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VSI BULLETIN



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Foreword Foreword ...

I have the pleasure in sharing with you that the year 2025 marks a remarkable milestone for your Association, as we celebrating 50 years of unwavering commitment to the progress of the sugarcane growers, sugar and allied industries. Founded in 1975, the Vasantdada Sugar Institute (VSI) as earlier recognized as Deccan Sugar Institute has been at the forefront of fostering technological advancements for sugar & allied industry, sugarcane cane growers and Sustainable practices within the sector. Over the decades, VSI has played a pivotal role in Research & Development, Extension and consultation to developing cost effective process technologies, facilitating the exchange of knowledge and promoting best practices in sugar and sugarcane production.

In this issues various activities under taken by VSI during the period from July to September 2025 have been highlighted as part of our Golden Jubilee celebrations, the VSI conducted National Seminar on National Seminar on 'Advanced Technologies of Sugarcane Production in Relation to Climate Resilience' during July 30 – 31, 2025. These activities will showcase the significant achievements of our industry and provide a platform for collaboration, learning, and future growth.

Apart from we also conducted seminars/Trainings at VSI on Dnyanyag and Dnyanlaxmi, AI Applications in the sugarcane production & cultivation, Modern technology for sugarcane cultivation for farmers of ATMA, NFSM officers.

A look at the events, training, seminar and workshops reported in this issue will demonstrate the strength of VSI in this field. This is also reflected by the good placements of VSI students in sugar mill and distilleries in the country. It once again showcases the prominent role of VSI in to training and educate through training to the sugarcane growers on the domestic front. Visitors to VSI also do not fail to be impressed by its functions in research, extension and consultations.

We are happy to place this Bulletin in the hands of our readers and look forward to their suggestions for effecting further improvements in future.

WISH YOU HAPPY DIWALI....


(RM Devarumath)
Editor

EVENTS EVENTS

National Seminar on Advanced Technologies of Sugarcane Production in relation to Climate Resilience

In the eve of celebration of Golden Jubilee year of the Institute, a National Seminar on 'Advanced Technologies of Sugarcane Production in Relation to Climate Resilience' was organized at VSI, Pune on July 30-31, 2025. The important themes *viz.* Overview of sugarcane cultivation at national and international level, Sugarcane crop improvement, Sugarcane crop production and Sugarcane crop protection were discussed in relation to the resilience of climate change.

The seminar was inaugurated by Dr. PL Patil, Vice Chancellor of University of Agriculture Sciences, Dharwad as chief guest. He congratulated and complimented the Institute management for Golden Jubilee Celebration. As per his opinion, the seminar is not just scientific event but a platform for collective reflections and showing strategic directions that will save sugarcane sector in future. He highlighted the need of efforts for enhancing sugar recovery and also support of the Govt. policy for 25% ethanol blending.

The key note address was delivered by Dr. S Solaman, Former Vice Chancellor of Chandrashekhar Azad University of Agriculture and Technology, Kanpur SAUA & T Kanpur. As per his opinion till 2050 sugarcane yield will be reduce by 20-30% and cane area by 2.5% due to rise in temperature. He suggested 10 points based sustainable sugarcane productivity involving Genomic Assisted Breeding, Climate adaptability traits, location specific and climate resilient varieties, bio-security quarantine as Australia and need of Tissue Culture based seed production for better yield and recovery, AI based alerts to combat soil health and Avoidance of mono-cropping.

The presidential address was delivered by Dr. Indrajit Mohite, Member of Board of Trustee, VSI. He

mentioned for need of going with genomic editing and AI based technologies and bio inputs integrations for enhancing sugarcane productivity.

The technical session on Sugarcane Crop Improvement was chaired by Dr. G Hemaprabha, Former Director, Sugarcane Breeding Institute (SBI), Coimbatore, and Consultant, Plant Breeding, VSI and co-chaired by Dr. VL Amolic, Head, Department of Botany, Mahatma Phule Krishi Vidyapeeth, Rahuri.

The session featured with four 4 lead presentations were presented on different topic *viz.* 'Sugarcane Varietal Development for Climate Resilience' by Dr. G. Hemaprabha, Former Director, ICAR-Sugarcane Breeding Institute, Coimbatore & Advisor, Plant Breeding Dept., Vasantdada Sugar Institute, Pune; 'Sugarcane Breeding Strategies and their Future Prospective for Development of New Sugarcane Varieties' by Dr. VL Amolic, HOD, Botany, Mahatma Phule Krishi Vidyapeeth, Rahuri, and 'Targeted Gene Editing in Sugarcane for Improved Tolerance to Drought and Salinity Stresses' by Dr. Appunu Chinnaswamy, ICAR-Sugarcane Breeding Institute, Coimbatore and concluded with the following recommendations. The session emphasized on the sugarcane improvement through modern Biotechnological tools to improvement cane yield quality and resistance to biotic & abiotic stresses to enhance sugarcane productivity and sustainability.

- ◆ Considering the fact, sugarcane crop once planted remains in the field for about three years, it is essential to start the plantation using high quality planting material for:

- a. The use of **meristem tissue** as the explants for micro-propagation to produce high-quality breeder seeds
 - b. Adoption of the **mechanized sett treatment device** developed by ICAR-Sugarcane Breeding Institute, Coimbatore for effective control of seed-borne diseases during seed production
- ◆ Climate resilience particularly for drought and salinity should be taken up precisely in breeding using traits specific genetic stocks and gene editing technology.
 - ◆ Maintenance breeding has to be an integral part for seed production to maintain genetic purity and avoid the problems of phenotypic variation observed among Tissue Culture derived plantlets (as observed in sugarcane variety Co 86032). Hence new explants should be drawn from the maintenance breeding plots of research station which developed particular variety once in five years.
 - ◆ In order to extend the life of promising variety and its benefits, monoculturing of a variety has to be avoided by every sugar mill.
 - ◆ In order to realize the real genetic potential of a variety, varietal testing needs to be carried out using precision agricultural practices.
 - ◆ Precision agricultural practices needs to be an integral part in yield demonstration/adaptive trials, so that real genetic potential of a variety can be realized for the benefit of farmers and sugar mills.

Technical Session on 'Sugarcane Crop Production' was structured into two thematic segments. The first segment, focused on 'Advanced Soil Management', was chaired by Dr. V. K. Kharche, Former Director of Research, Dr. PDKV, Akola, and co-chaired by Dr. P. S. Bodake, Head, Department of Agronomy, MPKV, Rahuri.

In this session total four lead papers were presented by Dr. BM Kamble, Department of Soil Science, Mahatma Phule Krishi Vidyapeeth, Rahuri on 'Integrated Nutrient Management for Sustaining of Sugarcane Productivity and Soil Health in

Maharashtra'; Dr. MC Kasture, Dr. Balasaheb Konkan Krishi Vidyapeeth, Dapoli presented paper on 'Sustainable Integrated Nutrient Management for Sugarcane in Lateritic Soils of *Konkan* region of Maharashtra'; Dr. V Bhoite, ADT's Krushi Vigyan Kendra, Baramati, Pune delivered presentation on 'Application of AI, Computer Vision and Machine Learning for Game Changing Improvements in Sugarcane Farming Practices and Maintaining Soil Health' and 'Modeling the Wastewater Irrigation and its Impact on Carbon Sequestration by Dr. S Deshmukh, ADT's Krushi Vigyan Kendra, Baramati, Pune.

The second segment, centered on 'Advanced Agronomic Practices and Irrigation Management', was chaired by Dr. RL Bhilare, Sugarcane Specialist, CSRS, Padegaon, and co-chaired by Dr. CR Patil, Head, Department of Agricultural Microbiology, UAS, Dharwad. In this session total three presentations were made as Dr. Tushar Patil, Praj Industries Ltd, Pune presented on 'Development of Intercropping Models in Sugarcane for Additional Feedstock Generation to Produce Ethanol'; Dr. RL Bhilare, Central Sugarcane Research Station, Padegaon on 'Doubling the Farmers Income through Sugarcane Intercropping' and 'AI and IoT powered weather-based irrigation scheduling system for Sugarcane' by Dr. SA Kadam, Centre of Excellence on Digital Technologies for Smart and Precision Agriculture, Department of Agricultural Engineering, Mahatma Phule Krishi Vidyapeeth, Rahuri.

This session emphasized the integration of technological innovations with climate-resilient farming practices to enhance sugarcane productivity and sustainability.

Total seven lead papers were presented in this session as and concluded with following recommendations .

- ◆ Scale up the use of AI-powered agronomy platforms that integrate satellite imagery, IoT, and weather data to provide real-time, plot-level insights. These systems can significantly improve yield, resource use efficiency, and reduce production costs, enabling sustainable and precision-based sugarcane cultivation.

- ◆ Implement pilot-scale intercropping models using sweet sorghum and sugar beet within sugar mill command areas to assess their feasibility for additional ethanol production. Facilitate adoption through policy interventions, farmer incentives, and detailed analysis of economic viability and carbon intensity reduction.
- ◆ Encourage diversified intercropping with cereals, pulses, vegetables, oilseeds, medicinal and forage crops to optimize limited land resources, provide interim income to farmers, and support national food and feed demands while sustaining sugarcane cultivation.
- ◆ Promote optimized and scientifically validated wastewater irrigation practices, in line with FAO and ISO 16075-4 (2016) guidelines, to improve soil physical properties, enhance organic carbon sequestration, and sustain productivity under climate variability.
- ◆ Develop and promote Integrated Nutrient Management (INM) tailored to regional soil and climatic conditions-especially for lateritic soils of high-rainfall areas like Konkan-combining organic amendments and balanced chemical fertilizers to improve soil fertility, nutrient efficiency, and yields.
- ◆ Strengthen INM adoption by providing farmer-centric training programs, regular soil health testing, and policy incentives aimed at achieving climate-resilient and sustainable sugarcane farming systems.
- ◆ Use pre-emergence application of Clomazone 30% + Sulfentrazone 28% WP @ 2.5 kg/ha followed by partial earthing up at 60 DAP, or post-emergence application of 2,4-D Sodium Salt + Metribuzin + Pyrazosulfuron Ethyl @ 3 kg/ha at the 2–4 leaf stage followed by earthing up at 120 DAP, as proven weed control strategies to maximize yield and economic returns.
- ◆ Apply non-irradiated chitosan @ 100–150 ppm via sett dipping and foliar sprays (at 30, 60, and 90 DAP) to improve germination, tillering, cane

growth, and sugar yield. Select sugarcane varieties based on agro-physiological traits suited to specific regional conditions for enhanced productivity.

Technical Session on ‘Sugarcane Crop Protection’ was chaired by Dr. R. Vishwanathan Former Director IISR, Lucknow, and Dr. SB Kharbade, Dean (F/a) & Director of Instruction, MPKV Rahuri and DR. Kaushik Banerjee, Director, NRC Grapes. In this session following papers were presented as ‘Healthy Seed Program to Assess Varietal Degradation in sugarcane’ by Dr. R. Vishwanathan; ‘Integrated Approach for Management of Diseases and Pests in Sugarcane’ by Dr. SB. Kharbade; ‘Integrated white grub Management in Sugarcane, by Dr. UB Hole and ‘Entomopathogens: A Potential Bio-agent for Sustainable Management of White Grubs Infesting Sugarcane by Dr. DN Borase. and concluded with the following recommendations

- ◆ Tissue (meristem) culture based healthy seed nursery programme combined with molecular diagnosis for the designated viruses and phytoplasma like Organism
- ◆ No compromise for maintaining seed health by the sugar industry
- ◆ Developing comprehensive strategies that integrate all available methods for sustainable crop protection. Integrated pest management in Sugarcane crop use Cultural practices, Biopesticides, Bioagents, Release of Trichogramma cards, chemical control are important to manage pest in sugarcane.
- ◆ Application of *Metarhizium anisopliae* (mixed with 100 kg FYM and applied in furrow before planting) followed by set treatment with imidacloprid 600 FS and drenching of Fipronil 40% + Imidacloprid 40% WG in 1000 liters of water the month of June after planting was consistently achieved white grub control in all three years.
- ◆ Use of Artificial Intelligence (AI) for early detection which is useful for forewarning the incidence and spread of diseases of sugarcane helps in adopting effective fungicidal spray schedule.

- ◆ Establish a robust national surveillance and forecasting system for sugarcane pests and diseases to enable timely interventions

The poster session was divided into three main themes i.e. Sugarcane Crop Improvement; Sugarcane Crop Production and Sugarcane Crop Protection. The posters were evaluated by following subject expert's committee in respective theme. In crop improvement 8 posters were presented, in crop production 32 posters were presented and in crop protection 8 posters were presented. The following four best posters were given the awards.

- ◆ Exotic Vegetables Intercropping with Preseason Planted Sugarcane: A Step Towards Doubling Farmers Income in Tropical India by Dr. RL Bhilare et al., Sugarcane Specialist, Central Sugarcane Research Station, Padegaon.
- ◆ Assessment of Genetic Potential in Early Generations Sugarcane (*Saccharum officinarum* L.) Clones for Commercial Traits by Dr. Arunkumar et al., Sugarcane Research Station, Sankeshwar (KN).
- ◆ Effect of Abiotic factors on Population Dynamics of Sugarcane Woolly Aphid, *Ceratovacuna lanigera* Zehntner and its Natural Enemy by Dr. VK Biradar et al., Sugarcane Research Station, Tharsa, Nagpur.
- ◆ Influence of Trash Management Practices and Micro-Irrigation methods of Productivity, Profitability and Soil Health Improvement in Sugarcane by Dr. US Surve et al., MPKV, Rahuri.

The Technology Provider was chaired by Dr. AD Kadlag, Principal Scientist, Crop production and protection, VSI, Pune and Co- Chaired by Mr. PP Shinde, Scientist, Agril. Engineering Section, VSI, Pune. In this session following six sponsors presented their technologies.

1. M/s. Tirth Agro Technologies Pvt. Ltd., Shaktiman, Rajkot
2. M/s. MahadhanAgritech Ltd., Pune
3. M/s. Mahindra – EPC Irrigation Ltd., Nashik,
4. M/s. Jain Irrigation systems Ltd., Jalgaon

5. M/s. United Phosphorous Ltd., Mumbai,
6. M/s. Kothari Agritech Pvt. Ltd., Solapur

The session brought together industry professionals who shared their experiences and views on new innovative and emerging technologies in mechanization, micro irrigation system and application of nutrient resources in sugarcane agriculture. Presentation covered novel strategies for development and promotion of sugarcane mechanization, multivariable solutions in micro-irrigation for improving water use efficiency, use of nutrient resources through advanced technologies and *Shaswat Mithas* Program to sustainable climate resilience. The Suggestion included emphasizing the post-harvest effect on biodiversity and soil properties by harvesters and spraying appliances. There is high scope to increase the area under micro-irrigation for improving water use efficiency. With respect to fertilizer application suggested, automatic fertigation according to crop growth stages. Also while achieving the sustainable yield is suggested to study of soil health, water balance and nutrient uptake.

The plenary session was chaired by Shri Shivajirao Deshmukh, Advisor, Vasantdada Sugar Institute (VSI) and co-chaired by Shri Sambhaji Kadupatil, Director, VSI.. In concluding remarks, Shri Shivajirao Deshmukh appreciated the scientific depth and practical orientation of the national seminar. He emphasized the need for a multi-dimensional strategy to develop a climate-resilient sugarcane production system. He emphasized on the importance of enhanced cooperation between national and international research institutions and industry stakeholders to accelerate technological advancements. He also underlined the importance of cost-effective technological interventions that ensure profitability for farmers and long-term sustainability for the sugar industry. Furthermore, he advocated for the translation of scientific research into field-level applications, effectively bridging the gap between the laboratory and the land. Lastly, he underscored the growing role of Artificial Intelligence (AI) in sugarcane agriculture,

citing its potential in predictive crop modeling, precision farming, pest forecasting, yield estimation, and real-time decision-making support. He emphasized that AI will be a vital tool in enhancing

productivity and resilience in the context of a changing climate. The program ended with Vote of thanks by Mr. PP Shinde, Scientist and Head, Agril. Engg. VSI, Pune

Innaguration





Technical Session





Poster Innaguration





Exhibitors



79th Independence Day

VSI celebrated 79th Independence Day of India on August 15, 2025. National flag was hoisted by Mr. Sambhaji Kadupatil, DG at VSI campus in presence of Mr. Shivaji Khengare, Chief Accountant and staff members & students. On this occasion, gave awards to meritorious children of VSI employees for their excellent academic achievements.



SEMINAR SEMINAR

Sustainability in the Sugar Industry : A Way Forward

Vasantdada Sugar Institute, Pune (VSI), Pune in association with the Bureau of Indian Standards (BIS), organized a seminar on the subject 'Sustainability in the Sugar Industry: A Way Forward' at VSI, Pune on July 21, 2025. The event was attended by 225 professionals from the sugar industry in the western Maharashtra region.

Mr. K Gangadharam, Technical Adviser, VSI, Pune invited all the delegates for the seminar and delivered the welcome address. The seminar commenced with an inaugural address by Mr. Sambhaji Kadupatil, Director General, VSI, wherein he highlighted sugar industry challenges and VSI's initiatives like energy conservation and AI-driven raw material planning to address sustainability in sugar industry.

In the keynote address, Dr. Prof. Seema Paroha, Director, National Sugar Institute (NSI), Kanpur, and Chairperson of the Sugar Industry Sectional Committee (FAD 2), underscored the critical importance of sustainability in the sugar sector. She highlighted resource-efficient practices such as drip irrigation, zero liquid discharge, bio-refinery integration, and value addition from by-products like press mud and molasses.

Ms. Disha Zanwar, Scientist-C, BIS, presented 'Addressing Sustainability through Indian Standards', explaining the concept of sustainability from the perspective of standards development and the

practical approaches BIS employs to ensure these standards support environmental, economic, and social sustainability goals.

Shri Rajesh Singh, Deputy General Manager, Triveni Engineering & Industries, spoke on 'Current Practices for Addressing Sustainability in the Sugar Industry', covering circular economy approaches, climate-resilient sugarcane, precision agriculture, sustainable water management, and government incentive schemes.

Dr. Rajeev Dani, Head & Technical Advisor, VSI, discussed 'Raw Sugar for Direct Use as a Sustainable Solution', focusing on the recent amendment in IS 5975:2020 permitting VVHP raw sugar for direct consumption, highlighting its cost and energy-saving benefits.

'Sustainability in the Sugar Industry: A Way Forward' Mr. Vivek Pratap Singh, Technical Officer, NSI, presented on 'Sustainable Indian Sugar', comparing Indian and international standards and emphasizing the role of quality in sustainability.

Dr. Vasudha Keskar, Director, MAARC Lab, Pune, shared insights on new testing methods in the revised IS 15279, underlining their importance for producing sustainable sugar.

The seminar concluded with the Vote of Thanks delivered by Mr. ST Chavan, Technical Advisor, VSI, Pune.



TRAINING

Oos Sheti Dnyanyag and Dnyanlaxmi

In the reminiscence of founder president of VSI late Padmabhushan Dr. Vasantdada Patil, four days residential training programs on ‘Oos Sheti Dnyanyag

and Oos Sheti Dnyanlaxmi’ were organized for men and women sugarcane growers of Maharashtra State at VSI, Pune during 01st July to 25th July, 2025 in 4 batches.

Batch No.	Period	Period	No. of Participants	No. of sugar mills and individual participation
Oos Sheti Dnyanyag programme (Men farmers)				
I	July 1-4, 2025	Kolhapur and Sangli Districts	265	Sugar mills : 07
II	July 8-11, 2025	Satara, Pune, Ahmednagar and Nashik Districts	251	Sugar mills : 09 Individual : 02
III	July 15-18, 2025	Solapur District and Marathwada region	249	Sugar mills : 08 Individual : 06
Oos Sheti Dnyanlaxmi programme (Women farmers)				
VI	July 22-25, 2025	All sugar mills in Maharashtra	134	Sugar mills : 08 Individual: 03
Total participants (Women +Men)			899	

In Oos Sheti Dnyanyag and Dnyanlaxmi training programs, **899** sugarcane farmers were participated from Jurisdiction of sugar mills in different parts of Maharashtra. Out of total sugarcane farmers, **11** sugarcane farmers were participated individually and rest of the farmers were deputed by **23** sugar mills from Maharashtra.

The training programs were conducted under the guidance of Mr. Sambhajirao Kadupatil, Director General and Dr. AD Kadlag, Principal Scientist, Crop Production and Crop Protection, VSI, Pune. Dr. GS Kotgire, Scientist, Plant Pathology Section coordinated the program with the help of Scientists and supporting staff members of different disciplines of Agriculture Sciences and Technology Division.

Lectures on various topics related to sugarcane agriculture viz., varietal planning for planting and harvesting, seed nursery management, tissue culture

use, modern planting techniques, weed management, soil fertility and fertilizer management, irrigation water management, use of bio-fertilizers and bio-control agents, farm mechanization, economics of cultivation, ratoon management and integrated disease and pest management were conducted by Subject Matter Specialists. More emphasis was given on practical and field demonstrations. The information on different types of Agriculture inputs developed by VSI, Artificial Intelligence (AI) and academic activities of VSI were also given to them.

In the plenary session of every batch, the trainees cleared their doubts from the subject experts. The representative trainee farmers expressed their opinion about the training and hospitality. The certificates along with group photos were distributed to the trainees.

Batch - I



Batch - II



Batch - III



Batch - IV



Advanced Technologies on Sugarcane Agriculture

Total three batches training program was conducted on 'Advanced Technologies on Sugarcane Agriculture' as details given below;

Batch I: The two days residential training programme was organized for newly recruited staff members of Vighnar SSK, Ltd, Pune . The objective of the training

was to train the participants about advanced technologies in sugarcane agriculture. The two days training programs were conducted during on August 6 - 7, 2025. Sixteen participants were attended the training program, consist of Agriculture Assistants and Agriculture overseer from the sugar mills.



Batch II: The four days residential training programs were conducted during on August 19 - 22, 2025 organized for staff members and sugarcane farmers from Gujarat and Chhattisgarh State. Total 85 participants

attended from which 55 farmers from Mahuva Pradesh Sahkari Khand Udyog Mandali Ltd., Gujarat and 30 farmers from Boramdev SSK Ltd., Kawardha, Chhattisgarh States.



Batch III: The residential training programme was organized for officers and staff members of Divisional Joint Director of Agriculture Aurangabad and Latur, sponsored by National Food Security Mission. The objective of the training was to train the participant about advanced technologies in sugarcane agriculture.



All above batches, the training was inaugurated by the Dr. AD Kadlag, Principal Scientist, Crop Production and Crop Protection. Dr. GS Kotgire., Scientist, Plant Pathology section welcome all the participants and others. Modern and scientific sugarcane cultivation technology was taught during the training period which covered the lectures and practical's on various topics like sugarcane varieties and varietal planning, nursery management, tissue culture, modern planting techniques, soil fertility and fertilizer management, irrigation water management, use of bio-fertilizers, farm mechanization, ratoon management and integrated disease and pest management during two days training program. All the agriculture scientists conducted theory lectures with the help of power point

The two days training programme was conducted on September 09 - 10, 2025. Thirty six participants were attended the training program, consist of Agriculture Officers, Agriculture Assistants and Agriculture supervisors from Ch. Sambhajinagar and Latur divisions.



presentation. More emphasis on practical's and field demonstrations was given during the program.

In the plenary session, the participants resolved their doubts from the subject experts. In the concluding function, the representative trainees expressed their satisfaction about the training, lodging and boarding facilities provided to them. Officials asked questions about organic sugarcane agriculture and appealed to scientists to focus on it. The certificates were distributed to the trainees. Hon. Director General, VSI discussed with participants during farewell function about the difficulties faced by them in sugarcane agriculture in their area and appealed them to adopt modern technologies in sugarcane. The training concluded with vote of thanks by Dr. GS Kotgire.



CONFERENCE CONFERENCE

Environmental Legislation, Compliances, Technologies and Best Practices in Sugar and Distillery Industries

The Maharashtra Pollution Control Board and Vasantdada Sugar Institute jointly organized a one Day Conference on 'Environmental Legislation, Compliances, Technologies and Best Practices in Sugar and Distillery Industries' on September 8, 2025 at VSI campus in Pune. The objective of the conference was to create awareness and provide a common platform for meaningful interaction among industry representatives, experts, and regulators on evolving environmental regulations, adoption of sustainable technologies, and sharing of best practices in the sugar and distillery sector.

The event started with a welcome speech by Mr. JS Salunkhe, Joint Director, Water Pollution Control, MPCB who outlined the objective of the event. After this, Mr. Avinash Dhakane, IAS and Member Secretary, MPCB gave the introductory address in which he mentioned how the board was working to ensure environmental compliance. Mr. Pratik Bharne, Director, CPCB Regional Directorate Pune talked about the work of the Regional Directorate and its work in inspecting sugar mills for environmental compliance. This was followed by the keynote address by Mr. Sambhaji Kadupatil, Director General, VSI who discussed the environmental problems of sugar mills and distilleries in detail. He also mentioned about the work done by VSI with CPCB/MPCB and the sugar industry charter 2.0 to which VSI has contributed.

The following lectures were delivered during the technical session.

1. 'Environmental Regulations and its compliance in

Sugar & Distillery industries' by Mr. Avinash Dhakane, Member Secretary, MPCB

2. 'Microalgue-based profitability for sugar units' by Dr. Ninad Gujarathi, Founder & Director, Environalgae Technologies Pvt. Ltd.
3. 'Advanced and Emerging Technology for Spent Wash Treatment and Potash Recovery' by Dr. K S Konde, Head & Technical Advisor, Dept of Alcohol Technology & Biofuels, VSI
4. 'Advance Oxidation Technology ETP in Sugar Industry' by Mr. Shrikant Ahirrao, Director, Adaxy Tech
5. 'Value Added Co-product from Sugar & Distillery wastes. (CBGfuel and bio fertilizer)' By Mr. Bharat Kadu, Director- Reliable Biogas Pvt Ltd, Director, Eagle Leap Bioenergy Pvt.
6. 'CPCB Charter 2.0 on water conservation and pollution prevention by Sugar industries' by Dr. Deepali Nimbalkar, Sr. Scientist and Head, Dept of Environmental Sciences, VSI
7. 'Best practices adopted by M/s. Swaraj Green Power Ltd., Phaltan' by Mr. Uday Patil, Director and COO

The programme was well attended by representatives from sugar and distillery industry, officers from MPCB, technology suppliers. All the lectures were well received and participant's queries were addressed jointly by Mr. Salukhe and Mr. Nandkumar Gurav, Technical Adviser, MPCB.



VSI COMMITTEE MEETINGS

The Technical Committee Meeting was held on August 2, 2025 under the chairmanship of Mr. Jaywant Patil Hon, Former Minister for Water Resources and Command Area Development Govt. of Maharashtra. Investment Committee Meeting was held on August

23, 2025 and Governing Council Meeting under the chairmanship of Hon. President of VSI Mr. Sharad Pawar was held on September 17, 2025 followed by Building Purchase Committee Meeting.



Quinquennial Review Team (QRT) Report

The Director General, VSI has constituted a Quinquennial Review Team (QRT) in the month of November 16, 2024 to review the work the departmental work of the scientist in Agriculture Sciences and technology Division. The QRT team members comprising Dr. SN Puri, Former Vice Chancellor, Mahatma Phule, Krishi Vidyapeeth, Rahuri, Ahilyanagar as a Chairman of the QRT, Dr. VM Mayande, Former Vice Chancellor, Dr. Punjabrao, Deshmukh Krishi Vidyapeeth, Akola; Dr. KE Lawande, Former Vice Chancellor, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli as a Members of the QRT and Dr. AD Kadalga, Principal Scientist (Crop Production & Protection) AST, VSI as a Member Secretary for the QRT.



The QRT team visited all the sections and farms of the VSI. During their visit they interacted with all the staff members' of AST & D. On the basis of they prepared the detail QRT report and submitted to the Mr. Sambhaji Kadupatil, DG on August 25, 2025 by Dr. KE Lawande, Former Vice Chancellor, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli in presence of Dr. VM Mayande, Former Vice Chancellor, Dr. Punjabrao, Deshmukh Krishi Vidyapeeth, Akola; and Dr. AD Kadalga, Principal Scientist (Crop Production & Protection) AST, VSI as a Member Secretary for the QRT.

VSI PARTICIPATION

Sugar & Bioenergy Summit 2025

One day conference 2025 was organized on ‘Sugar & Bioenergy Summit 2025’ by Tefla during July 13-14, 2025 at Khandala. The event was focused on the latest advancements and market trends in the sugar, ethanol and bioenergy sectors. The event featured technical & trade expo, insightful discussions and presentations. The key topics were discussed during conference such as Global & Domestic Market

Outlook, Policy and Regulatory Framework, Value Chain Optimization etc. From VSI, Mr. Sambhaji Kadupatil, Director General, VSI, Dr. Kakasaheb Konde, Head, Professor and Technical Advisor, Department of Alcohol Technology and Biofuels and Dr. RV Dani, Head, Department of Sugar Technology had attended the programme.



Bioenergy Global Summit 2025

Bioenergy Global Summit 2025 was organized at Yashobhoomi, IICC, Dwarka, New Delhi, India on July 29-30, 2025. The event was mainly focused on advancing the bioenergy sector to achieve a sustainable energy future. It provided platform for collaboration between bioenergy sector and related industries such as sugar, grain, ethanol, oil, natural gas,

fuel, and sustainable agricultural equipment. From VSI, Mr. Sambhaji Kadupatil, Director General, VSI and Dr. Kakasaheb Konde, Head, Professor and Technical Advisor, Department of Alcohol Technology and Biofuels had attended the programme. Mr. Sambhaji Kadupatil delivered keynote address on ‘Sugar Cooperative: Challenges & Future Scope’.



83rd STAI Centennial Annual Convention & International Sugar Expo 2025

VSI team consisting of Mr. Sambhaji Kadupatil, Dr. Kakasaheb Konde, Head, Professor & Technical Adviser, Department of Alcohol Technology & Biofuels, Dr. Shuvashish Behera Scientist, Department of Alcohol Technology & Biofuels were participated in the 83rd STAI Centennial Annual Convention & International Sugar Expo 2025 at New Delhi. The convention was organized from July 24 – 26, 2025 at Bharat Mandapam Convention Centre, New Delhi.



During the function, Mr. Sambhaji Kadupatil received award for distinguished leadership and contributions to sugar industry. Also, Dr. Kakasaheb Konde,

Dr. Sangram Patil and Dr. Shuvashish Behera from VSI received Noel Deerr Gold Medal for paper presentation entitled 'Opportunities of Compressed Biogas (CBG) production in sugar industry and distillery' presented during the 82nd STAI Annual Convention,

held from July 30 – 31, 2024 at the Jaipur Exhibition and Convention Centre, Jaipur, Rajasthan.

In the convention, Mr. Nitin Jairam Gadkari, Road Transport & Highways Minister, Government of India graced the session as the Chief Guest. Welcome Address was delivered by Mr. Sanjay Awasthi, President of STAI. The Introductory session open up with the felicitation of Chief Guest and other dignitaries followed by the lightning of the lamp. The Sugar Expo was inaugurated by chief guest and other dignitaries.

VSI's team has attended the SN Gundurao Memorial Lecture and Plenary Session, in which the distinguished speakers delivered speeches on different important topics. On July 25-26, 2025. Dr. Behera from VSI, Pune had presented his research paper entitled 'Valorization of sugarcane bagasse for lactic acid production: A value addition to the sugar industry' in the co-product session.

The India Sugar & Bioenergy Conference 2025

The India Sugar & Bioenergy Conference 2025 was organized at JW Marriott, Aerocity New Delhi, India on September 11-12, 2025. The event was organized

by the Indian Sugar & Bio-Energy Manufacturers Association (ISMA) in collaboration with the Department of Food and Public Distribution (DFPD),



Government of India. The conference was mainly focused on dialogue and action on the evolving role of sugar and bio-energy in sustainable economic and energy future. The sessions were based on an in- depth analysis of different aspects of sugar and allied industries. They were focused on evolving supply-demand dynamics, policy changes, and price volatility. Shri. Nitin Gadkari, Hon'ble Union Minister

of Road Transport & Highways Government of India and Shri. Pralhad Joshi, Hon'ble Union Minister of Consumer Affairs, Food & Public Distribution and New & Renewable Energy Government of India were the chief guest of the event. From VSI, Dr. Kakasaheb Konde, Head, Professor and Technical Advisor, Department of Alcohol Technology and Biofuels had attended the programme.

54th Annual Convention of SISSTA at Tirupati

The 54th Annual convention of the SISSTA (South Indian Sugarcane & Sugar Technologists Association) was held at Tirupati on September 19-20, 2025. The VSI team consisting of Dr. AD Kadlag, Mr. RA Chandgude, Dr. JM Repale, Dr. KV Sushir, Mr. K Gangadharam, Dr. SS Patil, Mr. MV Taur, Mr. N Mahana and Mr. US Manjul participated in the Annual Convention of SISSTA at Tirupati.

Mr. Sanjay Awasthi, President of STAI and Chairman ISSCT Council & Executive Committee graced the session as the Chief Guest. Welcome address was delivered by Mr. N Chinnappan President of SISSTA. The Chief Guest and other dignitaries on the dais felicitated the Life Time Achievement awards, best research papers and sugar mills for their performance. Mr. Sanjay Awasthi, President of STAI and Chairman

ISSCT Council & Executive Committee delivered Chief Guest address to the participant. The Keynote Address was delivered by Dr. Govind P Rao, ICAR-Emeritus Scientist (Crop Protection), New Delhi.

The research paper entitled 'Challenges & remedies in sugar processing during implementation of various encon measures' by Mr. M Gangadharan and Co-author by Dr. RV Dani and Mr. MR Patil presented during the SISSTA's 53rd Annual Convention has been awarded by a Shri. Mydur Anand Gold Medal for Best Paper in Process.

The Dr. AD Kadlag, Principal Scientist (Crop Production and Protection) Chaired the Agriculture session and Mr. RA Chandgude, Co-chaired the engineering session. The following research papers were presented by the respective authors.



Sr. No.	Title of the Paper	Name of the Author
1	Post harvest cleaning of sugarcane: A comparative study of dry, wet and hybrid cleaning techniques for manually and mechanically harvested cane by RA Chandgude and AP Dhage	RA Chandgude
2	Operation and maintenance challenges boilers in sugar industries: issues and solutions by RA Chandgude, AB Kotkar, AP Dhage and MV Taur	RA Chandgude
3	Enhancing plantation white sugar quality suitable to Institutional customers: A strategic approach for sustainable production by K. Gangadharam, RV Dani, ST Chavan, T. Kanagasabai	K. Gangadharam
4	Colour balance and pan boiling process for production of uniform grade refined sugar by Narayan Mahana and RV Dani	Narayan Mahana
5	Compressed biogas (CBG) production opportunities in sugar industry and distillery by Kakasheb Konde, Sangram Patil and Shuvashish Behera	Sangram Patil
6	Assessment of newly developed sugarcane genotypes for yield and quality traits at VSI, Pune by Repale JM, Kadlag AD, Gawhane AB, Sushir KV, Talekar SD and MG pawar (P.63-71)	JM Repale
7	Evaluation of promising genotypes for high rainfall area of Maharashtra by KV Sushir, JM Repale, AD Kadlag, MG pawar, SD Talekar, US Manjul (P.72-77)	KV Sushir
8	Screening of sugarcane germplasm for brown rust (<i>Puccinia melanocephala</i>) disease resistance by US Manjul, KV Sushir, MG Pawar, JM Repale, AD Kadlag (P.169-176)	US Manjul

Visit report of Bagamoyo Sugar Ltd. Tanzania

Mrs. Sudha D. Ghodke, Scientist & HOD and Mr. Bibhishan G. Mali, Scientific Officer, from Agriculture Microbiology Section visited Bagamoyo Sugar Ltd., Bagamoyo, Tanzania for commissioning the Liquid Biofertilizers (LBF) production unit from August 3–17, 2025. During their visit, the following activities were undertaken:

1. Verification & Installation

- Checked equipment and chemicals (item-wise) required for LBF production.
- Verified laboratory-wise arrangement of equipment and carried out calibration.

2. Culture Preparation & Quality Checks

- Checked mother cultures for pH, microscopy, and Gram staining of nine cultures.
- Prepared mother cultures of *Acetobacter*, *Azospirillum*, *Phosphate Solubilizing Bacteria*, *Potash Mobilizing Bacteria*, *Beauveria*, *Metarhizium*, *Verticillium* and *Trichoderma viride* in slants, plates, and broths.

3. Starter Batch Production

- Planned and initiated production of liquid biofertilizers for each product as a starter batch.
- As per the suggestion of the Agricultural Manager, produced 400 L of each product as the initial batch.

4. Staff Training: Conducted training sessions for staff on the following aspects;

- In-house quality control and record maintenance and Quality assessment of finished products
- Glassware cleaning and preparation, Formulation preparation and chemical weighing Register and documentation practices
- Autoclave operation and contamination control
- Laboratory safety protocols
- Filling, curing, and storage of biofertilizers
- Storage and handling of finished goods and raw materials.

VISITORS TO VSI

The delegates from International Flavors & Fragrances Inc. (IFF), Dr. Benjamin Fuchs, Strategic Portfolio Director, Grain Processing -Health & Biosciences, IFF (Unites States), Ms. Rachel Leong, Business Development Lead, IFF (Singapore), Dr. Ritu Bhalla, Regional Application Development Leader, IFF (India) and Mr. Arun Kumar, IFF(India) visited to Vasantdada Sugar Institute, Pune July 15, 2025 to discuss about potential areas of mutual interest for collaboration. The delegate was welcomed by

Mr. Sambhaji Kadupatil, Director General, VSI. He given brief introduction of VSI and discussed VSI activities. Dr. KS Konde, Head, Professor & Technical Adviser, Department of Alcohol Technology & Biofuels gave brief presentation about department activity. Later IFF officials gave presentation about IFF activities and their product portfolio. During the visit delegates visited Department of Alcohol Technology & Biofuels, pilot facilities of the department and Tissue Culture section.



The team of Organic Recycling Systems Ltd., (ORS), Navi Mumbai visited Vasantdada Sugar Institute (VSI), Pune on July 21, 2025 and signed Memorandum of Understanding (MoU) with VSI for collaborations in different areas such as Biofuels and Value-added products. From ORS, Mr. Yashas Bhand, CEO and Director, ORS, Dr. Manju D Tanwar, Chief Scientist and Head R&D, ORS, Mr. Pankaj Tanwar, ORS were present in the meeting and from VSI, Mr. Sambhaji Kadupatil, Director General, Dr. KS Konde, Head, Professor & Technical Adviser, Department of Alcohol Technology & Biofuels were present.



The Chinese delegation also visited Vasantdada Sugar Institute on August 16, 2025. The delegation comprises Mr. Scotte Zheng, Vice President, Overseas Business, Inovance OBG Shenzhen/Suzhou, China; Mr. Sanjay Repale, Subject Matter Expert in Electrical,

Automation & Process Energy Solutions and Mr. Subhash Patil, Director, Eltech Engineering; Manufacturer of Energy-Efficient Starters and Channel Partner for Inovance in India for Electrical Drives.



Mr. Rajendra Changdude, Head of the Sugar Engineering & Renewable Energy Department, extended a warm welcome to the delegates in presence of HODs/HOSs of the Departments and technical officers were present. The event commenced with a documentary film showcasing the Institute's journey, followed by a presentation by Dr. Deepali Nimbalkar, Head of the Department of Environmental Sciences. She highlighted the history of the Institute, its various activities and significant R&D achievements across departments.



Mr. Scotte Zheng delivered a presentation introducing their company profile and activities in the fields of industrial automation, intelligent elevators, new energy vehicles, rail transport, medium voltage drives, and more. He expressed interest in future collaboration with VSI to drive innovation in the sugar industry.

The delegation also visited various departments of the Institute and engaged in detailed discussions on ongoing R&D initiatives. The delegates expressed their appreciation for the Institute's research work and the warm hospitality extended by VSI.

Dr. D.Y. Patil Arts, Commerce & Science College, Pimpri, Pune students are visited VSI Campus on September 2, 2025. Mr. BG Takalkar, VSI explain the activities of VSI and later student visited some of sections to know more about scientific activities in VSI.



The AICRP(S) monitoring team comprised of Dr. MK Tripathi, Principal scientist (Agronomy), ICAR-Indian Sugarcane Research Institute, Lucknow; Dr. VK Biradar, Associate Professor (Entomology) & I/C, Sugarcane Research Centre, Tharsa; Dr. AK Mall, Principal Scientist (PI. Br.), ICAR- Indian Sugarcane Research Institute, Lucknow; Dr. RT Maruthi, Senior

Scientist (PI.Br.), SBI, Coimbatore; and Dr. RK Tiwari, Scientist, ISRI, Lucknow) was visited our Institute from September 9 - 12, 2025.

Dr. AD Kadlag, Principal Scientist (Crop Production & Protection) AST, VSI welcomed the team. Later the team monitored the VSI research activity under AICRP program of at Manjari farm and Vasantdada R & D

Farm of AICRP(S) trials of Plant Breeding, Agronomy, Soil Science, Entomology and Plant Pathology sec-



tions. During the visit concerned HODs & HOSs of the concern sections and staff members were present.



The Maharashtra State Grapes Grower Association Pune, Board members visited Vasantdada sugar Institute on September, 16, 2025. During their visit



Dr. AD Kadlag, Principal Scientist, Crop Production and Crop Protection briefed the activities of VSI.



Following Visitors were visited VSI during (July-August-September, 2025)

Name of Institutions	Visitors	No. of Visitors	Total
JULY - 2025			
Nirani SSK, Mudhol, Karnatak	Farmers & Officers	128+12	140
Padmashri Appasaheb Pawar Agricultural Polytechnic, Baramati, Pune	Students & Faculties	38+2	40
Individual Farmers from Maharashtra State	Farmers	152+118+178 +110+130	688
AUGUST - 2025			
College of Agricultural Biotechnology, Baramati, Pune	Students & Faculties	27+3	30
Dr. Sharadchandra Pawar College of Agriculture, Baramati, Pune	RAWE Students	7	7
Shri Baliraja Bachat Gat, Javala, Ahilyanagar	Farmers	45	45
Farmers Rally at Shri Chhatrapati SSK, Bhavaninagar. Pune	Farmers	1000	1000
Individual Farmers from Maharashtra State	Farmers	128+121+ 86+160	495
SEPTEMBER – 2025			
Dr. D. Y. Patil Arts, Commerce & Science College, Pimpri, Pune	Students & Faculties	80+2	82
Maharashtra Rajya Draksha Bagaytdar Sangh, Pune	Directors	25	25
Katraj Dairy, Pune	Employees	5	5
Green Edge FPC & Jakraya Sugar Limited, Solapur	Farmers & Officers	50+2	52
K. K. Wagh Arts, Commerce, Science & Computer Science College, Nashik	Students & Faculties	76+2	78
Department of Alcohol & Fermentation Technology, MIT World Peace University, Pune	Students & Faculties	63+3	66
Department of Microbiology, S.P. College, Pune	Students & Faculties	42+3	45
Individual Farmers from Maharashtra State	Farmers	95+125+69+ 49+62	400
Total :			3195

LIBRARY NEWS LIBRARY NEWS

July to September 2025

1. **STAI- The Sugar Technologists' Association of India (2025) Proceedings- 83rd STAI Annual Convention 24th – 26st July, 2025, Bharat Mandapam Convention Centre, New Delhi (1st Ed); New Delhi: The Sugar Technologists' Association of India, (p. 434).**
2. **STAI- The Sugar Technologists' Association of India (2025) Souvenir- 83rd STAI Annual Convention and International Sugar Expo- 2025, 24th – 26th July, 2025, Bharat Mandapam Convention Centre, New Delhi; New Delhi: The Sugar Technologists' Association of India, (p. 434).**
3. **Mahajani V. V.; Umarji S. B. (2022) Joshi's Process Equipment Design (5th Ed); New Delhi: Trinity Press (p. 535).**
4. **Surwase Samadhan; Deshmukh Preeti; Kadu Prakash; Singh S. K. (2025) Foundations and Applications of Remote Sensing and GIS(1st Ed); West Bengal: BP International (p. 77).**
5. **SISSTA- The South Indian Sugarcane & The Sugar Technologists' Association of India (2024) Proceedings- 53rd SISSTA Annual Convention 19th – 20th August, 2024, Sheraton Grand Hotel, Bengaluru, Karnataka; Chennai: SISSTA- The South Indian Sugarcane & The Sugar Technologists' Association of India (p. 580).**
6. **Kadlag A. D.- VSI (2025) Compendium of National Seminar on Advanced Technologies of Sugarcane Production in Relation to Climate Resilience (1st Ed); Pune : Sambhaji Kadupatil (p. 195).**
7. **Wonder House Books (2025) World's Greatest Scientists & Inventors (1st Ed.); New Delhi: Wonder House Books (p. 160).**
8. **Wonder House Books (2025) World's Greatest Writers (1st Ed.); New Delhi: Wonder House Books (p. 160).**
9. **Wonder House Books (2025) World's Greatest Sports Stars (1st Ed.); New Delhi: Wonder House Books (p. 160).**
10. **Wonder House Books (2025) World's Greatest Musicians (1st Ed.); New Delhi: Wonder House Books (p. 160).**
11. **Wonder House Books (2025) World's Greatest Leaders (1st Ed.); New Delhi: Wonder House Books (p. 160).**
12. **Wonder House Books (2025) World's Greatest Entrepreneurs (1st Ed.); New Delhi: Wonder House Books (p. 160).**
13. **Wonder House Books (2025) World's Greatest Entertainers (1st Ed.); New Delhi: Wonder House Books (p. 160).**
14. **Wonder House Books (2025) World's Greatest Artists (1st Ed.); New Delhi: Wonder House Books (p. 160).**
15. **Walter Isaacson (2021) Steve Jobs- The Exclusive Biography (1st Ed); London: Abacus (p. 581).**
16. **Walter Isaacson (2008) Einstein- His Life and Universe (1st Ed); London: Pocket Books (p. 675).**
17. **Walter Isaacson (2021) Steve Jobs- The Exclusive Biography (1st Ed); London: Abacus (p. 608).**

18. **Dwivedi R. (2024)** The Payment of Gratuity Act, 1972- With Maharashtra & Central Rules- 1972 (1st Ed); Mumbai: Labour Law Agency (p. 408).
19. **Dwivedi R. (2025)** The Employees' Provident Funds and Miscellaneous Provisions Act, 1952 (1st Ed); Mumbai: Labour Law Agency (p. 408).
20. **Muthuswamy; Brinda; Sanjeev (2025)** Swamy's Income Tax on Salaries- 2025- 2026 (G-7) (57th Ed); Chennai: Swamy Publishers (P) Ltd. (p. 200).
21. **Muthuswamy; Brinda; Sanjeev (2025)** Swamy's Compilation of General Financial Rules, 2017- Incorporating Compendium of Rules on Advances to Central Government Servants (35th Ed); Chennai: Swamy Publishers (P) Ltd. (p. 308).
22. **Muthuswamy; Brinda; Sanjeev (2026)** Swamy's Handbook 2026- For Central Government Staff (G- 16) (52nd Ed); Chennai: Swamy Publishers (P) Ltd. (p. 592).
23. **STAI- The Sugar Technologists' Association of India (2023)** *Proceedings- 81st STAI Annual Convention on 06th – 08th September, 2023, Travancore International Convention Centre, Thiruvananthapuram- Kerala; New Delhi: The Sugar Technologists' Association of India , (p. 516).*
24. **STAI- The Sugar Technologists' Association of India (2023)** *Directory of Cane Sugar Factories and Refineries (India and Other SAARC Countries) and Distilleries (India, Nepal and Bhutan) 2024- 2025; New Delhi: The Sugar Technologists' Association of India , (p. 488).*
25. **SISSTA- The South Indian Sugarcane & The Sugar Technologists' Association of India (2025)** *Proceedings- 54th SISSTA Annual Convention 19th – 20th September, 2025, at Shree Convention Tirupati (1st Ed); Chennai: SISSTA- The South Indian Sugarcane & The Sugar Technologists' Association of India (p. 716).*

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