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JISL/SEC/2017/07/B-2,B-6

31.07.2017

To,
Bombay Stock Exchange Ltd.,
Corporate Relationship Department,
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Ref: Code No. 500219 (BSE) JISLJALEQS (NSE) Ordinary Equity Shares
Code No. 570004 (BSE) & JISLDVREQS (NSE) for DVR Equity Shares

Sub: Press Release

Dear Sir,

Attached is the Press Release being issued by the Company entitled “**JAIN IRRIGATION’S AGRI-BIOTECH R&D LAB’S RESEARCH WORK PUBLISHED IN HIGHLY RESPECTED SCIENTIFIC REPORTS (NATURE PUBLISHING GROUP, LONDON, UK)**” for your record and reference.

Please acknowledge.

Thanking you,

For Jain Irrigation Systems Ltd.,


A. V. Ghodgaonkar
Company Secretary

**JAIN IRRIGATION'S AGRI-BIOTECH R&D LAB'S RESEARCH WORK PUBLISHED IN
HIGHLY RESPECTED SCIENTIFIC REPORTS (NATURE PUBLISHING GROUP, LONDON, UK)**

Jain Irrigation Systems Ltd. (JISL) is pleased to announce that its Agri-biotech R&D group has published their research paper on banana entitled "Flowering time in Banana (Musa spp.), a day neutral plant, is controlled by at least three Flowering Locus T homologues" (<https://www.nature.com/articles/s41598-017-06118-x> , doi:10.1038/s41598-017-06118-x). This paper was submitted on January, 27th 2017, accepted on June, 8th 2017 and finally published on July, 19th 2017.

Banana is the largest produced fruit crop in the world with around 140 million MT total world production. India ranks first in the world with a total production over 30 million MT from 0.8 million hectare area which generates livelihood for millions of farmers. JISL has leveraged better technologies to farmers which sells more than 70 million tissue cultured banana plants coupled with micro irrigation system to the farmers. To complete the agri-value chain, JISL also buys back significant quantity of banana for processing as well as for fresh fruit export. This research work will substantially help in improving the productivity and quality of banana plants to a great extent.

The scientists announced that they were the first to successfully demonstrate the role of members of FT gene family in regulating flowering in a day neutral crop such as banana. This has long been one of the holy grails of scientific field, as not very many scientists have attempted to work on banana as a crop, not only due to its long gestation period but also the complexity entailed in generating scientifically valid data.



This research is of paramount importance considering banana as a staple food crop for millions worldwide. Banana has a long flowering/fruitle cycle and is sensitive to several abiotic stresses like hot summers, cool winters and drought which restrict its cultivation to specific areas. If one wishes or attempts to manipulate the life cycle of banana to escape these abiotic stresses, a thorough understanding of molecular physiology of flowering is essential.

In the present study, twelve *FLOWERING LOCUS T (FT)* and two *TWIN SISTER OF FT (TSF)* members were isolated from banana and their organization and expression were studied. The expression of at least 3 genes namely *MaFT1*, *MaFT2* and *MaFT5* (and to some extent *MaFT7*) increases just prior to initiation of flowering suggesting that these are the florigen encoding genes of banana. These four genes and five others could correct the delayed flowering defect in the Arabidopsis *ft-10* mutant. Subtle amino acid changes in these FT/TSF-like proteins provide interesting insights into the structure/function relationships of banana FTs *vis-à-vis* Arabidopsis. The studies provide a means for manipulation of flowering in banana for better management of resources and to reduce losses through abiotic stresses.

With great happiness, JISL and authors dedicate this paper to the group's founding Chairman, Padmashree Late Dr. Bhavarlalji Jain. It was under his tutelage that JISL became deeply interested in Agri-Biotechnology. Dr Jain's sheer interest in science has further opened new avenues for future research and for sure, it will unequivocally benefit not only the scientific community but also the farmers, who are considered to be the founders of our civilization.

About JAIN IRRIGATION SYSTEMS LIMITED (www.jains.com)

Our Company, Jain Irrigation Systems Limited (JISL) with its motto 'Small Ideas, Big Revolutions' with more than 10,500+ associates worldwide and revenue of ~USD 1 Billion, is an Indian multinational company with manufacturing plants in 30 locations across the globe. JISL, its subsidiaries and associates are engaged in providing solutions in agriculture, piping, infrastructure through manufacturing of Micro Irrigation Systems, PVC Pipes, HDPE Pipes, Plastic Sheets, Agro



Processed Products, Renewable Energy Solutions, Tissue Culture Plants, Financial Services and other agricultural inputs since more than 34 years. It has pioneered a silent Productivity Revolution with modern irrigation systems and innovative technologies in order to save precious water and has helped to get significant increase in crop yields, especially for more than 6 million small farmers. It has also ushered in new concept of large scale Integrated Irrigation Projects (IIP). 'More Crop Per Drop™' is the company's approach to water security and food security. JISL is early pioneer for IOT in the agri-sector and is leading efforts to create global solutions with precision agriculture. It's food brand 'Jain FarmFresh' is well known all over the world for quality and consistency. All the products and services of JISL help create a sustainable future while fulfilling its vision to 'Leave this world better than you found it'.

JISL is listed in NSE–Mumbai at JISLJALEQS and in BSE at code 500219.

