



# VSI

## BULLETIN

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Dedicated service to sugar industry since 1975

## Foreword

### Foreword ...

With immense pleasure, I am bringing out the Second Issue Volume 18 of our 'VSI Bulletin'. I am indeed very happy to share that Plant Breeding Section has developed first sugarcane variety "VSI 12121" (VSI 08005) after establishment of Institute's Sugarcane Breeding Centre, Amboli. This variety is recommended at Joint AGRESCO meeting held at Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli on 24<sup>th</sup> to 26<sup>th</sup> May 2018 and State Seed Sub-Committee meeting held on 15<sup>th</sup> June 2018 at Mantralaya, Mumbai under the chairmanship of Chief Secretary (Agriculture). In this meeting, the sugarcane variety VSI 12121 (VSI 08005) considered as 'State Variety'.

It is expected that the country's sugar production during the current season 2017-18 will be around 32 million tons out of which, Maharashtra sugar mills have produced 10.71 million tons of sugar. Because of overproduction of sugar in 2017-18 and carry forward stock of 3.90 million tons of sugar, the domestic sugar prices have dropped from average of Rs 3700 per quintal in previous season to Rs 2,600 per quintal in current season, making it difficult for sugar mills to make payment to farmers who have supplied sugarcane. The accumulated cane price arrears of farmers have reached to over Rs. 22,000 crores. In order to stabilize sugar prices at reasonable level and to improve liquidity position of sugar mills, thereby enabling them to clear cane price dues of farmers, the Central Government has taken various measures viz. (a) Customs duty on import of sugar increased from 50% to 100%. (b) Imposed reverse stock holding limits on producers of sugar for the months of February and March, 2018 to stabilize sugar price. (c) Government has also fully withdrawn the customs duty on export of sugar to encourage sugar industry to start exploring possibility of export of sugar. (d) Mill-wise Minimum Indicative Export Quotas (MIEQ) of 2.00 million tons have been fixed for sugar season 2017-18. (e) Further, to facilitate and incentivize export of surplus sugar by sugar mills, Government has allowed Duty Free Import Authorization (DFIA) Scheme (f) Financial

assistance @ of Rs. 5.50 per quintal of cane crushed in sugar season 2017-18 to sugar mills to offset the cost of cane. The said assistance shall be paid directly to the farmers on behalf of the mills and be adjusted against the cane price payable dues to the farmers against Fair and Remunerative Price (FRP) including arrears relating to previous years

Central Government recently on 6<sup>th</sup> June 2018 announced a package of Rs 8500 crores to boost farmer's income by creating a buffer stock of 3.00 million tons of sugar to wipe off surplus and push up prices of sugar, enhancing ethanol production capacity by providing Rs 4400 crores soft loan to sugar mills and fixing a minimum selling price of sugar at Rs 29 per kg to cut mill losses.

The Union Cabinet has approved National Policy on Biofuels – 2018. The Policy categorises biofuels as "Basic Biofuels" First Generation (1G) bioethanol & biodiesel and "Advanced Biofuels", Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels and Third Generation (3G) biofuels, bio-CNG etc. Policy also allows use of surplus foodgrains for production of ethanol for blending with petrol with the approval of National Biofuel Coordination Committee when farmers at a risk of not getting appropriate price for their surplus production phase.

Indian metrological Department (IMD) forecasted this year's monsoon will be normal and rainfall will be around 95% to 98% throughout the country. We wish all the farmers to grow more to achieve bumper production of crops vegetables and fruits. Apart from this, more important's that we should not forget to conserve water for future!

In this issue, VSI's contribution in the field of sugarcane agriculture and technology are highlighted through seminars, workshops/training and short term training programs. We look forward to your constructive feedback and participatory action.

  
(RM Devarumath)  
Editor



## CONGRATULATIONS CONGRATULATIONS



**Mrs. Ranjana A. Sawant**, Scientist, Tissue Culture Section, VSI has been awarded with Ph.D. under the Faculty of Science in the subject of Biotechnology by Bharati Vidyapeeth Deemed University, Pune for the thesis entitled “**Micropropagation of Sugarcane Varieties Via Axillary Shoot Proliferation for Quality Seed Production**” on 17<sup>th</sup> March 2018 under the guidance of Dr. (Mrs.) Neelambika Meti, Associate Professor, Department of Biotechnology, Rajiv Gandhi Institute of Information Technology and Biotechnology, Pune.

## WELCOME TO NEWLY APPOINTED STAFF WELCOME TO NEWLY APPOINTED STAFF



**Dr. Ganesh Soplanrao Kotgire**  
Scientist, Plant Pathology



**Mr. Gorkshanath Eknath Atre**  
Scientific Officer, Plant Pathology



**Mr. Anil Gowardhanrao Mundhe**  
Scientific Officer, Farm Development & Management



**Mr. Samadhan Appaso Surwase**  
Scientific officer, Soil Science



**Dr. Tushar Dadasaheb Shitole**  
Scientific Officer, Entomology



**Dr. Abhinadan Suresh Patil**  
Scientific Officer, Agronomy



**Ms. Mohini Ashok Gaikwad**  
Scientific Officer in Agriculture Engineering & Workshop



**Mr. Sachin Ramchandra Patil**  
Scientific Officer, Agriculture Engineering & workshop



**Mr. Milind Ankush Tekawade**  
Agriculture Assistant, Entomology





**Mr. Vikram Singh Ajitrao Chavan**  
Agriculture Assistant, Entomology



**Mr. Prashant Vilas Devkar**  
Agriculture Assistant, Entomology



**Mr. Amol Narayan Chaudhari**  
Agriculture Assistant, Plant Breeding



**Mr. Prakash Shivaji Rane**  
Agriculture Assistant, Farm  
Development & Management



**Mr. Abhijit Kumar Yadav**  
Agriculture Assistant, Farm Development  
& Management



**Mr. Shuddhodhan Devidas Tayade**  
Agriculture Assistant, Agriculture  
Engineering & Workshop



**Mr. Kumar Bali Kamble**  
Agriculture Assistant, Microbiology

## Induction Programme



Personnel section organized an induction programme on 15<sup>th</sup> and 18<sup>th</sup> June 2018 for these newly joined staff in various discipline of Agriculture Science and Technology Division. In these two days they visited all the Departments/Sections of the Institute to know the activities/research programmes. The Director General, Mr. Shivajirao Deshmukh addressed newly recruited staff members on 18<sup>th</sup> June 2018 and enlightened them the activities and importance of the Institute to the sugarcane farmers and sugar industry in the areas of research, training, extension and advisory services. All the HOD/HOS of AST were present on this occasion.

## EVENTS

### World Book Day

VSI Library celebrated the World Book Day on 23<sup>rd</sup> April 2018. Students and staff members were invited for inculcating the information about existing of library

collection. Library displayed books on various subjects of the interest of the readers. Staff members and students visited the book exhibition.



### Maharashtra Day



VSI celebrated 58<sup>th</sup> Maharashtra Day on 1<sup>st</sup> May 2018 and National flag was hoisted by Mr. Shivajirao Deshmukh, Director General, VSI and all the staff members and students were present for this event. This day commemorates the

formation of the state of Maharashtra from the Division of the Bombay State in 1960. This day is also known as the International Labour Day.



### National Technology Day

Every year the nation celebrate the National Technology Day on 11<sup>th</sup> May to commemorate the role of Science and Technology in developing a modern India and the anniversary of three key events happened on the same day viz., in 1998, the second nuclear test conducted at Pokharan marking India's entry to the world's nuclear club,

the successful flight of the indigenously developed two seater aircraft 'Hansa' and the successful firing of the 'Trishul' missile leading to its induction into the Indian army.

VSI also celebrate the National Technology day every year by organizing lecture by eminent Scientist / Technologist. Prof. SW Gosavi, Head, Departments of Physics &



Environmental Sciences, Savitribai Phule Pune University, Pune was invited as honorable guest for this year's function. All the Scientists, Technologists and Engineers of the Institute attended this function. At the outset, Prof. Gosavi was welcomed by Dr. SV Patil, Technical Adviser & Head, Alcohol Technology and Biofuels. Dr. Deepali Nimbalkar Sr. Scientist, Environmental Sciences Department introduced him to the audience. Prof. Gosavi gave a talk on **'Use of Nanotechnology for Sustainable Development'**. He gave an overview of the various projects being conducted in the Department of Physics at SPPU and the funding received from national and international agencies. His speech covered three areas viz, solar energy for rural development, nanotechnology in water & wastewater treatment and nanotechnology in health care application. The first part elaborated on the solar energy project at Shive village near Bhama- Askhed dam in Pune district. This project uses solar

energy during day time and biomass energy when sunlight is not available. He explained how this unique project has made a change in the livelihood of villagers and is also used as a live laboratory by students of the university. Prof. Gosavi talked about the use of nanotechnology in water and wastewater treatment and informed use of nano particles for removal of various components from water and waste water in different application. The final part of the lecture dealt with the use of nanotechnology in health care with a stress on technologies for early detection of cancer. He gave details about the status of different developments with an example of early detection of breast and prostate cancers through markers. The address was concluded with a summary and answering the questions raised by audience from the audience. The function was concluded by vote of thanks.



## World Environment Day

VSI celebrated the 'World Environment Day' on 5<sup>th</sup> June 2018 in the VSI Library. On this occasion, Library focused on display of rare and valuable books of

Environmental Sciences from its collection and provided opportunity to enlighten the opinions to the visitors. Student and staff members visited the exhibition.



## COMMITTEE MEETINGS

### Management Committee Meetings

Four Management Committee Meetings were held during the period from April to June 2018. In this period, Selection Committee meeting was held on 30<sup>th</sup> April 2018.



Purchase Committee meeting and Technical Committee Meetings were held on 05<sup>th</sup> May 2018 and Governing Council meeting was held on 11<sup>th</sup> June 2018.



### Technical Committee Meeting

The Technical Committee Meeting of all Agriculture Sections and Technical Departments of VSI was held on 5<sup>th</sup> May 2018 for review of completed R & D projects during 2017-18, ongoing projects and future research program for 2018-19.

The following members of the technical committee took part in the discussions; Mr. Narendra Murkumbi, Chairman, Mr. Arvind J. Gore, Mr. Madan Bhosale, Mr. Vishal P. Patil, Member, and Mr. Shivajirao Deshmukh, Director General, VSI and all the technical staff were present.

Mr. Shivajirao Deshmukh, Director General, welcomed Mr. Narendra Murkumbi, Chairman and members of the Technical Committee. The meeting was followed by presentations prepared by all the technical and agriculture divisions on research activities and their utility to the sugar industry and sugarcane growers. During the presentations, various issues were discussed for the improvement of the research activities and services to the sugarcane growers and sugar industry. The meeting was concluded with vote of thanks.



## WORKSHOPS WORKSHOPS

### Extension Progress of VSI's Promotional Award Scheme

One day monthly workshop on “**Extension Progress of VSI's Promotional Award Scheme**” by the participating Sugar Mills was held at VSI on 28<sup>th</sup> April 2018. The workshop was inaugurated by senior cane development officers of participating sugar mills and all the Head of Sections of Agricultural Sciences and Technology Division, VSI.

Dr. RS Hapase, Head & Principal Scientist, Plant Breeding welcomed all the 74 participants from 39 different sugar mills of Maharashtra State. He mentioned that promotional award scheme was declared by Hon. President of VSI and explained objectives of the scheme and the marks allotment system for each cane development activity during next three years to be considered by the participating sugar mills. Dr. Hapase highlighted that the basic aim of this award scheme is to motivate the farmers for achieving maximum sugarcane yield as well as to boost the sugar recovery of the sugar mills by adopting varietal

planting planning and harvesting programme under the guidance of VSI. The participant sugar mills should adopt the quality seed programme through three tier system and encourage the farmers to use the VSI's inputs which are affordable price as compared to inputs available in the market. In the technical session, officers from all 39 sugar mills presented information on actions undertaken by them under cane development award schemes since their entry of participation.

In the concluding session, all the heads of sections of Agriculture explained in details regarding each cane development activity to be implemented at participant sugar mills. The information sheet on cane development action taken by each participant mill was collected by the respective zone leader for compilation. The programme was ended with vote of thanks by Mrs. JP Kharade, Scientific Officer, Soil Science Section.



## Varietal Planning and Seed Programme

One day workshop on ‘**Varietal Planning and Seed Programme**’ was organized at VSI on 26<sup>th</sup> May 2018. The workshop was inaugurated by cane development officers of sugar mills and all Agriculture Heads of Sections from VSI.

The technical session was started with the lecture of Dr. RS Hapase on ‘**Sugarcane Varieties and their Planting Planning for Maharashtra State**’. He explained in detail regarding role of physiological activities during germination, tillering and grand growth stages and how it affects the total productivity of sugarcane. He also explained at cellular level of leaf and importance of photosynthesis activity in sugarcane crop. He detailed the different sugarcane varieties released for Maharashtra state, its maturity and importance in the varietal planting programme. He emphasized on planting of sugarcane in pre-season planting season.

The 2<sup>nd</sup> lecture was given on “Sugarcane seed nurseries planning” by Mr. SS Katake, Farm Manager, VSI, Pune. He explained about three tire seed programme and comparison between seed settling and tissue culture seedlings with cost effectiveness for seed purpose and 3<sup>rd</sup> lecture was on ‘**Sugarcane Seed Production through Tissue Culture**’ by Dr. AA Nikam. He explained about the purity of tissue culture plantlets and its importance for obtaining disease and insect free plantlets .

In the concluding session, participants of different sugar mills expressed their views regarding progress of cane development promotional award scheme and expectations from VSI. The chairman of concluding session, Director General, Mr. Shivajirao Deshmukh, took the review of cane development promotional award scheme progress. He also told that all 53 participating sugar mills should attend every workshop. The programme was concluded with vote of thanks by Mrs. JP Kharade, Scientific Officer, Soil Science Section.





## SEMINARS / TRAINING

### Art of Brewing

One day seminar was organized on ‘**Art of Brewing**’ by the Department of Alcohol Technology & Biofuels, VSI in collaboration with Weyermann specialty malting company, Germany and Fermentis, France on 19<sup>th</sup> April 2018. Mr. Pradeep Verma, Techno-commercial Associate, Weyermann, Mr. Sanjeev Nagpal, Director, Om Distributor, Gurgaon and Brewers & associates of Om Distributors and Mr. Krishan Kumar Rajeev, Sales Manager, South & South East Asia, Fermentis, France participated in this event.

First presentation of session-I was made by Mr. Pradeep Verma on ‘**Finest Weyermann Distillates Produced from Weyermann Malt Extracts**’. Mr. Verma explained the process of production of whisky and other spirits using malt extract and further gave information on various malt extract and malt based colour additives which can be used in distilled spirit production.

Mr. Pradeep Verma in his 2<sup>nd</sup> presentation on ‘**Authentic Weyermann Terroir Malts and the Brewing of Classic Lager Beers**’ gave a brief account of brewery terroir malts and also discussed the recipe of lager beer using Weyermann malts. He also covered some points on recipe

formulations and characteristics of lager beer. The 3<sup>rd</sup> presentation was made by Mr. Krishan Kumar Rajeev on the topic ‘**Cider Production and Yeast Nutritional Requirement**’. He described the process of cider production from apples and discussed steps involved in cider production, types of ciders and varieties of apples used for cider production. Mr. Krishna further gave information on nutrient supplements for production ciders and meads.

In post lunch session, Mr. Verma delivered a talk on ‘**Water- Ministry in the Universe**’. He took the audience through spiritual and scientific insights of water. He also discussed on current and future water issues and its impact of global brewing industry. Mr. Verma also talked about the ways of reducing water usage in the brewing industry. Later, Mr. Verma also demonstrated the Bevi-clean glass cleaner for minimum water usage.

In the concluding session, Mr. Verma and his team had interactions with students regarding their future prospects in brewing and allied alcoholic beverage industry. The staff of the Department proposed a vote of thanks which concluded the function.



### Energy Efficiency-Master Strategy for Business Success in 21<sup>st</sup> Century

As a part of ‘Institutional Training Program’ on behalf of Petroleum Conservation Research Association (PCRA), Ministry of Petroleum and Natural gas, Govt. of India,

Mr. RL Tailor, Sr. Faculty Member, PCRA, Pune delivered a lecture on ‘**Energy Efficiency- Master Strategy for Business Success in 21<sup>st</sup> Century**’ at Sugar Engineering

Department, VSI on 14<sup>th</sup> May 2018.. All staff members and students of Sugar Engineering Diploma (semester-II) attended this programme.

Mr. Tailor explained the various advanced engineering systems and their impacts on fuel saving as well as energy conservation. He also enlightened the requirement of energy efficiency and different strategies to achieve the same. The function concluded with discussion and vote of thanks.



## Short Term Training Programme : April - June 2018

The Institute conducts short term training programmes to the employees for the Sugar Mills and Distilleries to enhance their working knowledge, information to adopt new technology and guidance to industries to gain their key objectives. This is a significant achievement of VSI. The effectiveness and practical utility of these training programmes have been widely accepted and adopted by

the industries. These training courses hold essential criteria for granting promotion to higher grade to trained employees. The Short Term courses conducted by various Departments and the number of participants joined for the same from 16<sup>th</sup> April to 22<sup>nd</sup> June 2018 are given below;

Sr. No.	Course Title	No. of Trainees
<b>Sugar Technology</b>		
1.	Juice Clarification & Evaporation	63
2.	Pan Boiling & Centrifugals	104
3.	Special Analysis in Laboratory	14
<b>Sugar Engineering</b>		
4.	Boiler Attendant	26
5.	Mill Foreman	24
6.	Bagasse Based Co-Generation	27
<b>Alcohol Technology and biofuels</b>		
7.	Molasses, Spirit & Alcohol by beverages	04
8.	Fermentation & Distillation techniques in distillery	25
9.	Wet and Instrumentation Analysis in Distillery	08
<b>Instrumentation</b>		
10.	Techniques in Analytical Instrumentation	5
11.	Repairs & Maintenance of Sugar Factory Instruments.	35
<b>Environment Sciences</b>		
12.	Pollution Control and Environment Management in Sugar Factory	10
13.	ETP Operation	16
<b>Total Trainees</b>		<b>361</b>





Short Term Training - Bagasse Based Co-Generation

### *Oos Sheti Dnyanlaxmi*

In the remembrance of Founder President of VSI, Late Padmabhushan Dr. Vasantdada Patil, *Oos Sheti Dnyanlaxmi* and *Oos Sheti Dnyanyag* a 5 days residential training programmes were organized for women and men sugarcane growers of Maharashtra State at VSI. The 1<sup>st</sup> phase of the year 2018, training programme will be conducted by Agriculture Scientists and Technical Staff of VSI into four batches during June to July 2018. In this, 1<sup>st</sup> batch of *Oos Sheti Dnyanlaxmi* program was conducted on 25<sup>th</sup> - 30<sup>th</sup> June 2018 and inaugurated by women farmers of the participants and Agriculture Heads of sections from VSI. Total 176 participants from 11 Sugar Mills were present.

This Training programme was conducted in the form of theory lectures and practical field demonstrations on various topics comprising modern and scientific sugarcane cultivation technologies covering the topics like sugarcane varieties & varietal planning, three-tier seed nursery programme & its implementation, tissue culture, modern planting techniques, weed management, soil fertility & fertilizer management, irrigation water management, use of bio-fertilizers, growth stages of sugarcane crop, farm mechanization, sugarcane economics, ratoon management, integrated disease & pest management etc. The function concluded with the discussion session in which participants interact with subject experts about their doubts. Mr. BH Pawar, Senior Scientist & Head, Plant Pathology Section has coordinated this activity.



## PARTICIPATION BY VSI STAFF PARTICIPATION BY VSI STAFF

### International Conference at Krishi Vigyan Kendra, Baramati, Pune

On the invitation received from Mr. Rajendradada Pawar, Chairman, Agricultural Development Trust Baramati, Dist. Pune, the Director General, VSI and Mr. PV Ghodke, Scientist, Agronomy Section, attended International Conference on, **‘Doubling the Farmers Income through Innovative Approaches’** at Krishi Vigyan Kendra campus at Baramati on 9<sup>th</sup> April 2018. In inaugural session, the Director General delivered speech and appreciated the work done by the KVK for the benefit of the farming community through several innovative approaches. He also suggested introducing sugarbeet as a supplementary crop in sugarcane cropping system for increasing farmer’s income and improvement of soil health. He elaborated the proactive role played by VSI in the development of agro-techniques,

evaluation of different sugarbeet & sugarcane varieties and guided sugar mills for large scale cultivation of sugarbeet and sugarcane crops. He assured the Chairman, KVK that all possible support from VSI for technical knowledge of crop cultivation and processing.

Mr. PV Ghodke delivered a technical talk with presentation on **‘Sugarbeet Cultivation in Tropical India and VSI’s Experience in Processing’**. He elaborated the complete package cultivation of practices developed at VSI for sugarbeet crop and shared the experience with 100 TBD pilot processing plant in the operational area of two sugar mills in Maharashtra state.



### Training Programme for Engineers and Sugar Technologists of EID Parry (I) Ltd.

The Management of EID Parry requested VSI to conduct one day training programme for their technical staff. Accordingly, VSI team conducted a special training programme on 27<sup>th</sup> April, 2018. The programme started with introduction by Mr. Subramanyam, Unit Head, EID Parry and two sessions were conducted. Two lectures were conducted in the morning session. First lecture was on **‘Water Conservation and Wastewater Minimization’** by Mr. DB Sapkal, Sr. Sugar Technologist

and second lecture on, **‘Boiler Maintenance’** by Mr. AB Kotkar, Sugar Engineer. In the afternoon session, two lectures were conducted on, **‘Technologies for ETP’** and **‘Production of Good Quality Sugar’** by Mr. DB Sapkal and second lecture on **‘Power Requirement to Drive Mill and Cane Preparation’** by Mr. AB Kotkar.

Thirty participants attended the programme. All the participants were actively involved in the discussion. After



the training programme, there were positive feedbacks from participants, those expressed that the training programme was very useful and received good information to update their knowledge on water conservation,

minimizing effluent generation and also on mills & boilers. The programme was well appreciated by the participants and the Unit Head in the concluding session.

## Annual Convention (2018) and Asian Conclave of Sugar Millers, Vision - 2022

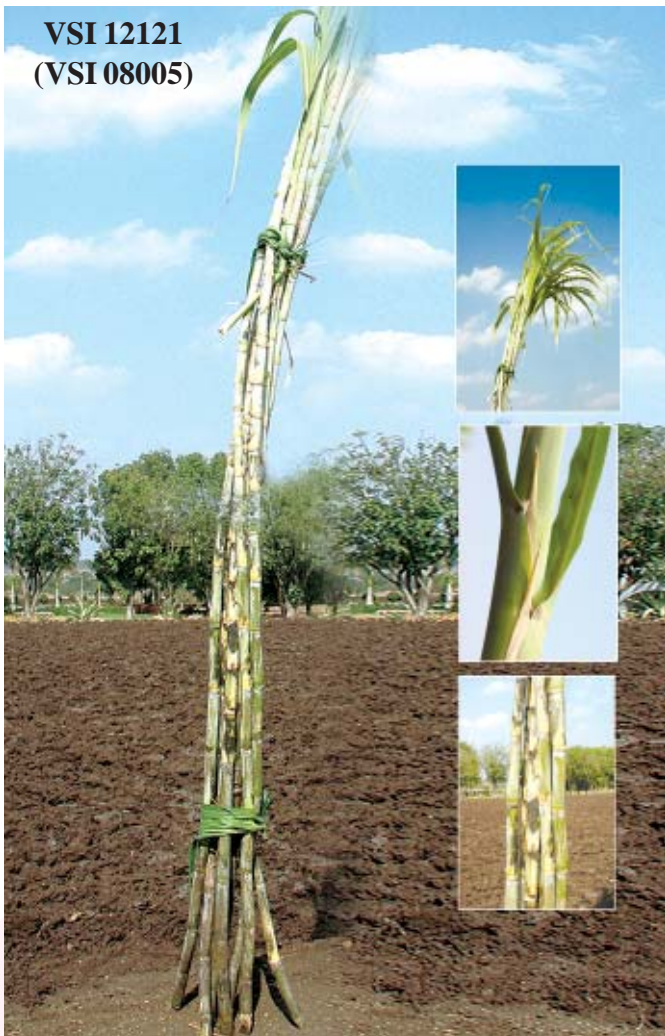
Dr. RV Dani, Head, Sugar Technology Department, VSI was invited as Guest of Honour by North Indian Sugarcane and Sugar Technologists Association (NISSTA) for the program on ‘Asian Conclave of Sugar Millers Vision – 2022’ held on 24<sup>th</sup> - 25<sup>th</sup> May, 2018 in Chandigarh. He also participated in the panel discussion as requested by the organizers. Theme of the conclave was ‘Technology

### Advancement in Sugarcane Production and Processing of Sugar: Experiences and Challenges’.

He presented a paper entitled ‘Advancement in Sugar Processing Technology in India’ in the conclave and stressed upon the reduction in production cost by conservation of steam, power and water. He emphasized on increasing the revenue by way of value addition of product.

## Joint AGRESCO Meeting

VSI 12121  
(VSI 08005)



A team of three scientists headed by Dr. RS Hapase, Head & Principal Scientist of Plant Breeding Section, Dr. JM Repale, Senior Scientist of Plant Breeding Section, and Dr. SG Dalvi, Scientific Officer of Tissue Culture Section attended the 46<sup>th</sup> Joint AGRESCO meeting held during 24<sup>th</sup> to 26<sup>th</sup> May, 2018 at Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli. The inaugural programme was chaired by Dr. B. Venkateswarlu, Vice Chancellor, Vasantnao Naik Marathwada Krishi Vidyapeeth, Parbhani in presence of Chief guests Dr. MC Warsheny, Former Vice Chancellor, Kamdhenu Vidyapeeth, Anand, Gujrat; Dr. VM Bhale, Vice Chancellor, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola; Dr. KP Vishwanatha, Vice Chancellor, Mahatma Phule Krishi Vidyapeeth, Rahuri; Mr. Ravindra Jagtap, Director General, Maharashtra Council of Agricultural Education and Research, Pune. Dr. Tapas Bhattacharyya, Vice Chancellor, Dr. BS Konkan Krishi Vidyapeeth, Dapoli welcomed the guest. Chief Guest Dr. MC Warsheny in his address urged that the Scientists should focus on reducing the cost on crop production. He also urged to concentrate on need based irrigation facilities availability and marketing for getting good prices to farmer’s commodity.

The team members attended and participated in the technical sessions. In technical session IX (Variety Release Committee for Field Crops) Dr. RS Hapase presented the release proposal of sugarcane variety “VSI 12121” (VSI 08005) developed by VSI before the Committee. **The Varietal Release Committee approved the proposal for its release for Maharashtra State for commercial cultivation.** The highlights of sugarcane variety VSI 12121 are as follows-

1. It has higher cane yield (141.24 t/ha) over the existing midlate maturing sugarcane variety Co 86032 (118.84 t/ha). It has given 18.85 % increase in cane yield and 23.47 % for sugar yield per hectare.
2. It has recorded 4.24 % higher sucrose % (20.16) in juice over Co 86032 (19.34) variety at the 14<sup>th</sup> months of crop age.
3. It is recommended for commercial cultivation in *Adsali*, *Pre-season* and *Suru* seasons for Maharashtra state.
4. It has good ratoonability.

5. It has non-flowering nature in central and North-East zone and sparse flowering nature in South zone of the Maharashtra State.
6. It is moderately resistant to smut, red-rot and rust disease and less susceptible to pest internode borer.

Dr. SG Dalvi presented the recommendation on oligochitosan in group V (Basic Sciences, Food Science and Technology). He explained that Irradiated Chitosan (Oligochitosan) a low Molecular weight derivative of chitin biopolymer developed by VSI & BARC by gamma irradiation/ Electron Beam technique at BRIT-BARC, Mumbai. It acts as elicitor triggering multiple stress tolerance. The recommendation was approved by the Committee. The farmers can use this Irradiated Chitosan. It is recommended that **‘Sett treatment of oligochitosan @ 50ppm for 30 min at the time of planting followed by three foliar sprays 30, 60 and 90 days after planting for sugarcane yield improvement in Suru season’**. The MOU with BARC, Mumbai is under progress for taking large scale trials of this biostimulator (Oligochitosan) on 1000 acres on sugarcane and intercrops at ten selected Sugar Mill areas.

## Maharashtra State Seed Sub-Committee Meeting

Dr. RS Hapase, Head & Principal Scientist, and Dr. JM Repale, Sr. Scientist from Plant Breeding Section attended the 50<sup>th</sup> State Seed Sub-Committee meeting held on 15<sup>th</sup> June 2018 at Mantralaya, Mumbai under chairmanship of Mr. Vijay Kumar, Chief Secretary (Agriculture). The other members of this committee consisted of Director’s of Research of four Agriculture Universities of Maharashtra State; Director of Agriculture, Govt. of Maharashtra; Managing Director, Mahabeej, Akola; Director,

Maharashtra State Seed Certification Agency, Akola; Director, National Fruit Research and Development, Nasik; Director, National Research Centre for Onion and Garlic etc. **In this meeting, Dr. RS Hapase presented the detailed proposal of sugarcane variety VSI 12121 (VSI 08005) which was discussed thoroughly and accepted this variety for Maharashtra State as ‘State Variety’**



## Maharashtra Plastic & Thermocol Products Notification 2018

World Environment Day is celebrated on 5<sup>th</sup> June every year. **‘Beat Plastic Pollution’** was the theme for the World Environment Day 2018 for which India was the host country. Maharashtra state has also been active in this regard with the implementation of the Maharashtra Plastic & Thermocol Products (Manufacture, Usage, Sale Transport, Handling and Storage) Notification, 2018 which was introduced on Gudhi padwa day on 23<sup>rd</sup> March, 2018. Dr. Deepali Nimbalkar, Head, & Sr. Scientist, Environmental Sciences, VSI, was invited to deliver a lecture on this notification and its implications at the inaugural session of the Environment month celebrations at Tata Motors on



5<sup>th</sup> June 2018. The function was attended by top management members as Mr. Satish Borwankar, COO & ED, Mr. Ajay Lal, Head (Manufacturing (CVBU), Mr. Alok Kumar Singh, Plat Head (CVBU, Pune) and around 250 employees of the company. She talked about the products covered, products exempted, the implications for industry, the general public & the environment along with the authorities and penalties under the notification. She also discussed the alternatives such as bioplastics and the misconceptions regarding them. The lecture was well received and there were several questions from the audience which were answered to their satisfaction.

## Environmental Management in Sugar & Distillery Industry

The Deccan Sugar Technologists Association had organized a one day seminar on **‘Environmental Management in Sugar & Distillery Industry’** on 9<sup>th</sup> June 2018 in Pune. Dr. Eknath Alhat from the Department of Environmental Sciences attended the Seminar. There were two technical sessions, one on sugar industry and another on distillery industry which included presentations from experts including senior officials from Maharashtra Pollution Control Board who also guided the participants

on their problems regarding various environmental issues. Dr. YB Sontakke, Joint Director (Water Pollution Control), MPCB spoke on recycling of water & wastewater in sugar industry and Mr. PK Mirashe, Assistant Secretary, MPCB spoke on spentwash management in distilleries. Dr. Deepali Nimbalkar from VSI was invited to take part in the panel discussion in the concluding session where the panel answered various queries from the audience.

## Representation of VSI on Technical Committee Constituted by Namami Chandrabhaga Pradhikaran

Bhima river originates in Bhimashankar in Pune district, but when it reaches Pandharpur, it appears like a crescent moon, thus deriving the name Chandrabhaga. Namami Chandrabhaga is an initiative of the state Government to revive and rejuvenate the river Chandrabhaga and restore its historic glory. Considering the religious, social and economic importance of the river Chandrabhaga, the Government has decided to prepare a comprehensive plan

for cleaning of the river on the lines of ‘Namami Gange’. A Technical Committee headed by Director, National Environmental Engineering Research Institute, Nagpur was constituted to implement projects of solid waste management and effluent treatment in clusters of 3-4 villages along the banks of the river as a part of this project. VSI has also been included in this Committee. Dr. Deepali Nimbalkar, will represent the Institute on this Committee.

## VISITORS TO VSI

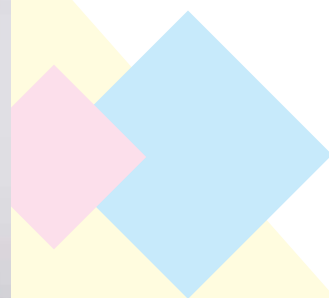
A Team of National Federation Co-operative Sugar Factories Ltd., New Delhi comprises of Mr. Amit Prabhakar Kore, Vice President and Chairman of Doodhganga Krishna SSK Niyamit, Chikodi, Karnataka; Mr. Hardeep Singh Dhillon, Director; Mr. Prakash Naiknaware, Managing Director and Ms. Sangeeta Bisht, Board Secretary visited VSI on 3<sup>rd</sup> May 2018. The Director General, VSI welcomed the team and briefed

about Institute's activities. Later the team visited various departments like Alcohol Technology and Biofuels, Sugar Technology, Environmental Sciences and Tissue Culture Section in Agriculture Science & Technology Division and concerning officers explained the Departmental R & D activities. Mr. BJ Takalkar, Statistical Officer from Statistics & Informatics Section, VSI accompanied the delegates.



Mr. Sada Dumbare, a Journalist and Ex. Editor of Sakal News paper visited VSI on 25<sup>th</sup> June 2018. Mr. Shivajirao Deshmukh, Director General, VSI welcomed him and briefed about Institute's activities. Later He visited various departments viz., Sugar Technology, Sugar Engineering, Alcohol Technology and Biofuels, Environmental Science,

Plant Breeding, Tissue Culture Section, Molecular Biology & Genetics Engineering, Soil Science, Microbiology etc. Concerning officers explained the departmental activities. Mr. BJ Takalkar, Statistical Officer from Statistics & Informatics Section, VSI accompanied him.







## Visitors List

Following list of visitors visited VSI as given below during April to June 2018

Name of Institutions	Visitors	Total
<b>April - 2018</b>		
Krishi Vigyan Kendra (PIRENS), Bableshwar, Dist : Ahmednagar	Officers and Farmers	<b>329(6)</b>
S.M. Joshi College, Hadapsar, Pune	Students	<b>6</b>
Farmers Welfare & Agriculture Development Department, Dist. : Burhanpur, State : Madhaypradesh	Officers and Farmers	<b>27</b>
Natural Sugars & Allied Industries Ltd., Sainagar, Dist: Osmanabad	Directors and Officers	<b>6</b>
Bhairavnath Sugar Works Ltd., Sonari, Dist: Osmanabad	Officers	<b>4</b>
Pabodh Teachers Training Aundh, Pune	Teachers	<b>12</b>
Individual Farmers from Maharashtra State	Farmers	<b>42 (8)</b>
Individual Farmers from outside State	Farmers	<b>8 (4)</b>
<b>May - 2018</b>		
Agriculture College, Naigaon, Nanded, Dist: Nanded	Lecturers and Farmers	<b>122</b>
Individual Farmers from Maharashtra State	Farmers	<b>57 (10)</b>
Individual Farmers from outside State	Farmers	<b>6 (3)</b>
<b>June - 2018</b>		
Vanketshkrupa Sugar Mills Ltd., Jategaon, Dist : Pune	Officer and Farmers	<b>25</b>
Palus Mandal Agriculture Officer, Dist : Sangli	Officers and Farmers	<b>54</b>
The Orbis School Keshvnagar, Pune	Teachers and Student	<b>118</b>
Individual Farmers from Maharashtra State	Farmers	<b>43 (13)</b>
Individual Farmers from outside State	Farmers	<b>7 (3)</b>
<b>Total :</b>		<b>866 (54)</b>

- Bracket figures denote number of visits

## LIBRARY UPDATE LIBRARY UPDATE

### April to June 2018

1. Shukla, S. K., Zubair, Adil, Awasthi, S. K., and Pathak, A. D.  
Sugarcane Varieties identified by AICRP(S) in India (111p.)  
Indian Council of Agricultural Research, Lucknow
2. Shukla, S. K., Zubair, Adil, Awasthi, S. K., and Pathak, A. D.  
Sugarcane Varieties identified by AICRP(S) in India (111p.)  
Indian Council of Agricultural Research, Lucknow
3. Kande-Patil, Vidhyadhar  
Sakharnama: Eka Katu Sangharshachi God Kahani, 1<sup>st</sup> ed. (232p.)  
Phoenix Publication, Latur.
4. Kande-Patil, Vidhyadhar  
Sakharnama: Eka Katu Sangharshachi God Kahani, 1<sup>st</sup> ed. (232p.)  
Phoenix Publication, Latur.
5. Hemprabha, G., Alarmelu, S., Mohanraj, K., Mohadevaiah, C., Raffee Voila, V., and Bakshi, Ram.  
Morphological Description of Coimbatore (Co) Canes (1993-2016) 1<sup>st</sup> ed. (682p.)  
ICAR-Sugarcane Breeding Institute, Coimbatore
6. Hemprabha, G., Vishwanathan, R., Ramasubramanian, T., Bhaskaran, A., Mohanraj, K., and Bakshi, Ram.  
SucroSym 2017: International Symposium on Sugarcane Research Since Co 205: 100 Years and Beyond – Proceedings Held on Sept. 18-21, 2017 at Coimbatore 1<sup>st</sup> ed. (682p.)  
Society for Sugarcane Research and Development, Coimbatore
7. Sugar Technologists' Association of India  
Year book and technical data directory of Indian sugar factories 2016-17 and 2015-16 (502p.)  
Sugar Technologists' Association of India, New Delhi.
8. Mathu, Swamy., Brinda and Sanjeev  
Seventh pay commission report (Part-I): recommendations except pension. 1<sup>st</sup> ed. (778p.)  
Swamy Publisher (P) Ltd., Chennai
9. Mathu, Swamy., Brinda and Sanjeev  
Seventh pay commission report (Part-II): Pension and other related benefits. 1<sup>st</sup> ed. (60p.)  
Swamy Publisher (P) Ltd., Chennai
10. Sugar Technologists' Association of India  
Proceedings: All India seminar on "Recent advances in energy efficient and eco-friendly sugar refineries" May 2017 at Gangtok. (80p.)  
Sugar Technologists' Association of India, New Delhi
11. Sugar Technologists' Association of India  
Proceedings: All India seminar on "Modern boiling house technologies and impact of steam saving on process efficiency March, 2018 Solapur. (56p.)  
Sugar Technologists' Association of India, New Delhi
12. Sugar Technologists' Association of India  
Proceedings: All India seminar on "Sustainable sugarcane practices for viable sugar industry" April, 2018, Lucknow. (66p.)  
Sugar Technologists' Association of India, New Delhi
13. NISSTA  
Annual convention (2018) and Asian conclave of sugar millers vision – 2022 at Chandigarh on May 24 - 25, 2018. (222p.)  
North Indian Sugarcane and Sugar Technologists' Association (NISSTA), Lucknow.
14. Sambandham, S. and Rajaram, V. S.  
Handbook of Tamilnadu Prohibition act (Tamilnadu Act 10 of 1937) with Rules framed there under . 1<sup>st</sup> ed. (867p.)  
C. Sitarama and Co. Pvt. Ltd., Chennai.



## Upcoming Events

Sr.No.	Date	Topic	Coordinator
1	June - July 2018	<i>Oos Sheti Dnyanlaxmi and Oos Sheti Dnyanyag</i> (Batch I)	Mr. BH Pawar
2	25.08.2018	Current Scenario of Pests in Sugarcane	Mr. BH Pawar Mr. RG Yadav
3	22.09.2018	Promotion of Pre-seasonal Planting, Intercropping and Integrated Nutrient management	Mr. PV Ghodke Dr. PS Deshmukh Mrs. SD Ghodke
4	27.10.2018	Quarterly Review of Promotional Award Scheme	Dr. RS Hapase
5	November – December 2018	<i>Oos Sheti Dnyanlaxmi and Oos Sheti Dnyanyag</i> (Batch II)	Mr. BH Pawar
6	25.01.2019	Multi-Ratooning and <i>In Situ</i> Trash Management	Mr. PV Ghodke
7	23.02.2019	Sugarcane Crop Management under Water Stress Condition	Mr. PP Shinde Mr. PV Ghodke
8	23.03.2019	Quarterly Review of Promotional Award Scheme	Dr. RS Hapase

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