

VSI

BULLETIN



www.vsisugar.com

July - September 2026
Vol.-26, Issue-3

Foreword Foreword ...

The sugar industry plays a significant role in India's agricultural economy- sugarcane and Sugar has been and continues to be important commodities of trade and livelihood. Today, the industry is a vital cog in India's rural development as the country's second largest agro-based industry, next only to cotton. It directly or indirectly impacts the livelihoods of over 5Cr farmers and their dependents, involved in cultivating sugarcane in an area of almost 55-60 lakh hectares. In addition, 5 lakh workers in sugar mills and another 10 lakh workers, through indirect means, draw their livelihoods from the sugar industry.

The new season opens with El Niño strengthening and monsoon rainfall running about 15% below normal, a Bloomberg survey of traders, analysts and miller's places gross production for 2026-27 between 290 and 310 lakh tonnes. Crushing is likely to be lower than last season. The true picture will emerge only by the end of December, once early crushing data and field surveys are in. Some of the work lies within the industry's own control. Mills must keep investing in their resilience through water-efficient cane cultivation, wider adoption of drip irrigation, better varieties and stronger cane development programmes, so that the next dry monsoon finds us better prepared.

The sugarcane industry is vital to India's ethanol and ethanol blending initiatives. As a primary feedstock, sugarcane's integration into the ethanol program has been crucial. Government policies, including guaranteed pricing, long-term contracts, and financial support for facility upgrades, have

encouraged sugar mills to invest in and boost ethanol production.

There is one more opportunity the industry must build into its plans: Compressed Biogas. On 6th August, 2026, the Union Cabinet approved the GOBARDhan scheme with an outlay of Rs 23,731 Cr for 2026-27 to 2035-36. The scheme offers assured off take, capital assistance and credit support. City gas distribution companies must now blend CBG at 3% of CNG and PNG consumption in 2026-27, rising to 4% in 2027-28 and 5% from 2028-29.

Another opportunity for sugar mills, press mud is available in abundance during the crushing season and is a ready feedstock. It can be co-digested with spent wash, cane trash and cattle dung to keep a plant running beyond the crushing months. A CBG unit adds a new revenue stream and produces fermented organic manure that goes back to the cane fields, turning a disposal problem into an asset.

A look at the events, training, workshops, VSI's participation and Visitors for research collaboration reported in this issue will once again showcase the prominent role of VSI in capacity building through training on the domestic front. Visitors to VSI also do not fail to be impressed by its functions in research, extension and training as VSI's work has always related to sugarcane growers and industry's needs by trying to reduce the gap between the lab and land.

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.


(RM Devarumath)
Editor

TRIBUTE TRIBUTE

Mr. Sambhaji Kadupatil, Director General, VSI and all members of staff on July 22, 2026 paid Humble tributes on the birth anniversary of Late Ajit Pawar, Former Deputy Chief Minister of Maharashtra and Trustee Members of VSI. All members remembers his

contribution to VSI's development remains deeply significant and enduring. His administrative acumen, decisive leadership and commitment to public service continue to be remembered with respect.



Late Ajit Anantrao Pawar
(July 22, 1959 – January 28, 2026)

AWARD AWARD

Vasantdada Sugar Institute Honored with 'Krishi Gaurav' Award

The Vasantdada Sugar Institute (VSI), Manjari, Pune, was honored with the prestigious 'Krishi Gaurav' Award by the Vasantrao Naik Smruti Pratishthan at a ceremony held in Pusad on August 18, 2026. The award was received on behalf of the Institute by Dr. Ashok Kadlag, Principal Scientist, Crop Production & Protection.

The programme was presided over by Rahul Narwekar, Speaker of the Maharashtra Legislative Assembly. Dr. Sharad Gadakh, Vice-Chancellor

of Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Minister of State and Reception President Indranil Naik and Dhananjay Soni, Working President of Vasantrao Naik Smruti Pratishthan, were among the prominent dignitaries present on the occasion.

The award was presented in recognition of VSI's contributions to the use of modern technologies in sugarcane cultivation, agricultural research, farmer training and extension, promotion of advanced technologies for improving sugarcane production and various initiatives aimed at promoting sustainable agriculture. For several decades, the Vasantdada Sugar Institute has made significant contributions to the development of the sugarcane and sugar industry through research, training and extension services. The Institute has been focusing on developing technological solutions to address emerging challenges such as climate change, water scarcity, soil fertility, crop protection and rising production costs.

In particular, VSI has been promoting the use of Artificial Intelligence (AI), drone technology, digital crop monitoring, soil and water management and precision agriculture in sugarcane cultivation.

Through these initiatives, the Institute is providing guidance to sugarcane farmers to adopt more efficient, sustainable and technology-driven production practices.

This award is a significant recognition of the Institute's research, extension and farmer-

centric activities, carried out under the guidance of our President, Hon. Sharad Pawar Saheb and the Executive Council of the Institute. This honor will further motivate us to work more effectively for the development of sugarcane cultivation, the sugar industry and sugarcane farmers, said Shri Sambhaji Kadupatil, Director General of VSI.



EVENTS EVENTS

80th Independence Day

VSI celebrated 80th Independence Day of India on August 15, 2026. 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, Mrs. Kadupatil was present and gave awards to meritorious children of VSI employees for their excellent academic achievements.



Blood Donation Camp

VSI organized a 'Blood Donation Camp' at VSI Campus in association with Tarpan Blood Bank of VishwaRaj Hospital, Loni Kalbhor, Pune on August 11, 2026. The

event was inaugurated by Dr. RM Devarumath, Principal and Sr. Scientist & HOD, of MB & GE Lab., in presence of Mr. Vandan Ghule, Vice Principal, teachers and students.



WORKSHOP WORKSHOP

Climate Resilience in Sugarcane Production and Sugarcane Harvester Training Program

A one-day workshop on 'Climate Resilience in Sugarcane Production' and 'Sugarcane Harvester Training Programme' was organized by the Vasantdada Sugar Institute (VSI), Pune on July 28, 2026.

The programme was chaired by Shri Dilip Walse-Patil, Vice President of VSI, Pune and Dr. Sanjay Kolte, Sugar Commissioner, Government of Maharashtra attended the event as the Chief Guest. Mr. Vishwa Somannvar, Vice President, Tirth Agro Tech. Pvt. Ltd., Rajkot; Mr. Sambhaji Kadupatil, Director General, VSI, Pune; Dr. AD Kadlag, Principal Scientist (Crop Production and Protection), participants from sugar mill and Agriculture staff members were present.

In his inaugural address, Shri Walse-Patil highlighted the emerging challenges confronting the sugar industry, particularly the declining duration of the sugarcane crushing season due to the increased crushing capacities of sugar factories. He observed that these developments have placed considerable financial pressure on sugar mills and underscored the need for innovative technological interventions to ensure their long-term sustainability. Emphasizing the transformative potential of Artificial Intelligence (AI) in agriculture, he stated that AI-driven technologies could substantially improve sugarcane productivity while reducing water consumption thereby enhancing resource-use efficiency and profitability for both farmers and sugar factories. Recognizing the rapid mechanization of sugarcane harvesting and the growing shortage of skilled machine operators, Shri Walse-Patil appreciated the joint initiative of the Vasantdada Sugar Institute and Tirth Agro Technology Pvt. Ltd., Rajkot in launching

the Harvester Operator Training Programme. He expressed confidence that the programme would develop a skilled workforce capable of meeting the increasing demand for qualified harvester operators across the sugar industry. He also announced that two newly developed sugarcane varieties, VSI 21121 and VSI 25121 bred at the Institute's Sugarcane Breeding Center, Amboli would soon be released for commercial cultivation. These high-yielding, high sugar varieties are expected to contribute significantly to improving sugarcane productivity and enhancing the competitiveness of the sugar sector.

Addressing the gathering, Dr. Sanjay Kolte, Sugar Commissioner, Government of Maharashtra, remarked that climate change is expected to pose even greater challenges to future sugarcane crushing seasons. He stressed the need for sugar factories to strengthen and expand their sugarcane development programmes by integrating climate-resilient production practices and advanced technologies. He further emphasized that close collaboration among farmers, sugar factories and research institutions would be essential for successfully addressing the challenges posed by changing climatic conditions.

In his address, Shri Vishwas Somanwar, Vice President, Tirth Agro Technology Pvt. Ltd., Rajkot, highlighted the growing need for trained sugarcane harvester operators in the sugar industry. Considering the increasing demand for skilled manpower and the mechanization of sugarcane harvesting, he emphasized the importance of developing a structured training programme. To address this industry requirement, the training programme was conceptualized and implemented through a

collaborative initiative between Tirth Agro Technology Pvt. Ltd., Rajkot and Vasantdada Sugar Institute (VSI), Pune.

During the technical sessions, Shri Tushar Jadhav, Scientist, Agriculture Development Trust (ADT), Baramati delivered presentations on 'Artificial Intelligence in Sugarcane Farming Review' highlighting the application of Artificial Intelligence in sugarcane agriculture and its potential to transform sugarcane farming. He presented the current scenario of adoption of A.I. by farmers in Maharashtra.

Dr. AD Kadlag in his address on 'Climate Resilient Sugarcane Crop Production' stated that Artificial Intelligence (AI)-based technologies to enhance sugarcane productivity and improve sugar recovery. He highlighted that AI-driven approaches can support precision crop management, optimize resource use, enable timely decision-making and ultimately contribute to higher cane yield and sugar quality. He also mentioned that the sustainable

sugarcane production under changing climatic conditions requires the adoption of climate-resilient agricultural practices. These practices should integrate improved crop management strategies, efficient utilization of water and nutrients, advanced digital technologies and ecosystem-based approaches. Such an integrated framework will strengthen the resilience of the sugarcane production system, mitigate the adverse effects of climate change, and support the long-term sustainability and profitability of the sugar industry.

Dr. KV Sushir in his address on 'Improved Sugarcane Varieties for Maharashtra' emphasized on the proper planting planning of sugarcane early and mid-maturing varieties in a proportion of 40:60, three tier seed programme with better ratoon management to improve the sugarcane productivity and sugar recovery. He also pointed out the increasing the monoculture of single variety under cultivation in area of operation of sugar mill adversely affect the cane production and sugar recovery. He explained the role





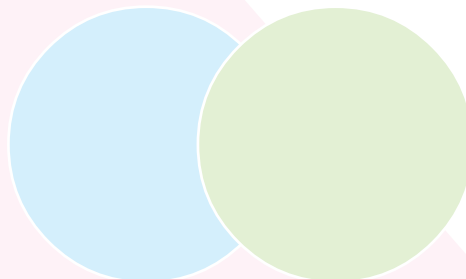
of various sugarcane varieties under cultivation and highlighted that the promising sugarcane genotypes VSI 21121 and VSI 25121, developed through the Institute's breeding programme at Sugarcane Breeding Centre, Amboli have demonstrated excellent yield and quality potential and are expected to be commercialized shortly, providing farmers and the sugar industry with improved options for enhancing productivity and sugar recovery.

The Cane Development Officer's from Rajarambapu SSK Ltd., Sangli, and Kallappa Anna Awade Jawahar Shetkari SSK Ltd., Kolhapur, shared their practical experiences on implementing AI-based technologies in sugarcane cultivation programmes undertaken by their respective sugar factories.

The valedictory session addressed by Shri Pradeep Walse-Patil, Vice Chairman, Bhimashankar Sahakari Sakhar Karkhana Ltd., Pune. He emphasized the need for wider adoption of research-based technologies,

rapid dissemination of improved sugarcane varieties and stronger collaboration among sugar factories, research institutions and farming communities to ensure sustainable growth of the sugar sector.

The programme was concluded with Vote of thanks by Mrs. Mohini Gaikwad, Scientific officer, Agriculture Engineering section of VSI.



TRAINING

Oos Sheti Dnyanyag and Dnyanlaxmi

In the reminiscence of founder president of VSI Late Padmabhushan Dr. Vasantdada Patil, 'Oos Sheti Dnyanyag and Dnyanlaxmi' a four days residential training programs were organized for men and women

sugarcane growers of Maharashtra at VSI, Pune during June 22 to July 17, 2026 in 4 different batches. The details of the training program as given in below table.

Batch No.	Period	Area from which the farmers participated	No. of Participants	No. of sugar mills and individual participation
Oos Sheti Dnyanyag programme (Men farmers)				
I	June 22- 25, 2026	Kolhapur and Sangli Districts	218	Sugar mills: 08 Individual: 01
II	June 30 – July 03, 2026	Satara, Pune, Ahmednagar and Nashik Districts	214	Sugar mills: 13 Individual: 01
III	July 7-10, 2026	Solapur District and Marathwada region	139	Sugar mills: 08
Oos Sheti Dnyanlaxmi Program (Women farmers)				
VI	July 14 -17, 2026	All sugar mills in Maharashtra	233	Sugar mills: 111 Individual: 01
Total Participants (Women +Men Farmers)			804	

In *Oos Sheti Dnyanyag* and *Dnyanlaxmi* training programs, 804 sugarcane farmers were participated from Jurisdiction of sugar mills in different parts of Maharashtra. Out of total sugarcane farmers, 03 sugarcane farmers were participated individually and rest of the farmers were deputed by 34 sugar mills from Maharashtra.

The training programs were conducted under valuable guidance of Mr. Sambhaji 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 Agril 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 practicals and field demonstrations. The information was given on different types of Agriculture Inputs developed by VSI, Artificial Intelligence (AI) and academic activities of VSI 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



Sugarcane Harvester Operator Training Program

The Vasantdada Sugar Institute (VSI), in collaboration with the LS Gohil Memorial Foundation, Rajkot organized a five-day residential Sugarcane Harvester Operator Training Program aimed at addressing the growing shortage of skilled operators in the sugar industry and creating employment opportunities for rural youth. The program seeks to bridge the gap between rural unemployment, shortage of skilled manpower, and increasing agricultural mechanization. With mechanical sugarcane harvesting rapidly expanding in Maharashtra and Karnataka due to acute labor shortages, the demand for trained and certified harvester operators has increased significantly. The lack of skilled operators often results in machine breakdowns, higher maintenance costs, inefficient harvesting, machine misuse, and increased crop losses. The training program aims to develop a structured pool of certified operators capable of operating and maintaining modern sugarcane

harvesters safely and efficiently. VSI plans to develop 150 certified sugarcane harvester operators annually from its Pune center. The program primarily targets unemployed rural youth aged 18–40 years from economically weaker sections, with a minimum qualification of 10th standard pass.

The program was inaugurated by Mr. Dilip Walse-Patil, Hon Vice President of VSI, Mr. Sanjay Kolate, Sugar Commissioner, Pune and Mr. Sambhaji Kadupatil, Director General, VSI. The initiative is expected to contribute towards employment generation, improved harvesting efficiency, reduced crop losses, and sustainable adoption of sugarcane mechanization in India.

In the month of July-September 2026 total seven batches training programs were conducted. Total 106 trainees participated (Maharashtra-76, Punjab-09, Karnataka-04 and Uttar Pradesh-17).





Sugarcane Nursery Training Program

Batch-I

A three-day training programme on Sugarcane Nursery: Technology and Management has commenced at the Vasantdada Sugar Institute (VSI) on August 12-14, 2026. In the first batch of the training programme, 27 sugarcane growing farmers from Bhaurao Chavan SSK, Nanded and 01 farmer from Purna SSK, Hingoli, participated in this training program.

The inaugural programme was presided over by Mr. Sambhaji Kadupatil, Director General, VSI, with Mr. Narendradada Chavan, Chairman, Bhaurao Chavan SSK, as the Chief Guest.

Dr. Samadhan Surwase delivered the introductory remarks and welcomed the dignitaries and participants.

Mr. Sambhaji Kadupatil, addressing the participants emphasized that seed replacement is essential for increasing sugarcane productivity and highlighted the

importance of producing healthy, disease and pest free, quality planting material through scientific nursery practices.

Mr. Narendradada Chavan stated that the Bhaurao Chavan SSK would effectively implement a seed replacement programme in collaboration with VSI, which would help farmers access quality planting material and contribute to increased sugarcane yield and productivity. Dr. Ashok Kadlag, Principal Scientist, Crop Production & Protection Division; Mr. Tushar Jadhav, AI Coordinator, Baramati and scientists from VSI were present on the occasion.

In this training scientist lectures and practical were taken by concern scientist and educate the participants for the importance of seed replacement and nursery development modern techniques. The program was concludes with distribution of certificates to the trainees and Vote of thanks.



Batch-II

A three-day training programme on 'Sugarcane Nursery: Technology and Management' was conducted at Vasantdada Sugar Institute (VSI) from September 4-6, 2026. The programme was chaired by Mr. Uttam Patil, Chief Administrative Officer, Vasantdada Sugar Institute, while Mr. Shivaji Khengare, Chief Accountant, VSI, was present as the chief guest.

Addressing the participating farmers, Mr. Uttam Patil emphasized that seed replacement was essential for increasing sugarcane productivity. He stressed the importance of adopting scientific nursery management practices for producing healthy, disease and pest free and quality planting material.

Mr. Shivaji Khengare stated that the effective implementation of the seed replacement programme would help improve sugarcane production and productivity. He also urged sugarcane growers to give priority to the use of quality planting material and adopt seed replacement practices.

During the three-day training programme, participating farmers were provided technical guidance on establishment and management of sugarcane nurseries, production of quality planting material, nursery management practices and scientific methods for producing disease and pest-free planting material.



Batch-III (September 7-9, 2026)



Batch-IV (September 8-10, 2026)



Modern Technologies in Sugarcane Agriculture

The three days residential training programs were organized for staff members and farmers from Baramati, Indapur, Malshiras and Akulj Tahsils in Maharashtra states under ITC, Development Support Center, Pune . The objective of the training was to train the participants about advanced technologies in sugarcane agriculture. The three days training programs were conducted during on August 19-21, 2026. Total 94 participants attended this program from ITC, Development Support Center, Pune (50) and ITC, Development Support Center, Solapur (44).

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 three days training program. All the agriculture scientists conducted theory lectures in Hindi with the help of power point 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. Dr. AD Kadlag, Principal Scientist, VSI discussed with participants during farewell function about Mechanization and AI (Artificial Intelligence) technology and difficulties faced by them in sugarcane agriculture in their area and appealed them to adopt modern technologies in sugarcane.



Advanced Technologies in Sugarcane Agriculture

Batch-I

The Three days residential training programs were organized for farmers from Ahilyanagar, Satara, Latur, Beed and Chhatrapati Sambhajnagar under Agricultural Technology Management Agency (ATMA). The objective of the training was to train the participants about advanced technologies in sugarcane agriculture. The three days training programs were conducted during on September 01- 03, 2026.

The details of the participants as ATMA, Chhatrapati Sambhajnagar (62), ATMA, Beed (30), ATMA, Latur (50), ATMA, Satara (40) and ATMA, Ahilyanagar (62), total 240 farmers were attended the said training program. 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 three days training program. All the agriculture scientists conducted theory lectures with the help of power point 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. Shri Sharadchandraj Pawar also addressed and interacted to farmers during training program along with Punjab delegates. The certificates were distributed to the trainees. Mr. Uttam Patil, Administrative Officer, VSI, Pune was discussed with participants during farewell function about the difficulties faced by them in sugarcane agriculture in their area and appealed them to adopt advanced technologies in sugarcane. The vote of thanks was given by Dr. GE Atre, Scientist, to Hon. Director General, Principal Scientist, Project Director, ATMA Latur, Beed, Satara, Ahilyanagar and Chhatrapati Sambhajnagar Head of sections in Agril. Science and Technology Division, participants and other staff of VSI who directly and indirectly contributed for the success of said training programs.



Batch-II

The three days residential training programs were organized for staff members, officials and farmers from Bihar and Kawardha, Chhattisgarh. The objective of the training was to train the participants about advanced technologies in sugarcane agriculture. The three days training programs were conducted during on September 15 -17, 2026. Total Eighty Three staff members, officials and farmers were attended the said training program from Sugarcane Development Department, Bihar (35) and Bhoramdev SSK Limited, Kawardha, Chhattisgarh (48). The training was inaugurated by the Dr. AD Kadlag, Principal Scientist, Crop Production and Crop Protection.

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 three days training program. All the agriculture scientists conducted theory lectures in Hindi with the help of power point 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 varieties and excess use fertilizers in sugarcane agriculture and appealed to scientists to focus on it. The certificates were distributed to the trainees. Dr. AD Kadlag, Principal Scientist, VSI discussed with participants during inaugural function about AI (Artificial Intelligence) technology and difficulties faced by them in sugarcane agriculture in their area and appealed them to adopt modern technologies in sugarcane. The program concluded with Vote of thanks.



Batch-III

The residential training program was organized for officers and staff members of Divisional Joint Director of Agriculture Chhatrapati Sambhajnagar and Latur, sponsored by National Food Security Mission. The objective of the training was to train the participant about advanced technologies in sugarcane agriculture. The two days training program was conducted on September 08 – 09, 2026. Total 35 participants participated from Divisional Joint Director of Agriculture, Chhatrapati Sambhajnagar (19) and Divisional Joint Director of Agriculture, Latur (16).

Thirty Five participants were attended the training program, consist of Taluka Agriculture Officers, Assistant Agriculture Officers and Associate Agriculture Officers from Chhatrapati Sambhajnagar and Latur divisions. 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 presentation. More emphasis on practical's and field demonstrations was given during the programme.

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 different drainage systems used in sugarcane agriculture and appealed to scientists to focus on it. The certificates were distributed to the trainees. All Head of section, 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.



Batch-IV

The three days residential training programs were organized for staff members, men and women farmers from working area of sugar mill sponsored by Dalmia Bharat Sugar Industries, Ltd., Kolhapur. The objective of the training was to train the participants about advanced technologies in sugarcane agriculture. The three days training programs were conducted during September 28-30 September, 2026. 120 participants were attended the said training program.

The training was inaugurated by the Dr. Ashok Kadlag, Principal Scientist, VSI, Pune. 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 three days training program. All the agriculture scientists conducted theory lectures with the help of power point 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. The certificates were distributed to the trainees.

All the Head of sections were 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 programs was concluded with vote of thanks.



VSI COMMITTEE MEETINGS

VSI Committee Meetings

The Technical committee meeting of Technology Section was held on July 05, 2026 under the chairmanship of Mr. Jayant Patil Former Minister for Water Resources and Command Area Development Govt. of Maharashtra. In this meeting HODs of the Department were presented their completed ongoing project progress reports.

Departmental Review Meeting was organized at *Sakhar Sankul, Pune* under the chairmanship of Hon. President of VSI Mr. Sharad Pawar on July 13, 2026. In the Review meeting of the Agriculture Science & Technology Departments and Technical

Departmental HODs were present. In this review meeting ongoing projects of the departments and developmental work of VSI's farm were reviewed and discussed. On this occasion Book was compiled by Mr. AA Prabhavalkar, Sr. Statistician, Compendium on 'Manufacturing Performance of Sugar Mills in Maharashtra' (From 2004-05 to 2024-25) was released by Mr. Sharad Pawar. After the meeting Mr. Sharad Pawar and committee members seen the upcoming sugarcane var. developed by Plant Breeding Section. Dr. KV Sushir explained the importance of new upcoming sugarcane variety to the members.



A meeting of Building and Purchase committee was held on September 12, 2026. Governing Council and Board of Trustees Meeting was held at VSI on September 13, 2026 under the chairmanship of Mr. Sharad Pawar, Hon. President of VSI. In his meeting

different issues of VSI developmental work, sugarcane Agriculture and sugar mill related problems were discussed. After the GC meeting an investment committee meeting was held and VSI investment issues was discussed.

VSI PARTICIPATION

Environmental Compliance, Strategies to Reduce Greenhouse Gas Emissions in Sugar and Distillery Industries

Dr. Amol Deshmane, Senior Scientist (Dept. of Environmental Sciences) and Mr. Yuvaraj Kadam, Department of Alcohol Technology and Biofuels) participated as an invited speaker in a One-day workshop on 'Environmental Compliance, Strategies to Reduce Greenhouse Gas Emissions in Sugar and Distillery Industries' organized by Karnataka State Pollution Control Board and S. Nijalingappa Sugar Institute (SNSI), Belagavi, Karnataka on July 28, 2026. This programme received participation of 150+ environmental personnel from sugar and distilleries of Karnataka State.

In this workshop, Dr. Deshmane delivered his presentation on 'Best Environmental Practices, Resource Conservation in Sugar Industries and

Distilleries'. In his presentation, he discussed practical issues pertaining to environmental compliances, faced by Environmental Officers working in this industry. In his presentation, he provided some key steps to move towards environmental compliances. Mr. Kadam presented current practices followed in distilleries to achieve 'Zero Liquid Discharge' (ZLD). He also explained cost economics for those options. Question-answer session of the workshop was very active, participants raised queries to clarify their doubts. Both the presenters satisfactorily answered all the questions. Valedictory address was given by Dr. Rajagopal Sangam, Director of SNSI.

BioEnergy Global 2026 Summit & Conference

The BioEnergy Global 2026 Summit & Conference, one of India's premier platforms dedicated to bioenergy, renewable energy, and sustainable development, was inaugurated on July 29-31, 2026, at IICC, Yashobhoomi, New Delhi. Organized by Meera Trade Fair Media Pvt. Ltd., the three-day summit brought together leading policymakers, industry professionals, researchers, technology providers, and renewable-energy experts from across India and abroad.



The event witnessed an impressive participation of 200+ exhibitors, 10,000+ visitors, 200 conference delegates, and 50+ distinguished speakers, with more than 50 technical and knowledge-sharing sessions covering emerging trends, innovations, technologies, and business opportunities in the bioenergy and renewable-energy sectors.

The summit featured keynote addresses and insightful technical sessions by eminent dignitaries and industry leaders, including Shri Sambhaji Kadupatil, Director General, Vasantdada

Sugar Institute (VSI), Pune; Mr. Balram Gupta, CEO & Founder, Meera Trade Fair Media Pvt. Ltd.; Lt. Col. Monish Ahuja (Retd.), Chairman & Managing Director, PRESPL and Chairman, Confederation of Biomass Energy Industry of India; Dr. Atul Mohod, DG, SSS-NIBE; Dr. Mohammad Rihan, DG, NISE; Mr. Prafulla Pathak, President, SESI; Dr. Rasmus Alex Wendt, Energy Counsellor, Royal Danish Embassy, New Delhi; Mr. Ravi P. Gupta, CGM, Alternate Energy, Indian Oil Corporation Limited, R&D Centre; Ms. Jennifer Doerper, Director, Biogas Membranes, Evonik; and Mr. Harmit Singh, CEO, Kessels Steam Turbines Pvt. Ltd., along with several other distinguished experts and industry leaders.

The participation of Vasantdada Sugar Institute (VSI), Pune, highlighted its continued commitment and

leadership in advancing biofuels, sugarcane biomass utilization, ethanol technology, and renewable-energy solutions for the sugar and allied sectors.

In addition from VSI, Mr. Suneel Yadav, Associate Professor & Technical Advisor, Department of Alcohol Technology and Biofuels, attended the summit and participated in the knowledge-sharing and industry interactions focused on the future of bioenergy, biofuels, and sustainable technologies.

Overall, BioEnergy Global 2026 provided an important platform for collaboration, technology exchange, industry networking, and exploring new opportunities for accelerating India's transition towards a cleaner, more sustainable, and bioenergy-driven future.

The 71ST Annual Convention & Sugar Expo 2026 of The Deccan Sugar Technologists' Association (DSTA)

The 71st Annual Convention & Sugar Expo 2026 of DSTA was held at Hotel JW Marriott, Pune, on August 8–9, 2026. Mr. Sambhaji Kadupatil, Director General, VSI; Mr. RA Chandgude, Head & Technical Adviser (Sugar Engineering & Renewable Energy Department); Dr. SG Dalvi, Scientist (Tissue Culture); Mr. DN Shitole, Senior Sugar Engineer; and Mr. MV Taur, Sugar Engineer (Sugar Engineering & Renewable Energy Department), attended the seminar.

The inaugural session was graced by a distinguished panel of dignitaries. Hon. Shri Jayant Rajarambapu Patil, MLA, Maharashtra, presided over the ceremony as the Chairman, while Hon. Shri Satej Patil, Member of the Legislative Council of Maharashtra, was the Chief Guest. The distinguished guests included Dr. Sanjay Kolte, Commissioner of Sugar, Maharashtra; Shri B. B. Thombare, President, WISMA; Shri Rajesh Tope, Former Minister for Public Health and Family Welfare, Maharashtra; Shri Diliprao Deshmukh, Former Minister; Shri Shekhar Gaikwad, Retired IAS

Officer; Mr. Sambhaji Kadupatil, Director General, VSI, Pune; Mr. Sanjay Khatal, Managing Director, Maharashtra State Cooperative Sugar Factories Federation Ltd.; Mr. RV Kumbhar, President, SISSTA; and Dr. Suresh Bhosale, Chairman, YM Krishna SSKL.

The welcome address was delivered by Mr. Sohan Shirgaonkar, President of DSTA. The Chief Guest and other dignitaries on the dais felicitated the recipients of the Lifetime Achievement Awards, Best Research Paper Awards, Industrial Excellence Awards, and the sugar mills recognized for their performance.

Dr. Sunil G. Dalvi from VSI, Pune, presented his research paper entitled "Phytomelatonin in Sugarcane: Biological Functions, Stress Adaptation and Applications for Sustainable Crop Production" during the agriculture session. The paper entitled "Failure Examination of Boiler Tube in a Sugar Industry," co-authored by Mr. RA Chandgude, was also presented by Dr. Sweta Deshmukh (COEP) during the technical session.

84th STAI Annual Convention & International Sugar Expo 2026

VSI team comprising Mr. Sambhaji Kadupatil, Director General, VSI, Mr. RA Chandgude - Head & Technical Adviser (Sugar Engineering & Renewable Energy Department), Mr. K Gangadharam, Head & Technical Adviser (Sugar Technology Department), Dr. KV Sushir, Principal Scientist & Head (Plant Breeding), Dr. Shuvashish Behera, Scientist, Mr. Suneel Yadav, Technical Adviser (Department of Alcohol Technology & Biofuels), Dr. Ashok Jagtap, Scientist (Molecular Biology & Genetic Engineering), Mr. AP Dhage, Sugar Engineer, Mr. MV Taur, Sugar Engineer, Ms. Mansi Kale, Technical officer - AI, Ms. Rajlaxmi Kolhe, Technical officer- AI (Sugar Engineering & Renewable Energy Department) participated in the 84th STAI Annual Convention & International Sugar Expo 2026 held in Goa. The convention was organized from August 18-20, 2026 at Dr. Shyama Prasad Mukherjee Indoor Stadium, Goa.

The convention was inaugurated by Hon. Dr. Pramod Sawant, Chief Minister of Goa in the presence of other dignitaries. The welcome address was delivered by Mr. Sanjay Awasthi, President of STAI. The introductory session commenced with the felicitation of the Chief Guest and other dignitaries, followed by the traditional lighting of the lamp. Mr. Sambhaji Kadupatil, Director General, VSI delivered an address at the Sugar Expo. Key highlights included the release of the book Modern Sugarcane Management and the official convention souvenir. The convention focused on major industry themes such as factory efficiency, artificial intelligence in sugar production, ethanol, bioenergy, water conservation, and climate-resilient sugarcane cultivation. The exhibition featured more than 100 exhibitors and attracted over 1,000 industry professionals, including OEMs, researchers, and equipment manufacturers.



During the function, Mr. RA Chandgude received the “Industry Excellence Award” from STAI, presented by the Hon. Chief Minister of Goa, Dr. Pramod Sawant.

The VSI team attended S. N. Gundurao Memorial Lecture and Plenary Session, where distinguished speakers \ delivered presentations on various important topics.

Mr. RA Chandgude Chaired the Factory Session-IV (Combined Factory Engineering & Processing) and Co-chaired the Factory Session- II (combined factory engineering & processing). On August 19-20, 2026, Dr. Behera, Dr. Sushir, Mr. Dhage, Mr. Taur, Ms. Kale & Ms. Kolhe from VSI, Pune, presented their research papers with the following titles:

S.No.	Title of the Paper	Name of the Author
1	Evaluation of Sugarcane Genotypes for Yield and Quality Parameters in North-East Zone of Maharashtra, by KV Sushir, JM Repale, AB Gawhane, SD Talekar & AD Kadlag.	Dr. KV Sushir
2	Sustainable And Energy-Efficient Refined Sugar Production In Indian Sugar Mills, by RA Chandgude, VN Pawar, AP Dhage & N Mahana.	RA Chandgude
3	Root Cause Of Analysis Boiler Tube In A Sugar Industry, by RA Chandgude, Sweta Deshmukh, PR Dhamangaonkar, SS Bhavikatti & MV Taur.	RA Chandgude
4	Artificial Intelligence In The Sugar Industry Evolution And Future Opportunities by RA Chandgude, MA Kale & RR Kolhe.	RA Chandgude
5	Techno-economic Perspectives of Compressed Biogas Production: A Case Study for Sugar Mill and Distillery by Kakasaheb Konde, Sangram Patil & Shuvashish Behera	Kakasaheb Konde
6	Techno-Economic Analysis of Ethanol Production Pathways in India: Cost Competitiveness, Policy Incentives, and Transition Dynamics under the Ethanol Blending Programme, by Suneel Yadav & Kakasaheb Konde.	Suneel Yadav

54th Joint Agresco Meet, Dr. BSKVP, Dapoli

54th Joint Agresco meet was organized at Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli and Maharashtra Council of Agricultural Education and Research, Pune during Sept. 9-11, 2026. This meet was attended by Dr. JP Repale, Sr. Scientist, Plant Breeding section, Dr. Preeti S Deshmukh, Sr. Scientist & Head, Soil Science section, Dr. SG Dalvi, Sr Scientist, Vasanturja/TC section, Dr. Sunita S Sakure, Sr. Scientist & Head, Agril Microbiology section, Mr. DS Pawar, Sr. Scientist, Plant Breeding Section and Ms. Sudha Ghodke, Scientist, Agriculture Microbiology section.

The Technical sessions were started on Sept. 10, 2026. The sessions were hosted by the respective sessions Chairman and Co-chairman. The following recommendation were presented by state coordinators and passed for release.

1. Plant Breeding section

Sugarcane genotype VSI 21121 having higher cane and sugar yield, drought tolerant, midlate maturing is recommended for pre-release in Preseason and Suru season in Maharashtra.

2. Soil Science section.

Application of potash 140 kg ha⁻¹ through potash derived from molasses powder (PDM) 965 kg ha⁻¹ to Suru sugarcane (Co 86032) alongwith general recommended dose of N:P₂O₅ 300:140 kg ha⁻¹ + FYM 20 t ha⁻¹ is recommended for higher cane yield and economic return in medium deep black soils of Maharashtra.

3. Agril Microbiology section.

Application of VSI's halophilic-halotolerant bacterial consortium (*Bacillus sanguinis* -

NR_175555.1), *Bacillus wiedmannii* - NR_152692.1, *Pseudomonas gessardii*- NR_024928.1 and *Pseudomonas libanesensis* - NR_024901.1) alongwith RDF and soil amendment is recommended for reclamation of sodic soil, higher cane and CCS yield of Suru sugarcane as follows:

- Soil application of gypsum as per requirement
- Drenching of VSI's halophilic-halotolerant bacterial consortium @ 20 lit. ha⁻¹ in 500 lit. of water at the time of planting.

4. Vasanturja section

Recommendation: Three sprays of Gamma Irradiated Chitosan 1% @ 15ml + *Ampelomyces quisqualis* 2 % WP @ 5 g/lit. of water immediately after appearance of disease at an interval of seven days are recommended for management of powdery mildew of grape.

Research Finding: Three sprays of Gamma Irradiated Chitosan 1 % @ 15 ml + *Bacillus subtilis* 1.5% AS (Count: 2 x 10⁹cfu./ml) @ 4 ml/lit. of water immediately after appearance of disease at an interval of seven days are recommended for management of downy mildew of grape.

55th SISSTA Annual Convention 2026

Vasantdada Sugar Institute (VSI), Pune, participated in the 55th Annual Convention of the South Indian Sugarcane and Sugar Technologists Association (SISSTA) held on September 4, 2026 at the Chennai Trade Convention Centre, Nandambakkam, Chennai, Tamil Nadu. VSI was represented by Mr. K Gangadharam, Head & Technical Adviser, and Mr. A Swamy, Sr. Sugar Technologist, Sugar Technology Department; Mr. Suneel Yadav, Technical Adviser and Mr. SA Patil, Scientist, Alcohol Technology & Biofuels Department; and Mr. US Manjul, Sr. Scientist (Crop Protection), Plant Breeding Department. Mr. K Gangadharam served as the Co-Chairman of the Process Technical Session, while Mr. Suneel Yadav served as the Co-Chairman of the Coproduct Session, reflecting VSIs' active participation and technical contribution to the convention. SISSTA bulletin.



Paper Award and Silver Medal for his paper, "Operational and Maintenance Challenges of Boilers in Sugar Industries: Issues & Solutions," presented at the 54th Annual Convention of SISSTA. Dr. GS Kotgire, Scientist, Plant Pathology Section, was also conferred the Best

Technical Paper Award and Silver Medal for his paper, "Antifungal efficacy of silver nanoparticles against *Fusarium moniliforme* – an incitant of Pokkah Boeng disease in sugarcane," presented at the 54th Annual Convention. SISSTA bulletin.

In addition to the above recognition, VSI technocrats presented a total of five technical papers at the convention, which received appreciation from fellow technocrats and participants. The participation and recognition of VSI professionals across sugar processing, engineering, coproducts, biofuels and sugarcane crop protection reflect the Institute's technical expertise, research excellence and multidisciplinary contribution to the sugar industry. The achievements further strengthen VSIs' continued contribution towards technological advancement, knowledge dissemination and sustainable development of the sugar sector.

The convention also brought notable recognition to VSI through two Best Technical Paper Awards, with the recipients being honoured with Silver Medals. Mr. RA Chandgude, Head & Technical Adviser, Sugar Engineering Department, received the Best Technical

VISITORS TO VSI

Visit of Punjab Delegation

Mr. Jagdish Singh, Joint Director (Agricultural Engineering), Punjab; Dr. Amrik Singh, Sugarcane Commissioner, Punjab; and Mr. Gulzar Singh, Director, PAU Sugarcane Research Station, Kapurthala, along with their team, visited the Vasantdada Sugar Institute (VSI) on August 4, 2026. Mr. Sambhaji Kadupatil, Director General, VSI, warmly welcomed the delegation. Dr. AD Kadlag, Principal Scientist, Agriculture Division, along with the Heads of Departments/Sections (HoDs/HoSs), was present during the interaction.

During the meeting, Dr. AD Kadlag briefed the delegation about the various research, development, and extension activities undertaken by VSI and delivered a presentation on "Importance of Mechanized Sugarcane Harvesting in India". The meeting included detailed discussions on the challenges associated with the use of existing

sugarcane harvesters in Punjab, required modifications and improvements in harvester design and operation, and key agronomic interventions and sugarcane varietal characteristics necessary for successful mechanized harvesting. The delegates also discussed suitable policy interventions and implementation strategies to promote and increase the adoption of mechanized sugarcane harvesting in Punjab.

As part of the visit, the delegation visited the Tissue Culture Laboratory, Plant Breeding Greenhouse, and Agricultural Engineering Section of VSI. The delegates appreciated the institute's research infrastructure, technical expertise, and ongoing efforts in advancing sugarcane agriculture and mechanization. The delegation expressed their satisfaction with the warm welcome, hospitality, and technical expertise of VSI, particularly its contributions to sugarcane research, mechanization, and technology development.



Visit of Delegates from NovelYeast B.V., Belgium

Shri. YB Ramakrishna, Former Chairman, Working Group on Biofuels, Ministry of Petroleum & Natural Gas, Government of India, along with Dr. Johan Thevelein, Managing Director, and Dr. Saju Varghese, Scientist, NovelYeast B.V., Belgium, visited Vasantdada Sugar Institute (VSI) on August 5, 2026. The visit focused on detailed discussions regarding

potential research and development (R&D) areas of collaboration and the installation of demonstration plants for isomaltulose and isobutanol. Officials from EPC partners Raj Process, Mojj Engineering, and Indiana Sucro-tech, Pune, were also present for the meeting.



Visit of Delegates from ICODOS GmbH, Germany

Mr. David Strittmatter, CEO, ICODOS GmbH, Germany, and Mr. Dhruv Jain, ICODOS, visited Vasantdada Sugar Institute (VSI) on August 28, 2026. The visit was organized for detailed discussions on a CO₂ to methanol plant. During the visit, discussions were



Visit of Dr. Jorge Ferreira, CSO, Norwegian Mycelium AS (NoMy)

Vasantdada Sugar Institute (VSI), Pune, welcomed Dr. Jorge Ferreira, Chief Scientific Officer (CSO) of Norwegian Mycelium AS (NoMy), Norway, for a five-day scientific visit to the Department of Alcohol Technology & Biofuels from August 24-28, 2026.

The visit focused on exploring sustainable approaches to converting sugar-industry side streams, particularly molasses and spent wash, into

high-value biochemical's and value-added products, supporting resource efficiency and the circular bioeconomy. During the visit, Dr. Ferreira was welcomed by Shri Sambhaji Kadupatil, Director General, VSI. The programme included visits to the Department of Alcohol Technology & Biofuels and other laboratory facilities, along with scientific discussions involving Dr. K. S. Konde and Dr. Madan

Junghare, regarding collaborative research and technology development.

Laboratory-scale experimental work was also undertaken to support the validation of NoMy's technology for producing value-added products using sugar-industry side streams. The work aimed to assess the feasibility of the proposed bioprocess under VSI laboratory conditions and establish a foundation for further scale-up.

The visit marked an important step towards strengthening international research collaboration between VSI and NoMy. Both organisations expressed interest in signing a Memorandum of Understanding (MoU) to advance joint research and develop sustainable bioprocesses for converting sugar-industry by-products into value-added products. This collaboration offers promising opportunities for sustainable bio-manufacturing, improved utilisation of sugar-industry resources and value creation from industrial side streams.



Visit of Shri Jayant Patil and Dr. Michael Butterfield from CTC, Brazil to Sugarcane Breeding Centre (SBC), Amboli

Hon. Mr. Jayant Patil, Trustee, VSI and Dr. Michael Butterfield, Scientist, CTC, Brazil visited SBC, Amboli on August 17, 2026. Dr. KV Sushir, Principal Scientist & Head (Pl. Br.) briefed the dignitaries about the various activities and research programmes being undertaken at SBC, Amboli. The meeting of scientists from Plant Breeding and Molecular Biology and Genetic Engineering was held with the dignitaries.

The following major points were discussed in the meeting.

- The discussion was held on the steps followed for development of drought and flood tolerant varieties in Brazil and Dr. Butterfield guided for the import of the germplasm from Brazil.
- The discussion on hybridization by using acid solution technique and its results in Brazil.





CRISPR/Cas-based approaches for targeted improvement of important agronomic traits including flowering, high sugar and yield. Dr. M. Butterfield expressed his willingness to extend technical support and share his expertise in genome editing and molecular breeding

- v. The key challenges in sugarcane gene editing, including its complex genome, transformation efficiency, tissue culture response, plant regeneration and confirmation of edited plants were discussed.

The development of synthetic seeds using callus tissue in sugarcane including their potential for rapid multiplication, germplasm conservation and propagation of selected and improved material was discussed.

- iii. Dr. M. Butterfield appreciated the germplasm enhancement programme, facilities developed for breeding programme at SBC, Amboli and steps taken in development of early maturing and drought tolerant varieties.
- iv. Discussed on CTC Brazil's ongoing research on gene editing in sugarcane with a focus on

Visitors from CTC, Brazil

The delegates, Mr. Carlos Pelaio, Resources Facility Coordinator, CTC Brazil and Dr. Aparecida Leonir da

Silva, Coordinator R&D, Technology Transfer, CTC Brazil visited Vasantdada Sugar Institute (VSI), Pune, on



September 2, 2026. The delegates were welcomed by Mr. Sambhaji Kadupatil, Director General, VSI who briefed them about the various activities of the institute. All Heads of Departments (HODs) and technical staff of the institute were present during the presentation.

A delegation visited the Tissue Culture Section to explore the institute's tissue culture facilities and technologies and held discussions on artificial seeds, callus culture, somatic embryogenesis, genetic purity and encapsulation techniques. Information on Vasant Urja was also shared, with discussions on its application in tissue culture media. Further visited

the tissue culture greenhouse, where they observed tissue culture plants and directly regenerated somatic embryogenesis plants.

The scientists also visited the sugarcane breeding plots, where they observed the newly arriving sugarcane varieties VSI 21121 and VSI 25121 and discussed their potential and varietal characteristics. Brazilian delegates visited the Microbiology Department and showed keen interest in biological inputs for soil and plant health as well as interested in EPS research for water-stress management and visited the ongoing EPS, IAA and GA trials in sugarcane.

Visit of AICRP(S) Monitoring Team

The AICRP(S) monitoring team comprised of four scientists Dr. VP Singh, Principal Scientist (Agronomy) & Head, Div. of Crop Production, ICAR-Indian Sugarcane Research Institute, Lucknow; Dr. K. Mohanraj, Breeder, SBI, Coimbatore; Dr. V. Chandra Sekhar, Pathologist, RARS, Anakapalle and Mr. RG Yadav, Senior Scientist & Head, Entomology, VSI, Pune, visited our institute from September 7 - 9, 2026. They visited monitoring of AICRP(S) trials of Plant Breeding, Agronomy, Soil Science, Entomology and Plant Pathology sections and during the visit sectional staffs were present. The team monitored the VSI research activity under AICRP program of at Manjari farm and Vasantdada R & D Farm.

The team members Dr. K Mohanraj and Mr. RG Yadav visited the four Zonal Varietal Trials of plant breeding viz., Initial Varietal Trial, Advanced Varietal Trial-I Plant, Advanced Varietal Trial-II Plant and Advanced Varietal Trial-I Plant-Ratoon. The team also visited the seedlings raised from fluff (Ground Nursery-I-2026 Batch).

Total 3332 seedlings developed from 57 biparental crosses, polycrosses and general collections effected at Sugarcane Breeding Institute, Coimbatore and Distant Hybridization Garden at Agali.

Besides this the total 871 seedlings developed from fluff of 43 biparental crosses received from SBI, Coimbatore under pre-breeding programme for red-rot and drought. The team impressed and appreciated the seedlings establishment and growth





from Ground Nursery-I and progress under fluff supply programme.

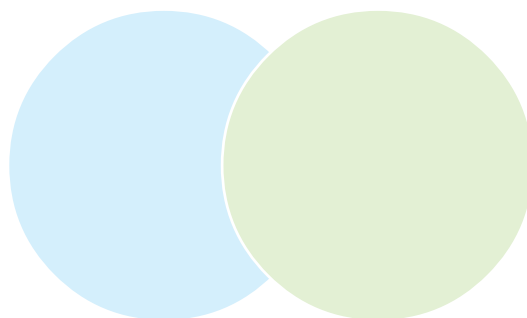
The team visited the experiments conducted under AICRP(S) by Agronomy, Soil Science, Entomology and Plant Pathology section. Dr. VP Singh visited the experiments conducted by Agronomy viz., AS 72- Agronomic performance of elite sugarcane genotypes, AS 74 - Evaluation of sugarcane varieties for drought tolerance, AS 81 - Ecofriendly sugarcane trash management options for enhancing soil health and productivity of sugarcane ratoon, AS 82- Evaluating new intercrops for crop diversification and profitability of sugarcane ecosystem. He visited the experiment conducted by the Soil Science viz., AS-80- Impact of long term use of liquid nanourea on sugarcane cropping system productivity and soil health. He appreciated the progress of trials conducted and the progress of results and guided.

Dr. V. Chandra Sekhar visited trials in Plant Pathology viz., PP 17-B- Evaluation of zonal varieties for resistance to smut disease, PP 17-D- Yellow leaf disease study, PP 17-E- Methodology for screening of varieties for brown rust, PP 33- Management of yellow leaf disease through meristem culture, PP 34- Efficient delivery of fungicides and other agro inputs to manage major fungal diseases in sugarcane, PP 34b- To demonstrate efficient delivery of plant protection chemicals through drone for effective management in sugarcane ecosystem, PP 35- Development of inoculation techniques for pokkah



boeng disease of sugarcane. He satisfied about performance of crop and conduct of experiments.

Dr. V. Chandra Sekhar and Mr. R. G. Yadav, visited the Entomology trials viz., E 4.1.1- Evaluation of zonal varieties / genotypes for their reaction against major insect pests, E.30-Monitoring of insect pests and bio agents in sugarcane agro- ecosystem, E.34- Standardization of simple, cost effective techniques for mass multiplication of sugarcane Bioagents, E.41- Assessment of yield losses caused by borer pests of sugarcane under changing climate scenario, E44-Management of sucking pests (mealy bugs, pyrilla, white fly, scales and wooly aphid) in sugarcane. The team member appreciated the progress of trials.



Following visitors visited VSI during last three months (July- August-September: 2026)

Name of Institutions	Visitors	No. of Visitors	Total
JULY - 2026			
Abasaheb Garware College, Pune	Students & Faculties	85+4	89
Individual Farmers from Maharashtra State	Farmers	109+86+105+75+103	478
AUGUST - 2026			
Padmashree Appasaheb Pawar Agriculture Polytechnic ,Baramati	Students & Faculties	38+3	41
Individual Farmers from Maharashtra State	Farmers	76+119+147+169	511
SEPTEMBER - 2026			
SNBP College of Pharmacy, Pune	Students & Faculties	76+4	80
Shriman Bhausahab Zadbuhe Mahavidyalaya, Barshi, Solapur	Students & Faculties	20+3	23
K. K. Wagh College of Agricultural Biotechnology	Students	7	7
Saikrupa College of Agriculture, Ghargaon, Tal.: Shrigonda, Dist.: Ahilyanagar	Students	13	13
Dr. D. Y. Patil College of Arts, Commerce & Science College, Pimpri, Pune	Students & Faculties	100+2	102
Ramdev Sugars Pvt. Ltd. Thaini, Bankhedi, Distt Hoshangabad (MP)	Chairman & Staff	1+8	9
Annasaheb Magar Mahavidyalay, Hadapsar, Pune	Students & Faculties	60+2	62
Sahebraoji Buttepatil Mahavidyalay Arts, Commerce & Science, Rajgurunagar, Tal.- Khed, Dist.- Pune	Students & Faculties	60+5	65
Eknath Sitaram Divekar College Arts, Science, Commerce & Computer Science, Varvand, Tal.- Daund, Dist.- Pune	Students & Faculties	45+4	49
Poona College of Arts, Science & Commerce, Camp, Pune	Students & Faculties	60+2	62
Dr. D. Y. Patil Arts, Commerce & Science College, Pimpri, Pune	Students & Faculties	60+3	63
Shriram College of Agriculture, Paniv, Tal.: Malshiras Dist.: Solapur	Students & Faculties	20+2	22
S.M. Joshi College, Hadapsar, Pune	Students & Faculties	90+3	93
Shri Siddhivinayak Mahila Mahavidyalay, Pune	Students & Faculties	29+3	32
Mahatma Gandhi College of Agricultural Biotechnology	Students & Faculties	21+2	23
Individual Farmers from Maharashtra State	Farmers	171+146+116+75+105	613
Total :			2437

LIBRARY NEWS

Following visitors visited VSI during last three months (July to September 2026)

- Center for Chemical Process Safety (2000)** *Guidelines for Chemical Process Quantitative Risk Analysis (2nd Ed)*; New York: Center for Chemical Process Safety & Wiley & Sons, Inc. Publications, (p. 755).
- STAI- The Sugar Technologists' Association of India (2026)** *84th STAI Annual Convention 18th – 20th August 2026*; Dr. Shayama Prasad Mukherjee Indoor Stadium, Goa. (1st Ed); New Delhi: The Sugar Technologists' Association of India, (p. 434).
- STAI- The Sugar Technologists' Association of India (2026)** *Souvenir - Released on the Occasion of 84th STAI Annual Convention & International Sugar Expo- 2026, on 18th-20th, August 2026*; Dr. Shyama Prasad Mukherjee Indoor Stadium, Goa, (1st Ed); New Delhi: The Sugar Technologists' Association of India, (p. 128).
- STAI- The Sugar Technologists' Association of India (2025-26)** *Directory of Cane Sugar Factories and Refineries (India and Other SAARC Countries) and Distilleries (India, Nepal and Bhutan) 2025- 2026 (1st Ed)*; New Delhi: The Sugar Technologists' Association of India, (p. 492).
- DSTA- The Deccan Sugar Technologists' Association (India) (2026)** *DSTA - 71st Annual Convention & Sugar Expo- 2026 on 8th & 9th August, 2026 at J. W. Marriott, Pune (1st Ed)*; New Delhi: The Deccan Sugar Technologists' Association, (p. 525).
- Milano Heloize de Souza (2013)** *Gut Microorganisms in Sugarcane Pests- Isentification of Lignocellulose- Degrading and Xylose- Bioconverting Isolates*; Germany: LAP LAMBERT Academic Publishing, (p. 80).
- Mehareb Eid Mohamed; Aboelenen Fouz Fotouh (2019)** *Sugarcane Breeding Technique of Artificial Flowering in the World and Natural Flowering*; Mauritius: LAP LAMBERT Academic Publishing, (p. 100)
- Henry Robert; Kole Chittaranjan (2010)** *Genetics, Genomics And Breeding of Sugarcane- Serie on Genetics, Genomics and Breeding of Crop Plants (1st Ed)*; New York: Science Publishers Book- CRC Press Taylor & Francis Group (p. 264)
- Chen Jen Tsung (2025)** *Plant Speed Breeding and High- Throughput Technologies (1st Ed)*; Boca Raton: CRC Press Taylor & Francis Group (p. 380).
- Sivanesan A; Waller J. M. (1986)** *Sugarcane Diseases- Phytopathological Paper No. 29 (1st Ed)*; UK: Commonwealth Mycological Institute CAB International (p. 180).
- Kumar Anil; Chand Hari; Ingle Dipak Shyamrao (2021)** *Ecofriendly Management of Sugarcane Pests (1st Ed)*; Delhi: Jaya Publishing House (p. 180).
- Singh Dhyani; Chhonkar P. K.; Dwivedi B. S. (2026)** *Manual on Soil, Plant and Water Analysis (1st Ed Reprint)*; New Delhi: Mrinal Goal Westville Publishing House (p. 200).
- Indian Society of Soil Science (2012)** *Fundamentals of Soil Science (3rd Ed)*; New Delhi: Indian Society of Soil Science (p. 728).
- Rattan R. K.; Katyal J. C.; Dwivedi B. S.; Sarkar A. K.; Bhattacharyya Tapas; Tarafdar J. C.; Kukal S. S. (2015)** *Soil Science- An Introduction (1st Ed)*; New Delhi: Indian Society of Soil Science (p. 875).

Adviser : Mr. Sambhaji Kadupatil
Editor : Dr. RM Devarumath
Layout & Photography : Mr. Sanjay A Dawari

Committee :
 Mr. RA Chandgude, Dr. KS Konde, Dr. PS Deshmukh,
 Dr. GS Kotgire, Mr. US Manjul, Mr. RB Bhoite

VSI Bulletin is published by the Vasantdada Sugar Institute, Pune.

Disclaimer: The views expressed in the articles are those of the authors and do not necessarily reflect the views of the VSI. The publisher makes no representation or warranties with respect to accuracy, applicability or completeness of information. Contents are for reference purpose only. Using it for any other purpose than for which it is shared is unauthorized and prohibited. No material from the issue may be copied, reproduced, republished, uploaded or commercially exploited in any manner without the prior consent of the publisher.
 Copyright © Vasantdada Sugar Institute

अवर्षणग्रस्त परिस्थितीत ऊस पिकाचे व्यवस्थापन

राज्यातील सध्याचा उन्हाळी हंगाम, त्यामुळे वाढत असलेले तापमान, बाष्पीभवनाचा तसेच उत्सर्जनाचा वाढणारा वेग, पिक वाढीची जोमदार अवस्था, पाण्याचे दुर्भिक्ष आणि पिकाला पडत असलेला ताण या सर्व बाबींमुळे उभे ऊस पिक जगविणे शेतकऱ्यांना कठीण होवून बसले आहे. पुढील गळीत हंगामासाठी पुरेशी ऊस उपलब्धतता होण्याच्या दृष्टीकोनातून उभ्या उसाचे उत्पादन कमी न होण्यासाठी उपलब्ध तंत्रज्ञानाचा मोठ्या प्रमाणावर त्वरीत अवलंब करणे आवश्यक आहे.

राज्यातील सध्याची परिस्थिती

- बहुतांश भागातील तापमान ४० सेल्सियस किंवा त्यापेक्षाही जास्त हवेतील कोरडेपणा आणि वाऱ्याचा वेग जास्त असल्याने जमिनीतील तसेच ऊस पिकाच्या शरीरातील ओलाव्यात झपाट्याने होणारी घट
- जमिनीतून होणाऱ्या बाष्पीभवनाचा वाढलेला वेग मार्च ते जून या कालावधीत वर्षभरातील ४५ ते ५० टक्के बाष्पीभवन होते.
- दिवसाचा वाढलेला कालावधी आणि दिवस व रात्रीच्या तापमानातील कमी असणारा फरक
- भुगर्भातील पाण्याची झपाट्याने खालावणारी पातळी
- कॅनल आणि उपसा जलसिंचन योजनांखालील पाण्याच्या पाळीत वाढत जाणारे अंतर
- वीजेचा कमी प्रमाणात पुरवठा आणि पडत असलेला खंड

वरील परिस्थितीमुळे ऊस पिकाच्या वाढीवर

खालीलप्रमाणे अनिष्ट परिणाम होत आहेत

- पिकाच्या मुळांची पाणी आणि अन्नद्रव्ये शोषण्याच्या कार्यक्षमतेत घट होते.
- उसाची पाने सुकून वाळत आहेत.
- पिकाची प्रकाशसंश्लेषणाची प्रक्रिया मंदावते
- अन्नरसाचे पिकाच्या विविध भागांना होणारे वहन कमी होते.
- पानांतील हरितद्रव्यांचे प्रमाण घटते.
- उसातील तंतूमय पदार्थांचे प्रमाण वाढून उसातील दशीचे प्रमाण वाढते.

- एकुण 'बाष्पीभवनाच्या सुरू हंगामात लागण केलेल्या तसेच खोडवा पिकात फुटव्यांचे प्रमाण कमी होवून गाळपालायक उसाच्या संख्येत घट झाल्याने ऊस उत्पादन घटते.
- पूर्वहंगामी व आडसाली उसाची वाढ खुंटून कांड्याची लांबी व जाडी कमी होते.

या परिस्थितीत ऊस उत्पादनात घट होवू नये म्हणून खालील उपाययोजनांचा अवलंब आपल्या कारखाना कार्यक्षेत्रात त्वरीत करणे आवश्यक आहे.

- उपलब्ध पाण्याचा कार्यक्षम वापर करणेसाठी लांबसरी, एक आड एक सरी किंवा जोडओळ पट्टा पद्धतीचा वापर करावा.
- प्रवाही सिंचनाचे मुख्य पाट व दांड स्वच्छ ठेवावे.
- मे महिन्यातील उपलब्ध पाणी विचारात घेऊनच उसाचे क्षेत्र ठरवावे.
- लांब सरी पद्धतीमध्ये दोन पाण्याच्या पाळीतील अंतर कमी ठेवावे.
- जास्त खोलीच्या भारी, मध्यम आणि हलक्या जमिनीत प्रत्येक सरी मधून उपलब्ध पाण्याचा प्रवाह अनुक्रमे १ ते १.५, २ ते २.५ आणि २.५ ते ३ लि. / सेंकदचा प्रवाह विभागून द्यावा.
- शक्य तेथे पाणी नेहमीच्या पाटाने पाणी देण्याच्या पद्धतीऐवजी ठिबक व तुषार सिंचन पद्धतीचा पद्धतीचा अवलंब करावा.
- रासायनिक खते ठिबक सिंचनाद्वारेच द्यावीत.
- ऊस पिकाची खालची वाळलेली पाने काढून ती आच्छादन म्हणून सरीत पसरावीत.
- पाचट आच्छादनाने दोन पाळ्यांच्या पाण्याच्या पाळीतील अंतर वाढविता येते व ४ ते ६ पाण्याच्या पाळ्यामध्ये बचत होते.
- शेताच्या बाहेरच्या बाजूस साधारणपणे एक मीटर पट्ट्याचे पाचट काढू नये.
- पीक नेहमी तण विरहीत ठेवावे म्हणजे उपलब्ध असलेल्या

पाण्यात तण वाटेकरी होणार नाही आणि दिलेल्या पाण्याचा पूरेपूर उपयोग होईल.

- सेंद्रिय व जैविक (अॅसिटोबॅक्टर, पी.एस.बी.) खतांचा वापर करावा आणि पाण्याची उपलब्धता पाहूनच रासायनिक खतांचा वापर करावा.
- पिकाला पोटॅश खताची २५ टक्के मात्रा अधिक द्यावी. तसेच दर २१ दिवसांनी दोन टक्के म्युरेट ऑफ पोटॅश + दोन टक्के युरिया यांचे मिश्रण करून फवारणी करावी.
- अश्या परिस्थितीत रासायनिक खतांचा वापर जमिनीतून करण्याऐवजी मल्टीन्यूट्रियंट (मॅक्रो आणि मायक्रो) द्रवरूप खतांच्या १ टक्के या प्रमाणात १ महिन्यांच्या अंतराने तीन फवारण्या कराव्यात.
- पिकास जैविक तसेच अजैविक ताण सहन करण्याची क्षमता वाढविण्यासाठी कायटोसानयुक्त तसेच सिलिकॉनयुक्त कृषिउत्पादनाचा वापर करावा.
- पट्टा किंवा जास्त अंतरावरील सरी लागण पद्धतीत मधल्या पट्ट्यात हलकी आंतरमशागत (कुळवणी करावी).
- या परिस्थितीत काणी व गवतीवाढ या रोगांचा तसेच खोडकिड, कांडी किड इत्यादि किडींचा प्रादुर्भाव वाढतो.
- काणी व गवतीवाढ रोगग्रस्त बेटे मुळासहीत काढून नष्ट करावीत.



- खोडकिडीच्या नियंत्रणासाठी ट्रायकोग्रामा चिलोनीस या मित्रकिडीचा अथवा कामगंध सापळे यांचा वापर करावा.
- याशिवाय फिप्रोनिलयुक्त (रिजेंट) किटकनाशकाचा वापर एकरी १० किलो या प्रमाणात वापर करावा.
- यापुढील काळात उसाची लागण न करता तुटणाऱ्या उसाच्या खोडवा पिकाचे योग्य व्यवस्थापन उदा. पाचट आच्छादन, पाचट प्रक्रिया (युरिया, सिंगल सुपर फॉस्फेट आणि पाचट कुजविणारे जीवाणूंचा वापर), बुंध्यांची जमिनीलगत छाटणी, नांग्या भरणे, मल्टीन्यूट्रियंट द्रवरूप खतांची फवारणी ही कामे करावीत.

कारखान्यांच्या कृषि आणि ऊस विकास विभागामार्फत कार्यक्षेत्रातील सर्व गटांमध्ये शेतकऱ्यांच्या शेतांवर वरील उपाययोजनांची अंमलबजावणी जास्तीतजास्त क्षेत्रावर करून घ्यावी आणि पुढील गळीत हंगामासाठी पुरेसा ऊस उपलब्ध होण्यासाठी प्रयत्न करावेत.

डॉ. गणेश कोटगिरे, शास्त्रज्ञ

मो.: ९९६०८३३३०१/८७८८१५३३३२

डॉ. ए.डी. कडलग, प्रमुख शास्त्रज्ञ

श्री. जी.ई. आत्रे, शास्त्रज्ञ

ऊसरोग शास्त्र विभाग,

वसंतदादा शुगर इन्स्टिट्यूट, मांजरी (बु.), पुणे-४१२ ३०७.

संपर्क : ०२०-२६०९०२२६८

