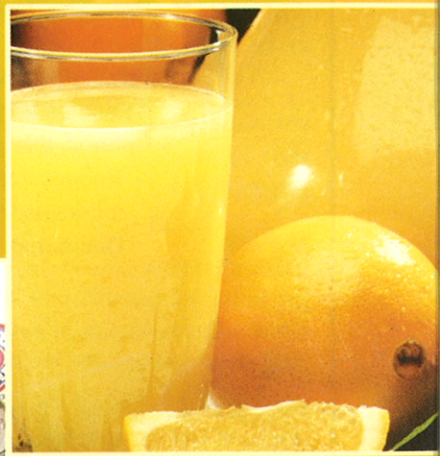




AFSTi

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Association of Food Scientists & Technologists (India)
C/o. Food Engineering & Technology Department,
Institute of Chemical Technology, University of Mumbai,
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CONTRACT FARMING: A WIN-WIN SITUATION FOR BOTH CORPORATES AND FARMERS

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Harnessing water for irrigation and increasing the crop productivity will be the main focus areas for the future of the Indian agriculture and intern the food industry in the country. India's cultivable area extends to over 149 million hectares, of which, 45 million hectares are irrigated. Even if 30 per cent of the annual rainfall is diverted to catchment areas, the farmers' water needs would be fully solved. Fertility and productivity growth through traditional water farming methods should be re-discovered. India has significant bio-diversity and is home to a wide range of edible plants. Efficient agricultural input management together with a good system of water management can save and rejuvenate countless number of herbs, shrubs and plant wealth, sustaining and providing farmers with alternative sources of income. In spite of the steep increase in Minimum Support Price, the Government is finding it hard to garner enough food grain stocks for PDS. Imports may become difficult as food grains production is slowing, even in the so-called "surplus" economies. The slow growth in the farm sector gives economists and planners the jitters and the Government is anxious that farming be diversified into horticulture and animal husbandry so as to achieve 4 per cent growth in agriculture, which can reflect 8 per cent growth in GDP.

With agriculture increasingly seen as a risky proposition, the promise of economic security within the contract farming system is rather very attractive. Contract farming generally involves: a pre-agreed price between

the company and the farmer, along with measures of quality, quantity, acreage to be farmed, and/or duration of the contract. In this system, the contractor supplies all the inputs required for cultivation, and the farmer is responsible for land and labour. However, the terms and nature of the contract vary according to the crops grown, the agencies involved, the farmers themselves, and the technologies and context in which contract farming is taken up. The farmers' participation is generally limited to production For a corporate, the objective of contract farming is to integrate the supply chain and ensure timely availability of materials, both in quality and quantity. It also reduces the procurement cost by eliminating the middlemen. Not only do the corporates get produce as per their specifications, the cost is much lower. With debt rampant, and soaring seed and fertilizer costs, contract farming appears a blessing, since all the inputs along with the know-how and updates will be provided by the corporate entity, and there is also a guarantee of purchase of the produce after harvest. It is a win-win situation for both corporates and farmers.

Jain Irrigation Systems Limited has successfully implemented and integrated model as corporate-farmer long term association for controlled irrigation with high-tech farming using tissue culture plants, high yielding processing quality raw materials, modern cultivation technology inputs, and buy back of farm produce for value addition through processing and export.



Report on Jain Visit by AFSTI Mumbai Chapter on 18th September – 20th September 2009

AFSTI Mumbai Chapter being the most active of all AFST chapters, organized an educational visit to Jalgaon under leadership of Dr. K.D. Yadav, President AFSTI Mumbai chapter & Mr. Prabodh Halde Secretary AFSTI Mumbai chapter. Total 18 senior members including Local executive committee members were part of the delegations.

The objective of the visit was two fold.

- ✓ To visit world class facility of M/s Jain Irrigation and food Park and M/s MARICO Ltd Jalgaon

- ✓ To felicitate Mr. Ashok Jain, Vice Chairman & Mr. Bhavarlal Jain Chairman of Jain group on behalf of AFSTI Mumbai chapter for their contribution to food and Agro industry.

The visit was very successful in achieving its objectives. Interactive session with Mr. Bhavarlal Jain was really eye opening. He shared his views on different topics including Agriculture and Food security.

The legend who is founder chairman of the group at his seventies is leading the Jain Empire and everybody called him as Bhao. The detailed visit report and information about both the units is attached.



*Felicitating of
Padmashree
Bhavarlal Jain*



*LEC members at
Jain Irrigation,
Jalgaon*

JISL Activity Profile

A) Agricultural competency development:

- ◆ Provision of agriculture education, training, demonstration and extension services right up to doctoral degrees in collaboration with reputed national universities.
- ◆ Agricultural project consultancy and execution services from concept to commissioning.

B) Agricultural biotechnology, R&D, analysis & testing:

- ◆ Tissue culture plants especially bananas; bio-fertilizers & bio-cultures.
- ◆ Thrust areas of R&D.: Molecular characterization, crop improvement & enhancement of product quality of onion, jatropha, pomegranate, mango and aonla; biochemical and molecular markers for varietal authentication; genetic transformation; fresh fruits and vegetables product development and processing of organic waste.
- ◆ Quality parameters testing of plants, soil, water, and food products.

C) Food processing:

- ◆ Fruit & vegetable processing and fresh fruit marketing.

D) Water creation, conservation, distribution, treatment products & projects:

- ◆ Engineering structures for creation of water source thru rain harvesting, water storage, recovery and recharge - project planning, designing, implementation and O & M.
- ◆ Water conservation and productivity enhancement through drip and sprinkler irrigation.
- ◆ Closed water conveyance, on demand irrigation, raw potable water mains & distribution including 24x7 supply using plastic piping systems.
- ◆ Water treatment, purification, sewerage & waste water treatment & reuse of brackish and sea water by desalination.

E) Urban / rural infrastructure & building products:

- ◆ Plumbing, cable ducting, gas distribution, dust suppression, effluent disposal, marine outfall, sewerage and SWR drainage, subsoil drainage & plastic sheets.

F) Renewable energy products:

- ◆ Development and application of renewable energy sources including bio-fuel, photovoltaic and thermal applications.

G) Charitable disposition:

- ◆ The corporation inherited deep faith and pride in continuing good work as part of corporate life whether it be in the field of rural development, education, health building and care, cultural and environmental promotion and protection.

Jain Irrigation Systems Limited

R&D Thrust Areas

Hi-Tech Agri Inputs

- Evolve OP & hybrid high TSS onion varieties.
- Standardise farm agronomic practices for higher resource productivity.
- Introduce selection of virus-free high yield banana clones.
- Standardise cultivation practices for energy crops.
- Optimise agronomic practices for organic cultivation.
- Establish top-working for offseasonal fruiting & higher yield.

Agri-Processed Products

- Develop economic onion preservation practices.
- Establish natural ripening process preserving flavours.
- Selection of new mango cultivars/hybrids for regular bearing & higher yields and prevention of die back.
- Explore better neutraceutical property aonla cultivars.
- Develop process for grapes & pomegranate juices.
- Develop dehydrated fruits.

Irrigation & Plastic Piping

- Develop PC spray heads and foggers.
- Design & manufacture integral drip tapes.
- Collaborative research on fertigation and irrigation scheduling with national & international institutes.
- Modernization of canal regulation for on demand water supply.
- Corrugated and Large Diameter (upto 1600 mm) PE & PP Pipes.

Plastic Sheets

Value added product development like, wooden finish, laminated, co-extruded and building products.

Greenhouses, Poly & Shadehouses

Production Capacity : upto 1,000,000 m².

Process

Construction of desired Galvanized steel structures with roofing and walling of UV stabilized plastics, complete with cooling, ventilation, irrigation, planting materials, and control systems (manual, semi-automatic or fully computerised) for creating controlled environment so as to achieve higher productivity of cash and high value crops.

Salient Features

Different models for varied climates and applications; turnkey assignments with integrated single source supply, design of structure and climatology, agronomic and irrigation knowhow, nut-bolt structure, easy to assemble and dismantle, can withstand 120 kmph wind speed. Increased productivity, reduced operating cost, leading to better commercial viability.

Tunnels and polyhouses are economical substitutes for creating semi-controlled environment for increasing yields, compared to open farm production systems.

Fruit Processing

Production Capacity

Fruit Pulps and Concentrates : 66,950 MTs/Annum
Frozen Fruits : 1,000 MTs/Annum

Raw Material : Mango, Banana, Papaya, Guava, Pomegranate, Custard Apple, Aonla (Indian Gooseberry), Tomato, etc.

Process

Aseptic & Canned Products :

- Fruits are harvested at the peak of their maturity and transported to our modern processing plants.
- After sorting, inspection, washing, etc. fruits are filled in crates and transferred to ripening chambers and ripened uniformly and optimally under controlled condition.
- Ripened fruits are washed, blanched, peeled, cut, inspected, pulped and homogenized and processed thermally and packed aseptically, retaining the taste, colour and aroma of fresh fruit.
- Finished products are stored at low temperature.

Frozen Fruits :

- Selected ripe fruits are inspected, sorted, washed, hand peeled, diced / sliced, frozen, and then packed.
- Packed frozen fruits are stored in Cold storages at -20°C (minus).

Salient Features :

- GMP, HACCP, SPC & other Quality Management Systems are implemented.
- Free of any chemical preservatives / additives.
- Stringent hygiene and sanitation is maintained all throughout the processing area.

ISO 9001 and HACCP certified by RWTUV, Germany.

Fruit Processing

Products

- 'FarmFresh' Aseptic & Canned product range includes pulps and concentrates of Mango, Banana, Guava, Papaya, Pomegranate, Aonla and Tomato. These are supplied in variety of packs, (Bag-In-Box, Bag-In-Drum, etc.).
- 'FarmFresh' Frozen (IQF) product range includes Cutpieces, Dices and Slices of Fruits & vegetables.

Applications

- 'FarmFresh' fruit pulps and concentrates are used

in a variety of applications e.g. fruit juices, nectars and other fruit based beverages. Ice-creams, yogurts, confectionaries and other applications.

- 'FarmFresh' Frozen Fruit & Vegetable Products are also used in a variety of applications e.g. Fruit salads, Yogurts, Ice-creams & other applications

Salient Features

- No chemical preservatives added.
- Meet WHO, EU and Japanese Standards for pesticides and heavy metals.
- Products are approved for Kosher and Pareve.
- Long shelf-life.

Essay competition and seminar organised by AFSTI

As part of the student activities, an essay competition was organised at Nirmala Niketan on 18th September 2009. Students from eight colleges participated in the competition. The essay topic, "Nutraceutical - Challenges and Opportunities in Good Health", was announced on the spot and the time allotted to participants was one hour. The essays have been evaluated by three senior members of AFSTI. Results will be announced at the Naram Award function.

The seminar on "Food for Healthy Living" was conducted on the same day at Nirmala Niketan and was attended by 180 participants from eight colleges. It was a good learning experience for the students.

Following is the list of students who participated in the essay competition.

NAME OF THE STUDENT; COLLEGE

1. SAKINA A RATLAMWALA DR BMN COLLEGE, MATUNGA

2. TASNEEM M KANCHWALA DR BMN COLLEGE, MATUNGA
3. VINAYA P NADKARNI SVT COLLEGE, JUHU
4. JHAVERI DISHA P SVT COLLEGE, JUHU
5. DEEPIKA H RACHWANI SNTD COLLEGE, JUHU
6. SHRESHTI JAIN SNTD COLLEGE, JUHU
7. ELINA S DAWOODANI PN DOSHI WOMEN'S COLLEGE
8. DELNAAZ DISAWALA NIRMALA NIKETAN
9. SWETLANA M KINNY RUIA COLLEGE
10. MADHURI ADULKAR PV POLYTECHNIC
11. PRERNA CHAWLA RUIA COLLEGE
12. SHIMPLI PATIL NIRMALA NIKETAN
13. PALLAVI S SHRIYAN PV POLYTECHNIC
14. VINAYAK S GHATE UICT, MATUNGA

Mrs Mary J Varghese,

Convener, Student Activities,
AFSTI (Mumbai Chapter).

Food facts

Sesame seeds are very rich in iron, magnesium, manganese and copper. There is about 90 mg of calcium in one tablespoon of unhulled seeds, and 10 mg in hulled seeds. They also contain vitamin E (tocopherol) and B1 (thiamine).