserve a higher multiple than 17x.

KEY FINANCIALS		(Rs mn)				
	FY10	FY11	FY12E	FY13E	FY14E	
Net Sales	33,858	40,724	49,555	58,320	69,071	
YoY Gr (%)	20.1	20.3	21.7	17.7	18.4	
Op. Profits	6,805	7,937	9,588	11,491	14,008	
OPM (%)	19.9	19.1	19.3	19.7	20.3	
Adj. Net Profit	2,476	2,807	3,146	4,188	5,842	
YoY Gr (%)	91.3	13.4	12.1	33.1	39.5	
KEY RATIOS						
EPS (Rs)	6.5	7.3	8.2	10.9	15.1	
ROCE (%)	13.2	11.9	12.3	13.2	14.5	
RoE (%)	23.8	20.3	18.6	20.9	24.0	
PER (x)	18.2	16.1	14.4	10.8	7.7	
EV/ Net Sales (x)	2.1	1.7	1.4	1.2	1.0	
EV/ EBITDA (x)	10.4	8.9	7.4	6.2	5.1	

### STOCK DATA

Market cap	Rs45.1bn
Book Value per share	Rs40
Shares O/S (F.V. Rs2)	386mn
Free Float	67%
Avg Trade Value (6 months)	Rs272mn
52 week High/Low	247/112
Bloomberg Code	JIIN
Reuters Code	JAIR.BO

### TOP SHAREHOLDERS

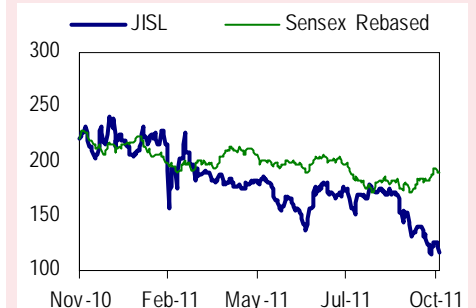
Name	% holding
Emerging Markets Growth Fund.	5.1
Janus Orion Fund	4.6
Smallcap World Fund	4.5
Columbia Acorn International	2.9
Capital Intl Emerging Mkts Fund	2.6

\*As on Sept 30, 2011

### PERFORMANCE (%)

	1M	3M	12M
Absolute	(18.8)	(31.6)	(47.2)
Relative	(26.9)	(28.0)	(32.6)

### RELATIVE PERFORMANCE



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**INVESTMENT RATIONALE**

**Micro Irrigation – the growth engine**

The estimated size of MIS industry is ~Rs30bn and is growing at more than 20% pa. Of the total possible 69.5 Mha that can be covered under MIS, only 5 Mha has been covered under drip and sprinkler irrigation in the country. Although MIS adoption by farmers is growing at a fast pace, the penetration is still very low (only 8%). Due to the advantages of MIS (improved yield, low water consumption) over conventional irrigation and a strong government push for MIS, we expect coverage under MIS to reach over 9 Mha by 2015.

**Industry Size**

	FY08	FY09	FY10	FY11
Rs bn	12	17	25	30
Mn Ha	2	3-3.5	4-4.5	5

Source: Company, PINC Research

JISL is the largest player in India's organised micro irrigation sector with a market share of 55% and 35% in drip and sprinkler irrigation respectively. It is the No. 2 player globally, after Israel's Netafirm, commanding 15-20% of the world market. JISL's MIS business has shown a CAGR of 33.6% over FY09-11 and we expect 27.4% revenue CAGR over FY11-13 from this business.

**Proportion of MIS lowest in Asia; specifically in India**

The penetration of irrigation worldwide is ~14%, with Asia logging the weakest coverage at 4%. Europe and America top the list with 47% and 36% penetration respectively. There remains an immense potential for micro irrigation in Asia in general and India in particular. In India, there is a total irrigation potential of ~140 Mha of which MIS potential is ~69.5 Mha. Out of this 69.5 Mha only 5 Mha (~3.5% of the total irrigation potential) is covered under MIS. MIS potential thus remains highly untapped in India.

**Worldwide spread of Micro Irrigation**

Region	No of Countries	Available Irrigated Area (Mha)	Sprinkler Irrigated Area (Mha)	Drip Irrigated Area (Mha)	Total Micro Irrigated Area	% of available irrigated area
Americas	35	41.9	13.3	1.9	15.2	36.3
Europe	35	25.2	10.1	1.8	11.9	47.2
Asia	46	194	6.8	1.8	8.6	4.4
Africa	53	12.5	1.9	0.4	2.3	18.4
Oceania	5	2.6	0.9	0.2	1.1	42.3
<b>Total</b>	<b>174</b>	<b>276.2</b>	<b>33</b>	<b>6.1</b>	<b>39.1</b>	<b>14.2</b>
<b>India</b>	<b>-</b>	<b>140</b>		<b>5</b>	<b>5</b>	<b>3.6</b>

Source: Company, PINC Research

**MIS - an edge over traditional irrigation**

MIS has started gaining popularity with a number of states starting to adopt MIS on account of the following reasons 1) thrust on water saving and 2) substantially high crop yield.

**1) Thrust on water saving**

MIS is commonly used in developed countries in areas with water paucity. These systems aid the judicious use of water and improve productivity, raise incomes through good crop yields, and enhance food security of households. A number of states have thus started encouraging MIS with a key objective to save water.

In India, water scarcity due to ground water depletion is a major concern. The country's rainfall has been estimated at 4,000km<sup>3</sup> annually, of which only 690km<sup>3</sup> is harnessed for useful purposes. Against this backdrop, micro irrigation practices such as drip and sprinkler irrigation can help ease the problems of water scarcity.

## 2) Substantially high crop yield

In both drip and sprinkler irrigation the yield per acre for all the crops increases substantially by ~20-100% (See table). There is also a significant saving in the water consumption.

Crop wise yield and water savings						
	Yield(Quintal/Ha)			Water Supplied (cm)		
	Conventional	Drip	% Increase	Conventional	Drip	% Saving
Banana	575	875	52	176	97	45
Grapes	264	325	23	53	28	48
Sugarcane	1,280	1,700	33	215	94	65
Tomato	320	480	50	30	18	39
Watermelon	240	450	88	33	21	36
Cotton	23	30	27	90	42	53
Chillies	42	61	44	110	42	62
Papaya	13	23	75	228	73	68
Wheat	46	54	17			

Source: Company, PINC Research

JISL has also been carrying out experiments on drip irrigated rice for over four years with good results. Going forward, it plans to commercialize rice on a large scale. We believe India has huge potential for MIS in paddy (See Annexure).

### NMMI to fuel growth in MIS

National Mission on Micro Irrigation (NMMI) was launched as a Mission from June 2010. Prior to this it was implemented as the centrally sponsored scheme where budget allocations were done annually. With the onset of NMMI, allocations will be done under the five year planning which is a long term commitment from the government side. NMMI is likely to bring in the following benefits:

- 1) It will help State Governments (especially northern and eastern states) to focus on micro-irrigation with assistance from the central Government. This will help increase area under MIS and also increase the number of crops under MIS via this mission. Once fully executed, NMMI is expected to bring an additional 2.85 Mha land under MIS.
- 2) NMMI will consolidate all the micro irrigation schemes under major government programmes such as National Food Security Mission (NFSM), Integrated Scheme of Oilseeds, Pulses, Oil palm & Maize (ISOPOM), Technology Mission on Cotton (TMC) etc. under one head which will help improve the efficiency of the programme.
- 3) Apart from increasing the number of crops and area under MIS, NMMI will also help streamline the process of subsidy disbursement and assist companies like JISL get subsidies faster and improve their working capital cycle.

### Budget allocation to MIS increasing

The budget allocation to MIS has risen over the past few years. Given the advantages of MIS and an increased government focus on propagation of MIS systems, we expect budget allocations to this segment to increase in the future. (See Annexure)

**Government sops luring farmers**

Budget allocation for MIS is increasing every year so as to lure more farmers to adopt MIS. Subsidy from government to MIS increased by 10% YoY in FY12 from Rs245bn to Rs270bn. As a result, the combined central and state government subsidies range from ~45%-70% (See Annexure) and is driving more and more farmers to adopt MIS although the initial cost is substantially higher in MIS than in traditional irrigation.

This, we believe, is highly attractive for the growth of MIS and we expect more farmers to adopt MIS. However, it is imperative that the government cuts down the reimbursement period for subsidy collection on micro irrigation products brought under the mission mode. In view of the large government subsidy and productivity benefits of MIS, we expect coverage of these systems to double to over 9Mha by 2015 - representing a market opportunity of USD1bn/year over the next 4-5 years.

**Widespread dealer network - A strong support for MIS growth**

JISL has a strong sales network comprising 2,500 dealers in the domestic market, with 300 more expected to be added on every year. Most of these dealers come from farming background and are influential in their respective regions. This strong local sales force helps company increase its reach in deep suburbs and also helps improve after sales service. At present, Maharashtra accounts for close to 44% of the Company's total revenue, followed by Andhra Pradesh (16%), Gujarat and Tamil Nadu. Gujarat has the highest potential among all the progressive states.

**Dealer network**

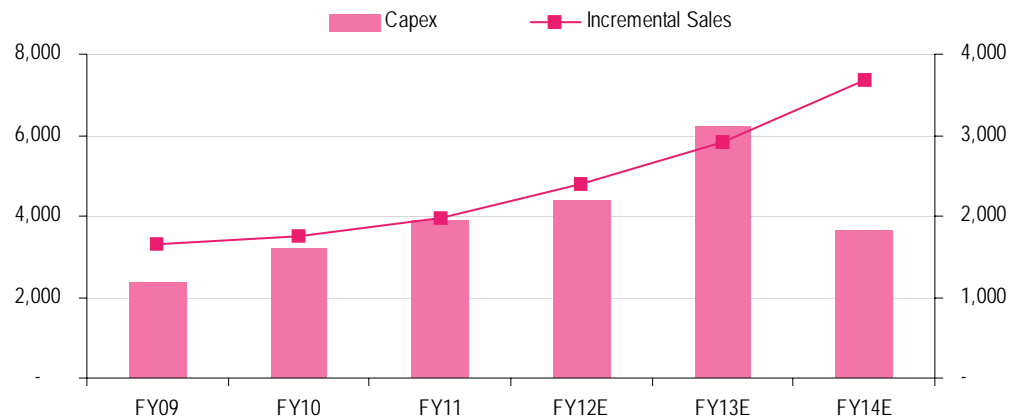
FY07	FY09	FY10	FY11
1,000	1,800	2,200	2,500

Source: Company

**Capex and dealer network to help grow by 27.4% over FY11-13**

JISL is the leader in India's micro irrigation segment with 55% and 35% share of the drip and sprinkler irrigation markets respectively. It is the second biggest company globally, after Israel's Netafirm, with 15-20% of the world market share. MIS comprises close to 50% of JISL's standalone revenues and has shown a CAGR of 33.6% over FY09-11 on the back of strong retail sales in the states of AP, Gujarat, TN, and consistent growth in Maharashtra with project revenue(10% of MIS revenue) also flourishing from states like Karnataka, Rajasthan, Tamil Nadu, Himachal Pradesh etc. The Net fixed assets turnover ratio is ~3.0-4.0x for the MIS business. We have assumed a total capital expenditure of ~Rs7.0bn for the MIS segment over FY12-14. This will help boost growth in revenue for the MIS business and is likely to help JISL garner further market share in the organised segment from the current share of 55% and 35% in drip and sprinkler irrigation respectively.

**Capex v/s Incremental Sales (Rs mn)**

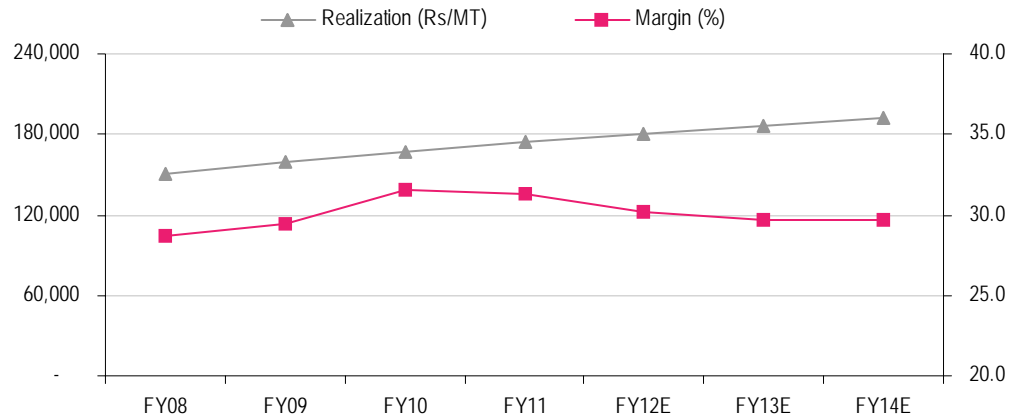


Source: Company, PINC Research

**Margins in MIS to be maintained at 28-30%**

The MIS margin has been in the range of 28-30% and going forward we expect the margins to be maintained at this level. Drip (80%) and Sprinkler irrigation (20%) businesses have margins of 30-34% and 18-20% respectively. Any incremental cost fluctuation is passed on to the end consumer and we believe that going ahead value mix is likely to play an important role in maintaining margins.

**Margins v/s Realisation**



Source: Company, PINC Research

**Debtor days to improve post NBFC and subsidy disbursement**

Over the last 3-4 quarters JISL is seeing a high working capital cycle due to (1) increase in receivables from 130 days in FY08 to 162 days in FY11. Including securitization the receivables days stands at 270 days in FY11 v/s 177 days in FY09 and (2) Inventory remaining high at 177 days.

However, the receivables days have come off from 270 days in Q4FY11 to 244 days in Q1FY12. We expect that the Company would have received Rs1-2bn from the Maharashtra government in Q2FY12 which will further reduce debtor days.

**Standalone Debtor and Inventory days**

	FY07	FY08	FY09	FY10	FY11
Standalone Receivables (Rs mn)	4,436	5,956	7,816	8,876	14,818
Debtor days	-	130	131	119	162
Debtor incl Securitization (Rs mn)	4,436	5,956	10,554	16,316	24,614
Debtor days (incl. securitization)	-	130	177	219	270
Inventories (Rs mn)	2,743	4,844	5,195	6,062	9,149
Inventory days	133	181	147	139	177

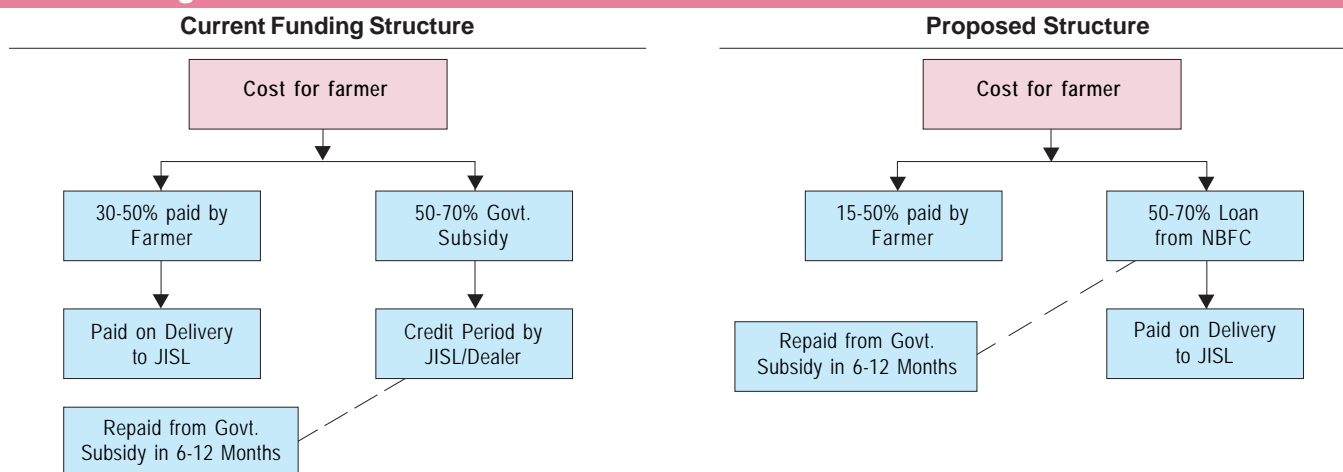
Source: Company, PINC Research

**NBFC – a permanent answer to improve working capital cycle**

JISL has applied for an NBFC license which will finance the farmer for MIS and help the Company improve its receivables cycle. We expect the license to come either by end of Q3FY12 or beginning of FY13. The total capital commitment for NBFC is likely to be Rs2bn of which JISL stake is likely to be 40% (as an associate company) and the remainder will be by IFC (10%), Promoters (20%) and other investors (30%). The total commitment from JISL for the NBFC will be Rs800mn but it will be less than Rs500mn in the current fiscal if rollout of NBFC occurs in the current year.

We are positive on this venture and believe it will help the Company's working capital issues to be sorted out permanently. NBFC rollout will happen on a pilot basis in Maharashtra initially.

**NBFC funding structure**



Source: Company

**Time to reap the fruits of overseas acquisitions**

JISL made three major acquisitions (Chapin Watermatics, Aquarius Brands and NaanDan Irrigation) in the micro irrigation segment during April '06 to May'07 for a total consideration of ~USD50mn. Since FY09, Chaplin Watermatics has been merged with Jain Irrigation Inc (JII). Total turnover for these three overseas subsidiaries in FY11 was USD170mn as against USD148mn in FY10, registering 15% growth YoY. We expect to see a revenue CAGR of 11% in these businesses over FY11-13. While the acquisitions of Chapin Watermatics and Aquarius helped JISL capture the North American market, NaanDan enabled it to garner market share in South America, Europe and the Middle East.

**MIS Acquisitions**

Subsidiary name	Segment	Current Stake	Country	Date of acquisition	Acquisition Price
Nucedar Mills Inc.	MIS	100.0%	USA	Feb-06	USD 2.1 mn
Eurodrip	MIS	7.4%	Greece	Feb-06	NA
Chapin Watermatics	MIS	100.0%	USA	Apr-06	USD 7 mn
Aquarius	MIS	100.0%	USA	Feb-07	USD 22 mn
NaanDan	MIS	50.0%	Israel	May-07	USD 22 mn

Source: Company, PINC Research



## PVC Pipes- MIS and agriculture growth to boost demand

Demand for PVC is estimated to increase at a CAGR of 9-11% over FY11-13 driven by growth in the agriculture, housing, and construction segments. Given the correlation with agricultural growth, we anticipate a strong demand for PVC as well as PVC pipes (~75% of PVC demand comes from PVC pipes) over the next couple of years. The PVC pipe industry comprises a small handful of major players in the organised sector. JISL with a 15% market share (second largest player) is one of the three major players in the organized market, offering pipes in the 20mm to 560mm diameter range. Rest of the industry is unorganized, fragmented and scattered near the user belts in the country. We expect the Company to benefit from the demand growth by virtue of its strong track record of executing large projects, backed by high brand value.

### PVC pipe applications

Lift & gravity irrigation systems

Potable water supply schemes

Domestic/industrial plumbing

Soil, waste & rain water drainage systems

Chemical transportation

Agriculture pump set suction and delivery pipes

Rising main & distribution lines

Source: Company, PINC Research

### Strong demand for PVC pipes due to agriculture

Demand for PVC is estimated to have increased by approximately 6% in FY11, driven mainly by the pipes segment. The bulk of the PVC pipes demand comes from rural areas for agriculture and irrigation. By having more than 2,500 MIS dealers and a strong network with farmers (contract), the Company is able to cater to even the remotest of villages where the demand for PVC pipes exist. We expect PVC pipes revenue for JISL to show a CAGR of 10.2% over FY11-FY13.

PVC demand has grown at ~3.0-4.6x agricultural growth. A multiple of 3x would imply that if agricultural growth were to remain in the expected 3-4% range, then PVC demand growth would be ~9-12% over the next couple of years.

### PVC Demand Growth

	FY09	FY10	FY11
PVC	4.70%	29.30%	6.0%

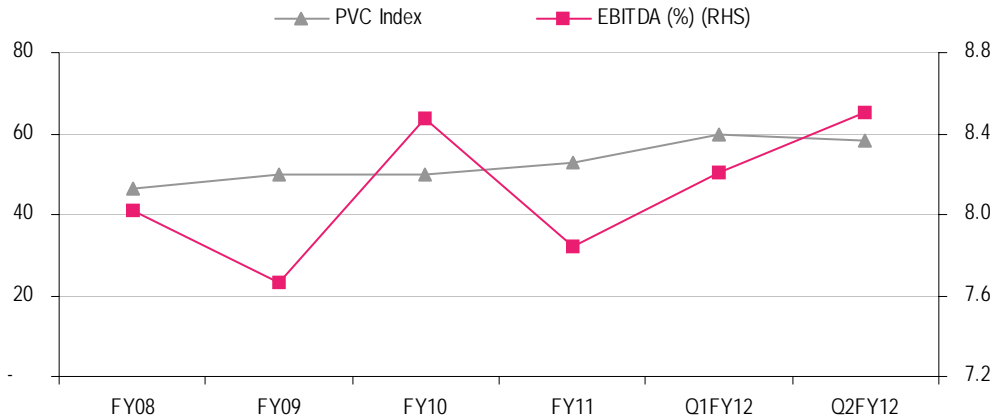
Source: Company, PINC Research

### PVC raw material price hike a pass-on

We expect EBITDA margin for PVC pipes segment to improve to 8.5% in FY12-13. In FY11, when raw material prices increased by 5%, margins only fell by 63bps. The price of resin has corrected by 12% from July'11 to Oct'11 and we expect further correction which is likely to help company improve its margins. The profit margin in PVC pipes would remain intact despite resin price fluctuation as the Company passes on the changes in price to the end consumer.



**EBITDA v/s PVC Index**

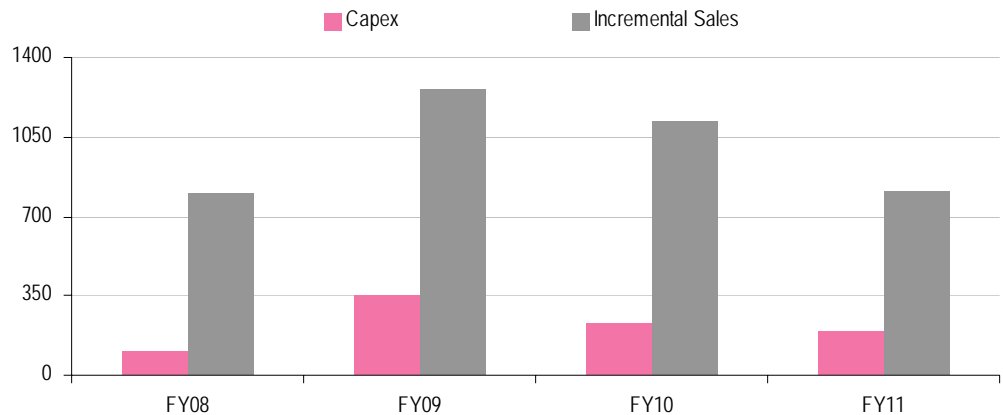


Source: Company, PINC Research, Bloomberg

**Capex augmenting growth**

JISL is continuously adding capacity to meet the growing demand in the PVC pipe segment. The sales volume increased by 14.3% over FY09-11 and going forward from FY11-FY13 we expect volume growth of 4.1%. We expect PVC sales to increase by 10.2% over FY11-13 as against 1% over FY09-11. The company has continuously invested in PVC pipes. We expect capex of Rs400-500mn over FY11-13 in the PVC segment to achieve a CAGR of 6.8%.

**Incremental Sales v/s Capex (Rs mn)**



Source: Company, PINC Research

## Dominant player in Polyethylene (PE) pipes

### PE pipe applications

Gas distribution network

Used for main ducts, cable conduits, road crossings

Pipeline for transportation of water, effluents, chemicals or slurries

Portable water supply distribution

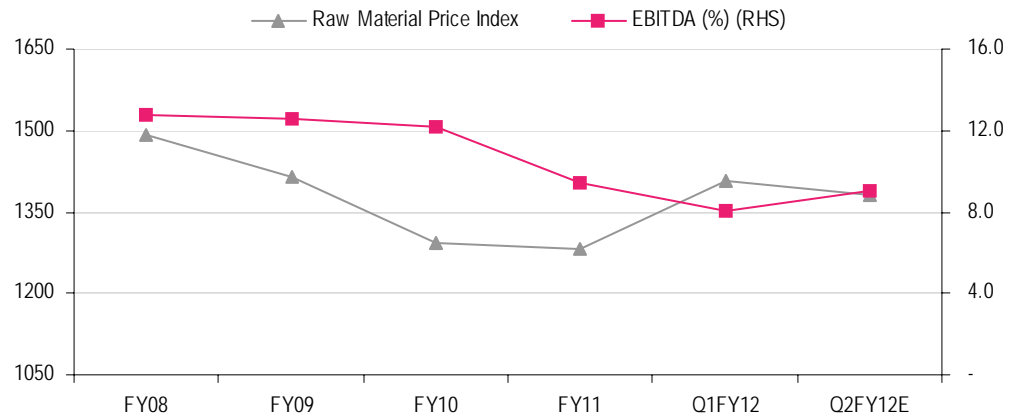
Source: Company, PINC Research

JISL manufactures a wide range of PE pipes. The application of PE pipes is growing at fast pace and yet still new applications are being developed for the product. PE pipes are used in applications such as sewage, disposal of effluents, sprinklers, gas distribution and water conveyance. The introduction of high-quality, less toxic products such as high density PE (HDPE) pipes have lent a boost to demand. Although more expensive than cement products, they offer the advantages of easier installation and a much longer lifespan. PE pipe sale has shown a CAGR of 1% (14.3% volume CAGR) over FY09-11 but with increased application of PE pipes (e.g. Water, Gas) we expect this segment to witness a CAGR of 10.2% over FY11-13. JISL is present in almost all segments of the PE pipe industry, commanding an overall industry share of 30%. Pennval and Dura-line are the other major players in the organized sector. Its thermoplastics range extends from 1mm in diameter to 1,600mm. JISL is the only player in India to manufacture pipes up to 1600+mm dia. JISL has now developed the capability to provide a complete solution to water management, waste water treatment and judicious use of treated water.

### Margins likely to expand in FY12 and FY13

PE segment margins contracted to 9.4% in FY11 from average margin of 12-13% in FY08-FY10 on account of rise in raw material prices in FY11. In Q2FY12 the price of raw material (PE-highly related to crude) fell by 2% QoQ as against QoQ rise of 9.6% in Q1FY12. Going ahead, we expect raw material price to come down and expect improvement in margins to 9.9-10.2% for FY12-13.

### EBITDA Margin v/s Raw Material price Index



Source: Company, PINC Research, Bloomberg

### PE segment sales likely to witness CAGR of 10.2% over FY11-13

With an increase in application for PE products, we have noticed an up-tick in PE volumes for the first time. Increase in volume is primarily on account of extensive application of PE products in various industries. We expect volume to rise by 6.2% over FY11-13 as against 4.8% over FY09-FY11. JISL has done capex of ~Rs600mn over FY09-FY11 in this segment and we expect further capex of ~Rs500mn over FY11-13 to support an expected revenue growth of 10.2% over FY11-FY13.

## **PVC Sheet business – revival still awaited**

The plastic sheet business still has not shown any substantial sign of revival. The market is serviced by 7 manufacturers and some Chinese import. This segment mostly caters to the export market. Major markets for the company's products are Europe and US. Slowdown in the housing market in US and economic downturn in Europe has led to a fall in demand in this business over last couple of years. Going ahead, we expect that before any revival is seen there is likely to be consolidation in the industry which is likely to benefit both consumer and the end users.

### **Growth likely to be flat**

PVC sheet business has shown a de-growth over FY09-10 which was on account of slowdown in the US housing market. In FY11 we saw 20% rise in sales on account of some improvement in H2FY11 but it still too early to deem this as a revival in demand. The company has introduced several new products so that it can reap the full benefit once the market revives. We expect revenue to show CAGR of 3.2% over FY11-13E.

## **Fruit Processing – Strong Growth Opportunity**

JISL is involved in the processing of fruits like Mango (80%), Guava, Papaya and Tomato. We expect the Fruit processing division to clock a CAGR of 25% over FY11-13 owing to strong demand and growth opportunities in this segment. India produces 15% and 8% of world's total vegetable and fruit production respectively. However, only 6% of the total produce is processed as compared to ~60-80% in some developed countries (70% USA, 83% Malaysia). Also India's share in the global food trade is a miniscule 1.5%. Given the growing demand for processed food due to lifestyle changes and storage advantages, the processed food segment is witnessing a strong growth. For e.g. the packaged juices segment is witnessing a CAGR of ~25% while that of fresh fruit and vegetable is growing at only 2.5%. JISL is well placed to capture this strong growth opportunity in the fruit processing segment.

JISL has fruit processing units in Jalgaon, Maharashtra and in Chittor & Hyderabad in AP. The company's fruit processing division has witnessed a CAGR of 22% over FY09-11. Going forward we expect a CAGR of 25.6% over FY11-13 with margins of ~19-20%. In FY11 this segment contributed ~Rs3.2bn (10% of total standalone revenues).

### **Mango Processing – a Stronghold**

India is the largest producer of Mangoes with a 60% share of the world market. JISL is the largest producer of Mango Pulp, Puree and Concentrate in the world with 35% of the world production. The processed mango is used in beverages, fruit Juices and as base in jams. JISL processes both Totapuri & Alphonso mangoes. ~70% of the mango pulp produced goes to 'Coca-Cola India' for its famous mango drink 'Maaza' which is clocking a CAGR of ~30%. JISL exports the rest to Middle East, China and US. Recently, the Company has entered into a JV with 'Coca-Cola India' to implement UHDP (ultra high density plantations) for mango. This initiative will help improve the productivity of farmers and help JISL source better and larger mango produce.

### **Other Fruits contributing well**

Although mango processing remains the main product for JISL in the fruit processing segment (~80%), it also processes other fruits such as guava, pomegranate and tomato. Tomato provides a strong opportunity since today most of the tomato paste requirements are met via imports from China. Also there is a marked shift in consumer preference from the more traditional fruit juices such as citrus and apple to the more exotic ones like mango and guava. The company is also working on setting up a processing line for processing mosambi and other citrus varieties.

## Strong Global Demand for Dehydrated Products

There is a strong demand globally for dehydrated vegetable products for their ease of storage and long shelf life. There is an even stronger demand for Dehydrated Onions (DHO) which is the most widely used dehydrated ingredient. The world DHO market is ~180,000MTPA growing at ~3-5%. The U.S. is the largest producer of DHO while Egypt and India are the other major producers. The DHO market only uses less than 2% of the total world onion produce. Although India is the 2nd largest producer of onions in the world, it controls only 7% of the world DHO market. This gives significant scope for expansion for players like JISL who is the largest manufacturer of DHO in India.

JISL has 4 vegetable Dehydration plants (1 each in Maharashtra and US, and 2 in Gujarat) with total capacity of 18,214MT where it processes primarily white onions and little bit of garlic. It is also setting up a new dehydration capacity of 3000MT in Alwar, Rajasthan. This division has shown a CAGR of 3.4% over FY09-11 (30% over FY08-10). Going forward, we expect a CAGR of 16% over FY11-13 with margins of ~10-13%. In FY11 this segment contributed ~Rs1.4bn (4.4% of total standalone revenues).

### JISL - Strong player in the Indian market

JISL is the largest player in DHO in India and the 3rd largest in the world. All its DHO are exported under the brand 'Farm Fresh'. JISL employs contract farming in Maharashtra to procure its white onion supply. As of FY11, the company had ~6000 acres under contract farming spanning 425 villages with more than 3000 contract farmers managed by 50 Gram Sevaks. ~50% of its total onion supply is procured through contract farming.

JISL produces high quality seeds at its in-house facilities which it supplies to the contract farmers. The onions produced from these seeds have a 17-18% TSS (Total Soluble solids) as compared to a normal 12-13% TSS. These seeds have better germination rate and give good yields with lower bacteria count. This helps JISL get better yields while processing onions. In FY11, the company released a new hybrid of high solid onion for contract farming. It also provides MIS support to its contract farmers ensuring high quality onion produce.

JISL's ability to ensure a good quality white onion supply via contract farming and high quality DHO manufacturing procedures make it a preferred supplier. For its Gujarat plant, JISL procures white onions from local farmers.

### Overseas subsidiaries to help reach out to new geographies

JISL acquired Cascade Specialties in the US in Nov'06 to become the third largest DHO player in the world. This also gave it a strong access to the U.S. market which is the largest consumer of DHO. JISL recently (Nov'10) acquired Sleaford Quality Food (SQFL) in the UK. SQFL is engaged in the business of food ingredients, trading, blending custom packaging and fruit & vegetable food ingredients, mainly in dry form and supplies over 1200 different products. SQFL is the largest distributor in the UK and will allow JISL to market its products in the European region.

#### Contract Farming

Year	Acres	Farmers
FY07	2,660	1,700
FY08	3,000	2,000
FY09	3,000	2,000
FY10	5,000	2,500
FY11	6,000	3,000

Source: Company, PINC Research

## **Bio Tech Tissue Culture – Coming up fast**

The industry is broadly divided into two segments- 1) Fruits and vegetables and 2) Leafy Plants and flowering Ornamental Plants. The industry is predominantly un-organized. Most of the players are engaged in tissue culture for cut flower exports. JISL is involved in Tissue Culture of fruits & vegetables (banana, pomegranate, onion, and mango) where it produces plantlets in-house, using high quality seeds from its lab and then sells these plantlets to farmers for planting in the farms. These plantlets are highly advantageous in terms of quality & quantity of fruiting and early fruit cycles. This industry is witnessing a CAGR of 25%. In FY11 this segment contributed Rs270mn in revenues. It has a capacity of 30mn plantlets (25mn in FY10) and further plans to expand by another 1mn in FY12.

### **Banana a major stay; Moving into newer fruits**

JISL predominantly sells banana plantlets. In FY11, JISL sold ~22mn plantlets generating about Rs270mn in revenues. Also, the Company successfully developed a disease free variant of pomegranate in 2008 which it plans to commercialize in FY12 by selling ~2mn pomegranate plantlets which will further add to this fast growing segment. It is also in the process of testing citrus fruits and potato at its lab. We expect this segment to grow strong with a CAGR of ~20%.

## **Solar systems – Moving in the right direction**

JISL is involved in the manufacturing, installation and operation of solar equipments such as Solar pumps, solar water heaters and Solar PV appliances. This is a fast growing segment for JISL and is expected to show 50% CAGR over FY11-13 with margins of ~11%. In FY11 this segment contributed ~Rs785mn. The company has one facility in Jalgaon for manufacturing solar products (25mn) and is in the process of setting up a new facility in Alwar, Rajasthan (1mn). The company also plans to move all its solar business under a separate subsidiary in FY12 or FY13.

### **Government thrust on Solar energy**

The Ministry of Non Conventional Energy launched the Solar Mission under which it has targeted: 1) to create an enabling policy framework for deployment of 20,000 MW of solar power by the year 2022; 2) to achieve 15 million square meters of solar thermal collector area by 2017 and 20 million square meters by 2022; 3) to deploy 20 million solar lighting systems for rural areas by 2022; and 4) to achieve these objectives through the private sector making focused efforts in the solar thermal and energy areas. This thrust, we believe, will create enough demand for JISL's solar products. Also, solar water pumps are subsidized by the Government, where the farmers receive ~30% subsidy.

### **Obvious benefits of using Solar equipments**

Solar water pumps are gradually replacing diesel pumps in irrigation. During the day time, due to sunlight, the water requirement for crops increases while this water requirement falls during the night. Solar pumps use the daylight to pump more water during the day and pump less (or no) water in the night. Hence they are naturally suited for irrigation and fertigation. Also solar equipments (water heaters, lamp posts, pumps) help reduce fuel requirements and have a long life (~20 years for pumps) which makes them cost effective in the long run.

## Ramp up in International operation

Over the past few years JISL has done a few of acquisitions and merged a few companies. All acquisitions and mergers have been a strategic fit with the intent of strengthening the business and increasing reach in every segment. We believe these acquisitions generate strong synergies, especially in the MIS segment. All the subsidiaries have been ramped up and have shown a good growth in revenue.

### **MIS acquisitions - a synergy on product portfolio expansion, technology and networking**

In MIS, JISL has done three major acquisitions during FY07-FY09 with total cost of USD51mn. It includes Chapin Watermatics and Aquarius which now have been merged and renamed as Jain Irrigation Inc (JII) and NaanDan.

#### **NaanDan Jain Irrigation**

JISL acquired NaanDan in May'07 for USD22mn. This acquisition has led to synergies through significant product portfolio expansion and R&D activities. The company offers the widest range of cost-effective and customized technologies across more than 100 countries worldwide. NaanDan Jain's extensive product range includes comprehensive irrigation and climate-control technologies for greenhouses and nurseries, open fields, orchards and plantations, residential and landscape areas. The acquisition of NaanDan by JISL has been fruitful with respect to technology, new crops and extending its network reach. Post acquisition, NaanDan's turnover has shown a CAGR of 10% over FY09-11. We expect more synergies to be harnessed in the coming years.

#### **Jain Irrigation Inc (JII)**

It includes two companies, Aquarius and Chapin Watermatics, which were acquired by JISL in FY07 for cost of USD7mn and USD22mn respectively. Chapin is a pioneer and leading manufacturer of drip tape and is known as complete source for field crop, nursery and green house drip irrigation systems whereas Aquarius is a leading designer and manufacturer of micro-irrigation systems for agriculture, landscape and nursery applications. JII's divisions include API, PEPCO, Chapin and Acu-Drip. Both these acquisitions have given JISL a technology advantage and introduce new product category in Indian market and bring more crops under MIS. Turnover for both the companies taken together has increased by 9.3% over FY09-11 to USD56mn.

### **Acquisition in Agro-processing – gives direct access to overseas clients**

The company has also done acquisition in Agro processing (Onion Dehydration-Cascade Specialist) and food business (Sleaford Quality Foods Ltd - SQFL).

#### **Cascade Specialties**

Cascade was acquired in 2006 for USD4.75mn for strengthening JISL's dehydrated onion business. We believe acquisition of Cascade offers perfect synergies as JISL exports all its white onions to Europe, US, Middle East, etc. Moreover, this acquisition gives JISL an opportunity to market its Indian onion basket to its ready clientele and use the marketing network of the Company. The company has grown by 30% in FY11 and we expect growth of ~15% during FY11-FY13.

**SQFL**

SQFL was a client of JISL for white onions before its acquisition. SQFL is UK's leading supplier of dried, dehydrated and canned foods. Post this acquisition, JISL can market its product to SQFL's clients directly and further enhance its marketing network. Moreover, it will also help JISL expand its food basket.

**Subsidiary revenue breakup (Rs mn)**

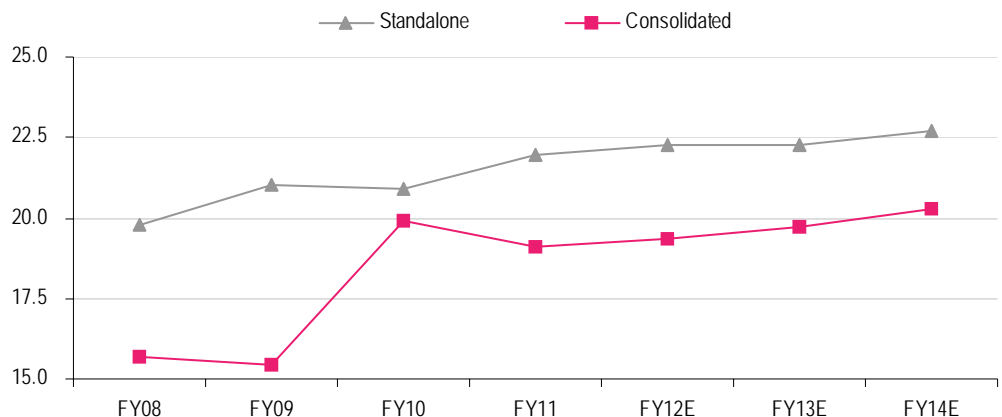
	% Holding	FY09	FY10	FY11	FY12E	FY13E	FY14E
Jain Irrigation Inc (previously Aquarius Brands )	100.0	47	47	56	64	72	81
YoY growth (%)		37.1	1.0	18.3	15.0	12.0	12.0
Naan Dann Irrigation	50.0	101	101	114	125	138	152
YoY growth (%)		43.7	(0.1)	13.5	10.0	10.0	10.0
Jain Sulama Sistemeru Sen	100.0			12.87	14	14	15
YoY growth (%)					5.0	5.0	5.0
Cascade Specialities	95.1		15.3	19.9	23	26	30
YoY growth (%)				30.0	15.0	15.0	15.0
Thomas Machine	69.8	20	21	28	31	34	37
YoY growth (%)		60.4	5.9	35.6	10.0	10.0	10.0
SQF Ltd	80.0			18	19	20	21
YoY growth (%)					5.0	5.0	5.0

Source: Company, PINC Research

**Standalone and consolidated margin**

The subsidiaries' performance has improved over the years and going forward we expect further improvement in the operations of overseas subsidiaries. The consolidated margin is likely to improve by 59bps from 19.1% to 19.7% over FY11-13 due to a 74bps improvement in subsidiary margin from 7.3% in FY11 to 8% in FY13.

**Standalone v/s Consolidated margins (%)**



Source: Company, PINC Research



## Healthy Capex plan to support 19% growth over FY11-13

JISL has planned a capital outlay of Rs4bn (including overseas subsidiary capex) in FY12. We believe over 50% has been earmarked for MIS, with the remaining in Pipes, Agro processing and maintenance capex. The company is doing capacity expansion in Rajasthan which is likely to commence operation from Q3FY12 onwards. This new capacity is likely to cater to the Northern Indian market which has a huge growth potential. Capex in the agro segment is also likely to boost business volumes, as it would allow for coverage of more crops.

### Segmental Capex (Rs mn)

	FY09	FY10	FY11	FY12E	FY13E	FY14E
MIS	1,185	1,600	1,962	2,188	3,116	1,824
Pipe & Sheets	922	341	321	422	220	240
Agro Processing	607	448	647	300	-	-

Source: Company, PINC Research

### Net Asset Turnover (x)

	FY10	FY11
MIS	3.7	4.0
PVC Pipes	5.0	5.6
PE Pipes	3.5	3.8
PVC Sheets	2.1	2.7
Dehy. Onion	1.1	1.1
Fruit Processing	1.6	1.5

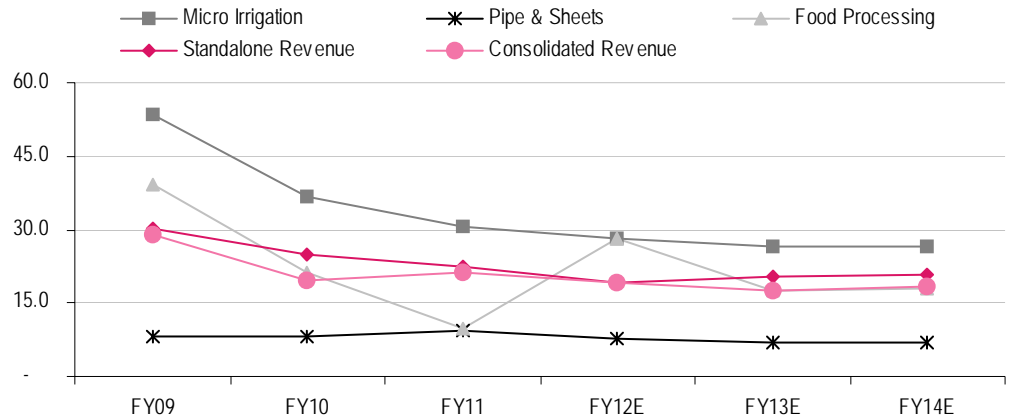
Source: Company, PINC Research

**FINANCIAL OVERVIEW**

**Revenue to witness a CAGR of 19.3% over FY11-FY13**

We expect a CAGR of 19.3% during FY11-13 primarily supported by a 27.4%, 10.2% and 25.6% CAGR in MIS, PE pipes and Fruit pulp and puree businesses respectively. Moreover, we expect the consolidated revenue to show a CAGR of 19.3% over FY11-13. The company has also increased its focus on the solar business. We expect this business to grow exponentially over FY11-FY13 with 48.4% CAGR.

**Segmental Revenue Growth (%)**

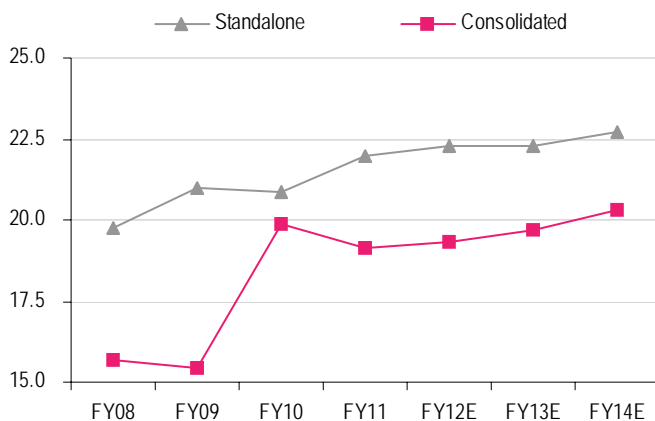


Source: Company, PINC Research

**EBIDTA margin to expand 59bps by FY13**

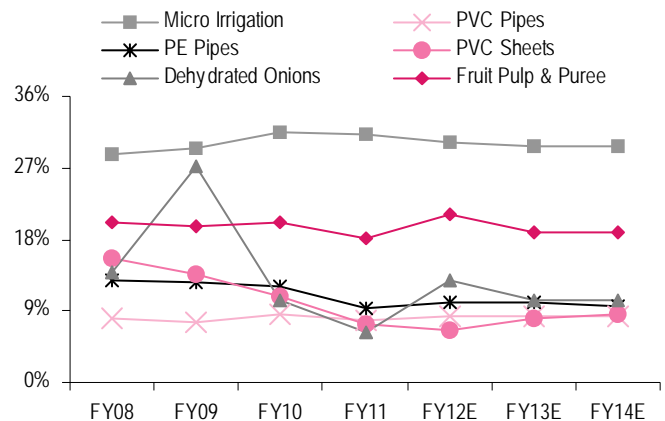
The company's consolidated EBIDTA margin came in at 19.1% in FY11 as against 19.9% for FY10 and 15.5% for FY09 respectively. We expect margins to improve by 59bps over FY11-13 on account of improvement in subsidiary margins and Food processing business. MIS business segment margin is likely to remain flat.

**Standalone v/s Consolidated margins (%)**



Source: Company, PINC Research

**Segmental EBITDA Margins (%)**

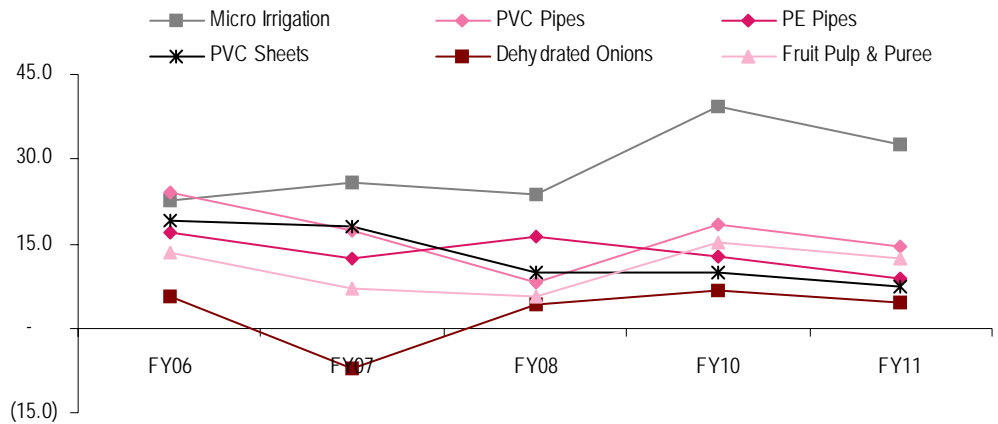


Source: Company, PINC Research

**RoCE of MIS business likely to be strong**

We expect RoCE in the MIS business (55% of standalone revenue) to remain over 30%. Overall RoCE of JISL is likely to improve by 240bps by FY13. Improvement will be contributed from piping division, fruit business and onion dehydration business over the years once the capital investments in these segments is optimally utilized.

**Segmental RoCE (%)**



Source: Company, PINC Research

**Assets turnover ratio**

We have seen an improvement in assets turnover ratio in all the segments indicating a better utilization of the assets. We have assumed a capex of Rs7bn in MIS over the next three years and have assumed assets turnover ratio of 3x whereas over the last couple of years it has generated an assets turnover ratio between 3.7-4X. Effective asset utilization is likely to help improve turnover of the company and thereby driving overall growth.

**Net Asset Turnover (x)**

	FY10	FY11
MIS	3.7	4.0
PVC Pipes	5.0	5.6
PE Pipes	3.5	3.8
PVC Sheets	2.1	2.7
Dehy. Onion	1.1	1.1
Fruit Processing	1.6	1.5

Source: Company, PINC Research

### Working capital cycle to decline

The company's working capital to sales ratio is set to decline going ahead from the current 0.59x to 0.49x by FY13 on a consolidated basis. MIS is a highly working capital intensive business and working capital cycle in this segment has deteriorated in FY11 due to high outstanding receivables. Standalone debtor excluding securitisation has increased from 131 days in FY09 to 162 days in FY11 whereas including factoring it has increased from 177 days in FY09 to 270 days in FY11. Going ahead we expect debtor days to come down to 130 days by FY13 from 162 days taking into consideration that MIS is now under NMMI. NMMI is a long term commitment from the Government to MIS and there is designated team from central government to work with state government which is likely to make MIS subsidy process more effective and collections faster. Moreover, inventory days on standalone basis have increased from 147 to 177 days in FY11 which we expect to come off to 145 days by FY13. Increase in inventory in FY11 was primarily on account of MIS, fruit and solar business.

### Standalone Debtor and Inventory days

	FY07	FY08	FY09	FY10	FY11
Standalone Receivables (Rs mn)	4,436	5,956	7,816	8,876	14,818
Debtor days	-	130	131	119	162
Debtor incl. Securitisation (Rs mn)	4,436	5,956	10,554	16,316	24,614
Debtor days (incl. securitisation)	-	130	177	219	270
Inventories (Rs mn)	2,743	4,844	5,195	6,062	9,149
Inventory days	133	181	147	139	177

Source: Company, PINC Research

### FCF of the company likely to improve going ahead

With improvement in working capital and operating performance we expect the company to have +ve operational and FCF. We expect FCF of Rs1.2bn in FY13 as against -ve Rs4.0bn in FY11.

### Cash Flow (Rs mn)

	FY08	FY09	FY10	FY11	FY12E	FY13E	FY14E
CFO	(2,610)	2,126	3,932	918	3,583	6,230	8,467
FCF	(6,038)	(2,572)	(863)	(3,963)	(766)	1,194	4,703

Source: Company, PINC Research

### Financial Table

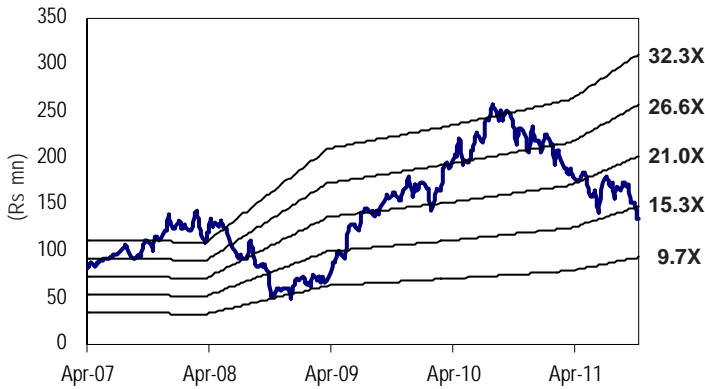
(Rs mn)	Q1FY12	Q4FY11	QoQ (%)	Q1FY11	YoY (%)	FY11	FY10	YoY (%)
Revenue	7,257	9,586	(24.3)	5,730	26.6	40,724	33,858	20.3
Expenditure	4,973	6,952	(28.5)	4,078	21.9	32,787	27,052	21.2
EBITDA	2,284	2,634	(13.3)	1,652	38.2	7,937	6,805	16.6
Other income	8	(0)	(4,100.0)	3	207.7	274	197	39.2
Interest	776	698	11.1	491	58.1	2,717	2,194	23.8
Depreciation	239	217	10.2	203	17.6	1,400	1,127	24.3
PBT	1,142	1,690	(32.5)	764	49.5	4,094	3,682	11.2
Tax	317	545	(41.9)	241	31.6	1,201	1,204	(0.2)
PAT	824	1,093	(24.6)	523	57.6	2,820	2,467	14.3
EBITDA margin (%)	24.0	21.3	270 bps	22.8	124 bps	19.1	19.9	(79)bps
EPS (Rs)	2.1	2.8	(24.5)	1.4	57.8	7.3	6.5	11.7

Source: Company, PINC Research \* Quarterly numbers on standalone basis

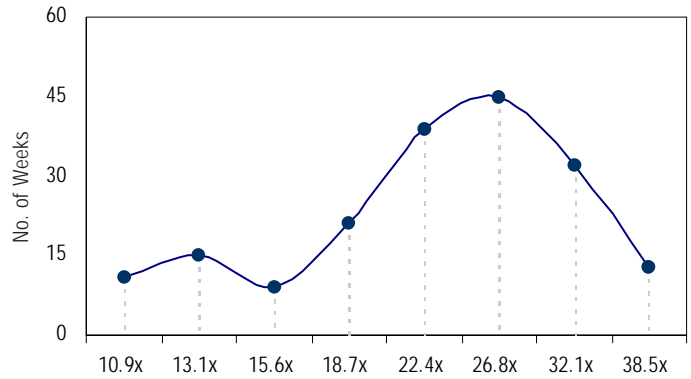
**VALUATION**

JISL has historically traded in a band of 18x-32x 1 year forward P/E (chart below). We assign a 1-year forward P/E of 17x on FY13 EPS of Rs11.4 to arrive at our target price of Rs185. We believe that if JISL is able to improve its working capital cycle, the stock could get re-rated and would deserve a higher multiple than 17x.

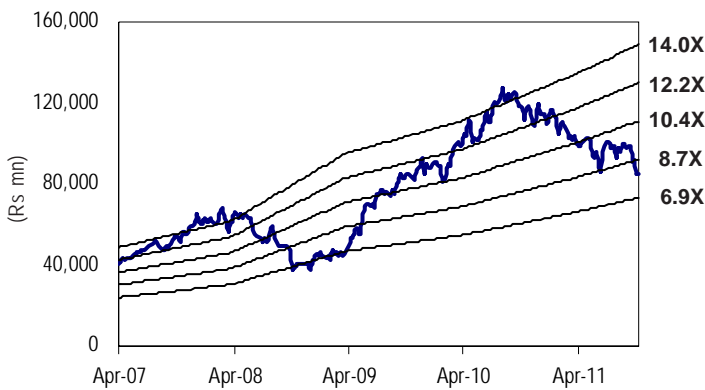
1-yr forward P/E Band



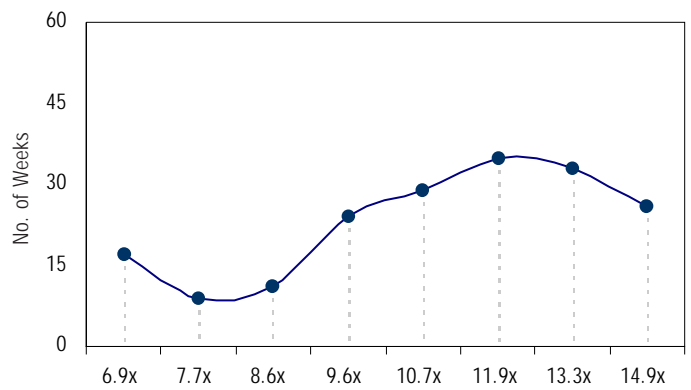
1-yr forward P/E Band - Histogram



1-yr forward EV/EBIDTA



1-yr forward EV/EBIDTA - Histogram



**KEY RISKS****High Receivables**

JISL currently has receivables to the tune of Rs24.6bn which is equivalent to 270 days sales. This is a huge drag on the company's balance sheet. Most of these receivables are subsidies pending from the respective state Government. We believe that with the formation of National Mission Mode for Irrigation and NBFC the Company will be able to improve its receivable scenario. However, if the receivable burden further deteriorates, JISL's balance sheet will be further stretched.

**Raw Material Price Risk**

Resins form ~64% of the total raw material cost. Any fluctuations in the resin prices in the short term will impact the margins negatively. However, since most of the raw material price rise is pass on we believe such price fluctuations should not have any significant material impact on the margins in the long run.

JISL procures White onions from farmers at market price. Any price rise in onions will negatively impact the margins in the DHO business as the price rise cannot be passed on easily in the export market where prices are determined based on global white onion availability.

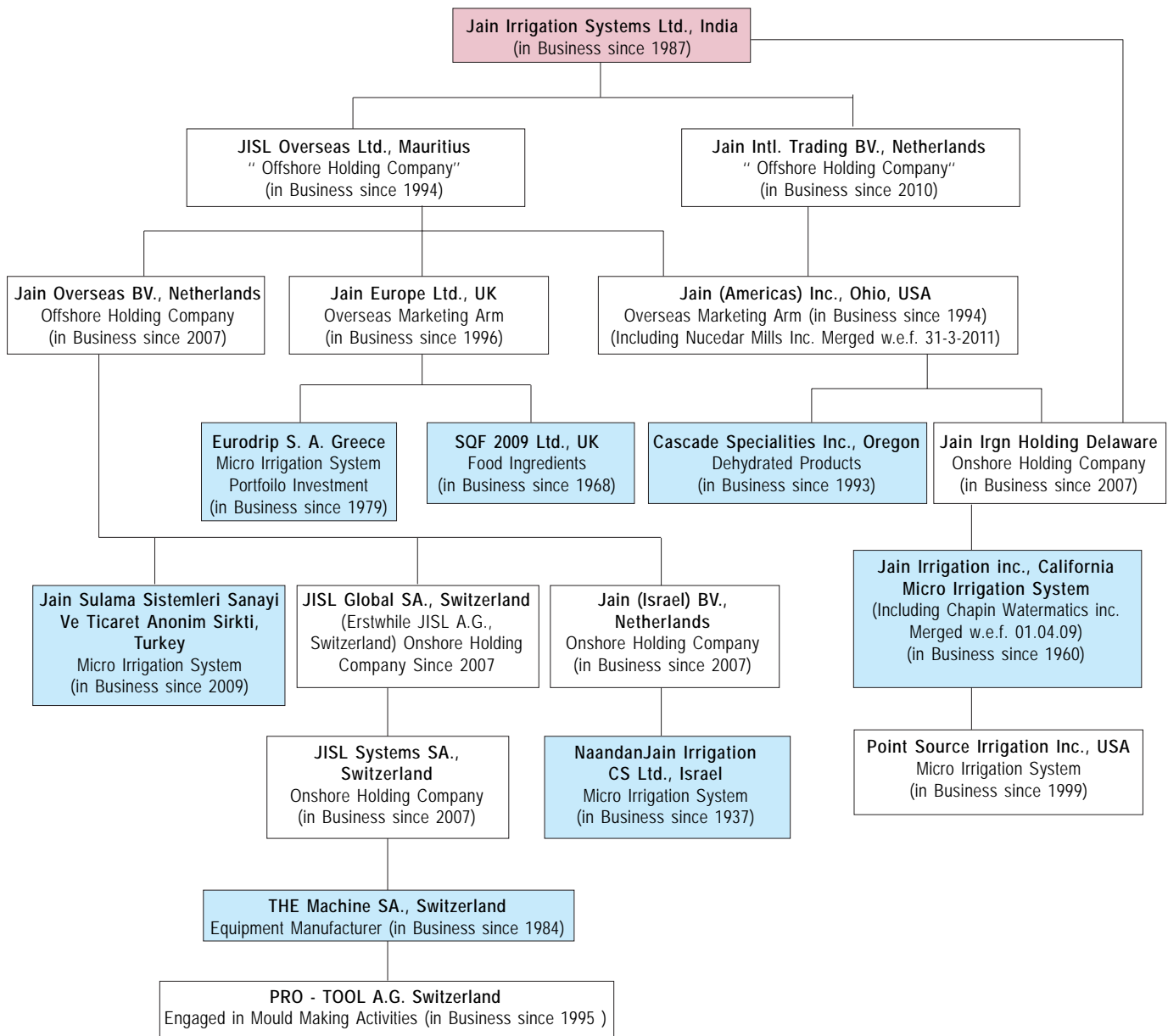
**Subsidy Removal**

Subsidy is a huge incentive for farmers to buy MIS equipments. Any reduction/removal of the subsidy provided for micro irrigation equipments will have a negative impact on the demand for MIS systems. However, we believe that given the high government focus on MIS, subsidies on MIS equipments will stay intact.

**COMPANY OVERVIEW**

Established in 1986, JISL is a transnational organisation headquartered at Jalgaon, Maharashtra, India. JISL employs over 5,000 associates and manufactures a number of products, including drip and sprinkler irrigation systems, PVC & PE piping systems, plastic sheets, greenhouses, bio-fertilizers, solar products including water-heating systems, photovoltaic appliances and solar pumps. JISL processes fruits and vegetables into aseptic concentrates, frozen fruits and dehydrated vegetables respectively. The company has a turnover exceeding Rs30bn. It has 21 manufacturing plants spread over 5 continents and its products are supplied to 110 countries through 3,000 dealers and distributors worldwide.

**Corporate Structure**



Source: Company, PINC Research



## Geographical Reach

JISL has a strong supply chain within and outside India. It leverages on this strong supply chain to gain an edge.

### Global Network

	Plants	Offices
North America	6	3
Europe	3	4
South America	2	1
Australia	1	0
Middle East	2	2
Africa	0	1
Asia (Excluding India)	0	2
India	9	80
<b>Total</b>	<b>23</b>	<b>93</b>

Source: Company, PINC Research

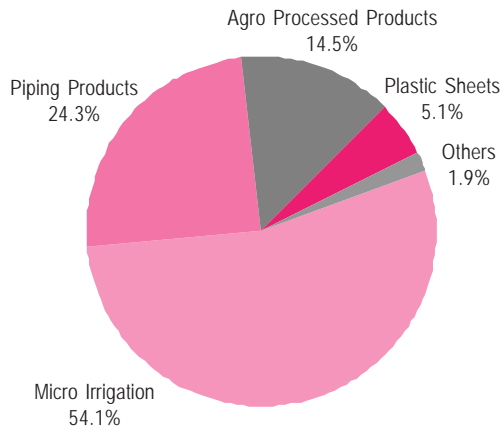
### Indian Network

Indian Network	Plants	Offices	Depots	Dealers
Maharashtra	3	16	9	1,164
AP	3	24	5	262
Karnataka	0	4	2	234
Gujarat	2	5	2	207
MP	0	1	3	161
Tamil Nadu	1	6	3	78
Rajasthan	0	3	4	71
Other States	0	21	11	365
<b>Total</b>	<b>9</b>	<b>80</b>	<b>39</b>	<b>2,542</b>

Source: Company, PINC Research

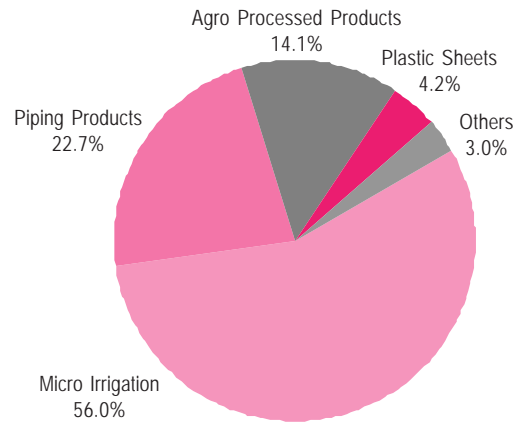
**Revenue breakup by Segment**

**FY10**



Source: Company, PINC Research

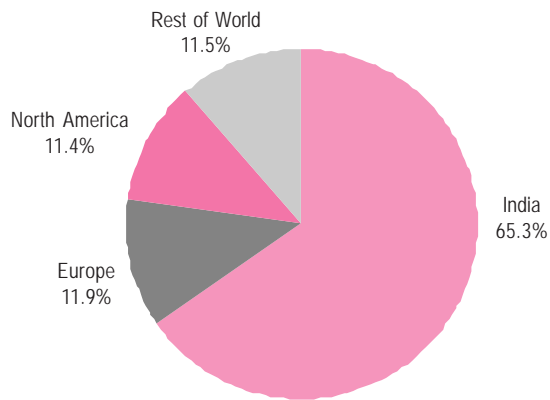
**FY11**



Source: Company, PINC Research

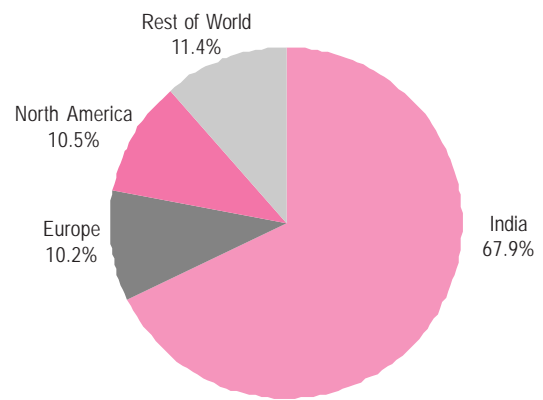
**Revenue breakup by Geography**

**FY10**



Source: Company, PINC Research

**FY11**



Source: Company, PINC Research

### Significant Acquisitions

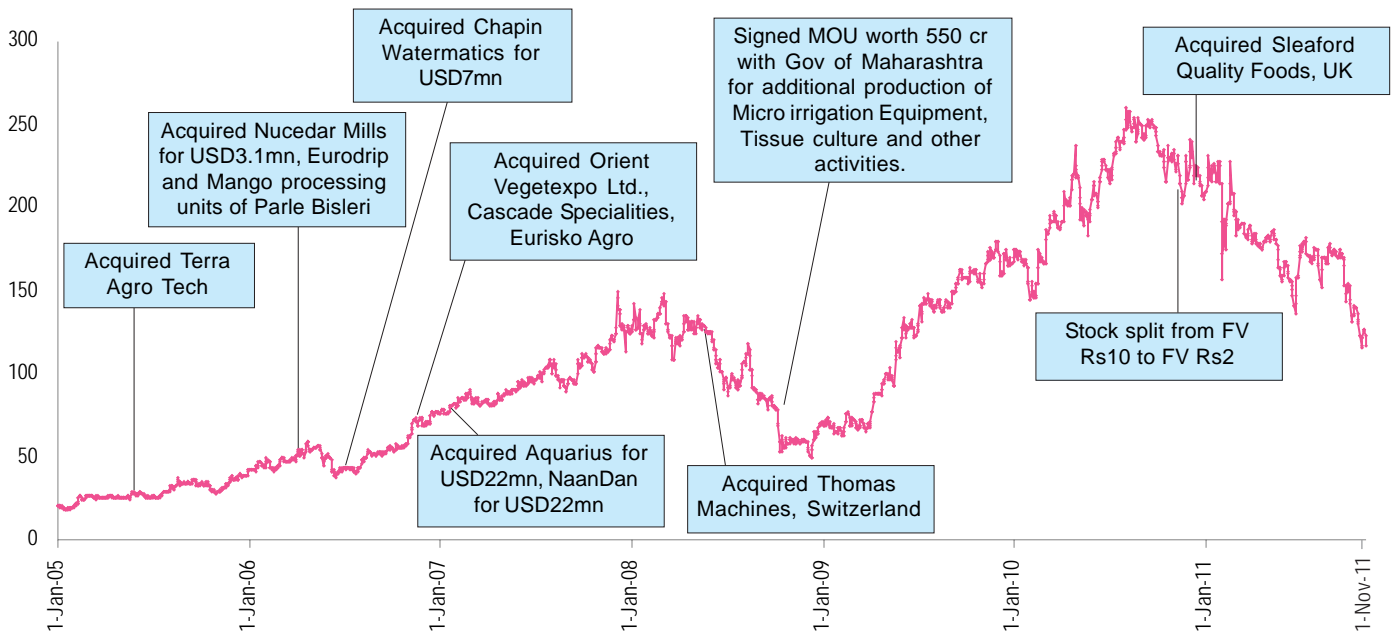
Over the years JISL has done acquisitions in MIS, Plastics and Food businesses. This has helped JISL increase its global footprint and also leverage on the technology and product portfolio synergies of the subsidiaries.

#### Acquisition History

Subsidiary name	Segment	Current Stake	Subsidiary Country	Date of acquisition	Acquisition Price
Nucedar Mills Inc.	MIS	100.0%	USA	Feb-06	USD 2.1 mn
Eurodrip	MIS	7.4%	Greece	Feb-06	NA
Chapin	MIS	100.0%	USA	Apr-06	USD 7 mn
Aquarius	MIS	100.0%	USA	Feb-07	USD 22 mn
NaanDan	MIS	50.0%	Israel	May-07	USD 22 mn
Thomas Machines S A	Plastics	69.8%	Switzerland	Mar-08	N.A
Terra Agro Technologies	Food	100.0%	India	May-05	N.A
Mango processing units of Parle Bisleri	Food	100.0%	India	Feb-06	N.A
Orient Vegetexpo	Food	100.0%	India	Sep-06	N.A
Eurisko Agro Ltd	Food	100.0%	India	Dec-06	N.A
Cascade Specialties Inc.	Food	100.0%	USA	Nov-06	USD 4.75 mn
Sleaford Quality Foods Ltd.	Food	85.0%	UK	Nov-10	N.A

Source: Company, PINC Research

#### Historical Events v/s Stock Price (Rs)



Source: Company, PINC Research

## Profile of Directors

**Mr. Bhavarlal H. Jain** is the Founder of the Jain group of companies and Chairman of the company. He began his business in 1963 by trading in agricultural inputs and equipments. In 1978, he acquired a sick unit which he used to manufacture Papain. In 1980, he commenced PVC Pipe manufacturing operations. Post 1986, he pioneered the concept of micro irrigation in India. He has received many awards and accolades for outstanding work in agriculture including the prestigious Crawford Reid Memorial Award instituted by Irrigation Association, U.S.A. for "Significant Contribution to the Irrigation Industry outside the United States". 3 honorary doctorates have been conferred on him from different universities acknowledging path breaking work he has done for improvement of agriculture in India

**Mr. Ashok B. Jain** is the Vice Chairman of the company. He holds a graduate degree in commerce from Pune University, India. He joined management team in 1982 and was in charge of marketing and extension services in Maharashtra and other States. In 1993 he became Director and was responsible for Corporate Administration, Corporate Image and Relationships, Events Management, Personnel/Human Resource Development, Communication, Public Relations, Art and Publicity. At present he also acts as director in charge of the Food Processing Division.

**Mr. Anil B. Jain** has been the Managing Director of the company since 1993. He has commerce degree from Pune University and Law Degree from Mumbai University. He joined management team in 1984 and was in charge of our US based marketing operations. Mr. Anil Jain has an extensive background and experience in Finance, Banking, Mergers & Acquisitions, Strategic Planning, Restructuring Operations, Export Marketing, International Business Relations, Collaborations and Joint Ventures.

**Mr. Ajit B. Jain** has been the Joint Managing Director of the company since 1994. He is an engineering graduate from Dnyaneshwar University. He is director in charge of drip irrigation division including guidance for extension service and development of new applications and products. He joined management of the company in 1984 and started his training in production and maintenance in the pipe division. During the period from 1985–1990, he was in charge of establishing our new pipe production plant in Madhya Pradesh. In 1991, he was appointed Director with the overall responsibility of the pipe manufacturing plant at Jalgaon, including production, maintenance and marketing.

**Mr. Atul B. Jain** is Director of Marketing. He holds a graduate degree in commerce from Pune University, India. He joined the management team in 1992. From 1994–2000, he was in charge of our Europe-based marketing operations and was responsible for developing and maintaining the market for PVC Sheets, Dehydrated Onion, Fruit Pulp etc. Presently, he focuses on marketing our products on a global basis in addition to being director in charge of piping division.

**ANNEXURE**

**Key micro irrigation techniques**

**Drip irrigation**

This is a method of irrigation where tubes or hoses, sometimes porous, are used to irrigate plants at a slow, constant trickle. The supply is consistent, but slow, to allow the roots to absorb the water before it runs off or evaporates.

**Sprinkler irrigation**

This method supplies water to plants just as natural rainfall would. Water is distributed through a system of pipes, usually through pumps. It is then sprayed into the air through sprinklers so that it breaks up into small water drops, which then fall to the ground. The pump system, sprinklers and operating conditions must be designed to enable uniform water supply. Sprinkler irrigation is suited for most row, field and tree crops and water can be sprayed over or under the crop canopy. However, large sprinklers are not recommended for sensitive crops such as lettuce, because the large water droplets they produce may damage the crop.

**MIS advantages for Rice**

Crop	Variety	Type	Yield (Kg/acre)		Increase in Yield (%)	Water Productivity (cum/Kg)		Reduction in water (%)
			Flood	Drip		Flood	Drip	
Rice	Variety A	Basmati Type	2,435	3,276	35	7.692	1.453	429%
	Variety B	Basmati Type	2,314	3,056	32	8.130	1.558	422%
	Variety C	Medium Fine	2,811	3,691	31	7.353	1.425	416%
	Variety D	Medium Fine	2,535	2,967	17	7.407	1.745	324%

Source: Company, PINC Research

**Low cost v/s high cost MIS systems**

Criteria	Low cost system	Hight cost system
Affordability	Requires little initial cost	Requires high initial capital
Local manufacturing capacity	Based on local skills and materials	Requires relatively sophisticated facilities
Payback period	Usually covers investment costs in one or two seasons	Usually 3 years
Pressure requirement	Requires low pressure	Requires high pressure
Ease of technical understanding by users	Simple and easily understood	Sophisticated, needs technical expertise
Operational convenience	Low operational conveniences	High operational convenience
Compatibility with the farming system	Available in the range of small and expandable packages	Generally adopted by large firms

Source: Company, PINC Research

**MIS - Advantages v/s Disadvantages**

Advantages	Disadvantages
Helps government reduce subsidy on energy, fertilisers	Clogging of the emitters
Creates rural wealth and reduces pressure on urbanisation	Can cause moisture distribution
Saves water, fertilisers and energy (50%)	Can lead to soil build-up
Supports agro-based industrial growth	Rodents and insects can create maintenance issues by chewing holes in the plastic
Increases productivity (30–200%)	
Enables waste land conversion to productive land	
Improves soil condition and reduces water degradation	
Leads to cropping diversification from field crops to horticulture	

Source: Company, PINC Research

### MIS Budget Allocation

(Rs mn)	FY10 B	FY10A	FY11B	FY12B
Micro irrigation (Federal Govt. Share of 40%)	4,300	4,800	9,700	11,300
Horticulture & Vegetable Crops	1,863	18,774	23,130	27,751
National Horticulture Board (NHB) & Horticulture Mission (NHM)	12,200	9,430	11,059	13,420
Micro Management For Agriculture	7,840	9,215	7,220	6,500
Technology Mission on oilseeds & Pulses	3,140	4,593	6,503	5,470
National Food Security Mission (NFSM)	12,600	10,171	11,576	12,500
Project Scheme for the benefit of North Eastern Region (NER)	-	-	-	-
Rashtriya Krishi Vikash Yojana(RKVY)	40,671	37,581	67,220	78,109
Integrated water shed Management programme	17,168	17,299	22,091	22,932
Support to State Extension Services	2,680	1,786	1,950	4,500
National Agricultural Innovation Project	2,520	2,772	2,650	1,710
Accelerated Rural Water Supply programme	72,000	79,959	81,000	84,150
Control of Shifting Cultivation 3601	400	382	400	500
National Project on Management of Soil, Health and Fertility	444	407	198	249
Rainfed Area Development Programmes	1,380	-	-	10
Integrated Cotton Development Programme	599	550	201	153
<b>Total</b>	<b>179,804</b>	<b>197,718</b>	<b>244,898</b>	<b>269,254</b>
<b>YoY Growth (%)</b>			<b>24.0</b>	<b>10.2</b>

Source: Company, PINC Research \* B - Budgeted , A - Actual

### Statewise subsidy for MIS

States	Government subsidies		Jain Irrigation
	Drip (%)	Sprinkler (%)	Market share (%)
Maharashtra	50	50	65
Gujarat	50	50	30
Andhra Pradesh	70	70	35
Tamil Nadu	50	50	60
Karnataka	75	50	60
Madhya Pradesh	70	70	60
Chattisgarh	70	70	50
Punjab	75	75	50
Bihar	60	60	60
Himachal Pradesh	50	50	50
Rajasthan	70	70	50
Kerala	50	50	50
Uttar Pradesh	75	75	50
Uttarakhand	50	50	50

Source: Company, PINC Research \* Subsidy % changes based on the subsidy amount allocated

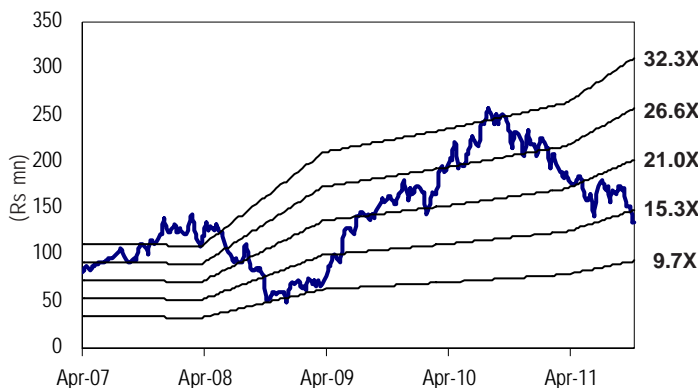
Income Statement	FY10	FY11	FY12E	FY13E	FY14E
Net Sales	33,858	40,724	49,555	58,320	69,071
Growth (%)	20.1	20.3	21.7	17.7	18.4
Other Operating Income	342	804	-	-	-
<b>EBITDA</b>	<b>6,805</b>	<b>7,937</b>	<b>9,588</b>	<b>11,491</b>	<b>14,008</b>
Growth (%)	54.0	16.6	20.8	19.9	21.9
Depreciation & amortisation	1,127	1,400	1,653	1,939	2,159
<b>EBIT</b>	<b>5,679</b>	<b>6,537</b>	<b>7,934</b>	<b>9,552</b>	<b>11,849</b>
Interest	2,194	2,717	3,603	3,675	3,647
Other income	197	274	222	127	132
<b>PBT</b>	<b>3,682</b>	<b>4,094</b>	<b>4,553</b>	<b>6,004</b>	<b>8,334</b>
Income taxes	1,204	1,201	1,320	1,741	2,417
Extra-ordinary items	-	-	-	-	-
Min int / inc from assoc	-	-	-	-	-
<b>Reported net income</b>	<b>2,467</b>	<b>2,820</b>	<b>3,158</b>	<b>4,188</b>	<b>5,842</b>
<b>Adjusted net income</b>	<b>2,476</b>	<b>2,807</b>	<b>3,146</b>	<b>4,188</b>	<b>5,842</b>
Growth (%)	91.3	13.4	12.1	33.1	39.5
<b>Adj Diluted EPS (Rs)</b>	<b>6.5</b>	<b>7.3</b>	<b>8.2</b>	<b>10.9</b>	<b>15.1</b>
Growth (%)	91.3	11.7	12.1	33.1	39.5

Cash Flow Statement	FY10	FY11	FY12E	FY13E	FY14E
Pre-tax profit	3,682	4,094	4,553	6,004	8,334
Depreciation & Amortisation	1,020	1,265	1,504	1,755	1,932
Total Tax Paid	(706)	(2,372)	(773)	(1,320)	(1,741)
Chg in working capital	(2,408)	(4,748)	(5,305)	(3,884)	(3,704)
Other operating activities	2,345	2,678	3,603	3,675	3,647
<b>Cash flow from oper (a)</b>	<b>3,932</b>	<b>918</b>	<b>3,583</b>	<b>6,230</b>	<b>8,467</b>
Capital Expenditure	(4,657)	(4,920)	(4,348)	(5,036)	(3,764)
Chg in investments	(4)	(0)	-	-	-
Other investing activities	(134)	39	-	-	-
<b>Cash flow from inv.(b)</b>	<b>(4,795)</b>	<b>(4,881)</b>	<b>(4,348)</b>	<b>(5,036)</b>	<b>(3,764)</b>
<b>Free cash flow (a+b)</b>	<b>(863)</b>	<b>(3,963)</b>	<b>(766)</b>	<b>1,194</b>	<b>4,703</b>
Equity raised/(repaid)	435	521	-	-	-
Debt raised/(repaid)	6,691	5,440	2,189	2,000	2,000
Change in MI	-	-	-	-	-
Dividend (incl. Tax)	(256)	(417)	(450)	(452)	(677)
Other financing activities	(2,121)	(2,489)	(3,979)	(3,687)	(3,659)
<b>Cash flow from fin (c)</b>	<b>4,749</b>	<b>3,054</b>	<b>(2,241)</b>	<b>(2,138)</b>	<b>(2,336)</b>
<b>Net chg in cash (a+b+c)</b>	<b>3,886</b>	<b>(909)</b>	<b>(3,007)</b>	<b>(945)</b>	<b>2,367</b>

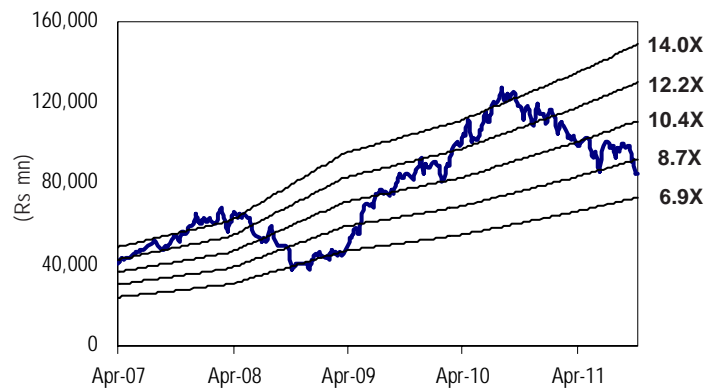
Balance Sheet	FY10	FY11	FY12E	FY13E	FY14E
Equity Share Capital	760	771	771	771	771
Reserves & surplus	11,406	14,785	17,479	20,989	26,154
<b>Shareholders' funds</b>	<b>12,166</b>	<b>15,557</b>	<b>18,251</b>	<b>21,761</b>	<b>26,926</b>
Min. Interest & Other	572	526	601	665	728
Total Debt	24,447	29,888	32,076	34,076	36,076
<b>Capital Employed</b>	<b>37,186</b>	<b>45,970</b>	<b>50,928</b>	<b>56,502</b>	<b>63,730</b>
Net fixed assets	16,071	19,663	22,557	25,887	27,768
Cash & Cash Eq.	5,053	4,144	1,137	193	2,560
Net Other current assets	14,609	20,494	25,157	28,466	31,609
Investments	211	211	211	211	211
Other Assets	1,852	2,119	2,070	2,021	1,972
Net Deferred tax Assets	(610)	(662)	(204)	(275)	(391)
<b>Total Assets</b>	<b>37,186</b>	<b>45,970</b>	<b>50,928</b>	<b>56,502</b>	<b>63,730</b>

Key Ratios	FY10	FY11	FY12E	FY13E	FY14E
OPM (%)	19.9	19.1	19.3	19.7	20.3
Net Margin (%)	7.2	6.8	6.4	7.2	8.5
Dividend Yield (%)	0.8	0.9	0.9	1.3	1.3
Gross Fixed asset turnover (x)	1.8	1.8	1.7	1.7	1.8
Total asset turnover (x)	0.8	0.8	0.8	0.8	0.9
Adjusted Net debt/equity (x)	1.6	1.7	1.7	1.6	1.2
Interest coverage ratio (x)	2.6	2.4	2.2	2.6	3.2
RoCE (%)	13.2	11.9	12.3	13.2	14.5
RoE (%)	23.8	20.3	18.6	20.9	24.0
EV/Net Sales (x)	2.1	1.7	1.4	1.2	1.0
EV/EBITDA (x)	10.4	8.9	7.4	6.2	5.1
P/E (x)	18.2	16.1	14.4	10.8	7.7
P/BV (x)	3.7	2.9	2.5	2.1	1.7

1-yr forward P/E Band



1-yr forward EV/EBIDTA





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